FACULTY OF MEDICAL AND HEALTH SCIENCES

Index of Subjects – Alphabetical List

Faculty of Medical and Health Sciences

Academic Integrity

ACADINT A01 **0 Points**
Academic Integrity Course
An online course designed to increase student knowledge of academic integrity, university rules relating to academic conduct, and the identification and consequences of academic misconduct. Students work through a series of modules, outlining scenarios that they may encounter while studying at university. Each scenario provides information on relevant rules, resources and expected behaviour.

Audiology

Postgraduate 700 Level Courses

AUDIOL 701 **15 Points**
Auditory Neuroscience
The anatomy and physiology of the auditory system, including the central nervous system. Topics include: the anatomy and neuroanatomy of the ear, the role of the middle ear, cochlear mechanics and micromechanics, transduction in the cochlea and vestibular system, responses of the auditory nerve and cochlear homeostasis.

AUDIOL 702 **15 Points**
Basic Diagnostic Audiology
The basic principles and techniques of diagnostic audiology in adults and children. Topics studied include: basic audiometric techniques (history-taking, pure tone audiometry, speech audiometry, immittance audiometry, traditional site-of-lesion tests, paediatric assessment, non-organic hearing loss). Emphasis is placed on critical assessment of current literature.

AUDIOL 704 **15 Points**
Central Auditory Function
Auditory neurophysiology and electrophysiology of central auditory pathways, psychoacoustics, and speech and language. Topics include: the use of electrophysiology, imaging technologies and psychoacoustics to probe the function of the auditory system. Central processes involved in speech and language.

AUDIOL 713 **15 Points**
Clinical Otolaryngology and Related Sciences
An introduction to otolaryngology and speech pathology. Topics include: principles of pathology and mechanisms of disease, imaging techniques, diseases of the ear, head and neck, the genetics of deafness, neurological disorders that affect hearing and balance, occupational deafness and hearing conservation, speech pathology.

AUDIOL 714 **15 Points**
Hearing Aids and Other Devices for the Hearing Impaired
An introduction to the design and technology of analogue and digital hearing aids, cochlear implants and assistive devices for children and adults with hearing-impairment. Analysis of the signal processing techniques and strategies used in digital hearing aids and cochlear implants.

AUDIOL 715 **15 Points**
Physics and Acoustics for Audiology
The basic physics of sound; and instrumentation and the principles of digital signal processing involved in audiological research. Topics include: the physics of sound waves, room acoustics, the measurement of reverberation time; the nature of acoustic impedance; the nature of filters and amplifiers, acoustics of speech, calibration.

AUDIOL 716A **15 Points**
AUDIOL 716B **15 Points**
Clinical Practicum I
Introduces the clinical practice of Audiology. Topics include communication skills; ethics; cultural issues; and the clinical practice of audiology, including counselling, understanding the effects of aging, tinnitus and hyperacusis management. Students will obtain the skills and knowledge to take a clinical history and to perform a basic audiometric assessment of adults and children. Particular emphasis is placed on critical evaluation and independent learning. Involves clinical work including a nine week practicum during the summer semester between Part I and Part II.
To complete this course students must enrol in AUDIOL 716 A and B

AUDIOL 718A **15 Points**
AUDIOL 718B **15 Points**
Clinical Practicum II
Clinical Audiology includes a scope of practice in evidence-based diagnostic and rehabilitative practices for the lifespan population. Topics include behavioural and objective measures of hearing for all ages, diagnosis and management of children with hearing loss, advanced topics in tinnitus, balance and hearing technologies. Interactive lectures, clinical placements, and independent learning contribute to the curriculum.
Prerequisite: AUDIOL 716
To complete this course students must enrol in AUDIOL 718 A and B

AUDIOL 796A **45 Points**
AUDIOL 796B **45 Points**
Thesis - Level 9
To complete this course students must enrol in AUDIOL 796 A and B

Clinical Education

Postgraduate 700 Level Courses

CLINED 703 **15 Points**
Learning in Small Groups
Explores how clinicians operate as members and leaders of groups, and the conditions underlying effective group function both in education and the workplace.

CLINED 705 **15 Points**
Simulation and Clinical Skills Teaching
Theory and practice around the use of simulators in clinical education. Addresses underlying theory, research, course design, acquisition of clinical skills, scenario-based learning, scenario design, simulator programming, and feedback after simulated performance.

CLINED 706 **15 Points**
Interprofessional Learning, Teamwork and Patient Safety
Explores and evaluates the evidence-base on interprofessional learning in the health professions. Evaluates the role of interprofessional learning in building effective healthcare teams.

CLINED 707 **15 Points**
Advanced Studies in Clinical Education
Supervised research on a topic approved by the Head of School of Medicine.

CLINED 710 **15 Points**
Special Studies
Independent study on a topic approved by the Head of School of Medicine.

CLINED 711 **15 Points**
E-learning and Clinical Education
Develops the knowledge and skills to critically evaluate e-learning in the clinical setting. Addresses underlying theoretical constructs, practical skills, sourcing and selection of learning objects, course design and assessment.

CLINED 712 **15 Points**
Curriculum and Course Design
Theory, concepts, and processes that underlie curriculum development and the design of short courses for a clinical setting. Addresses outcome-based course design and the development of objectives, content, methods, materials, assessment and evaluation for a course or curriculum.

CLINED 713 **15 Points**
Clinical Supervision
Students will explore theories of workplace learning and models of supervision of students and trainees in the clinical workplace, understand the different roles of clinical supervisors, and develop knowledge and skills to improve the effectiveness of clinical supervision in their own context.

CLINED 715 **30 Points**
Theory and Practice of Clinical Education
Examines the conceptual frameworks for learning in a clinical setting. The course will explore learning theory as it relates to the clinical experience, programme design, learner preparation, practical skills in enhancing learning in the clinical setting, and translation of theoretical knowledge into clinical practice.

CLINED 716 **30 Points**
Assessing Clinical Performance
Examines the purpose, criteria, methods, scoring methods and examiner training for a range of assessments of health professionals, with a focus on ensuring competence to practice. This will include concepts of reliability and validity, standard setting as well as advanced techniques to compare and effectively implement different types of clinical assessments.

CLINED 717 **15 Points**
Advanced E-Learning in Clinical Education
To advance and refine competencies to develop online and blended teaching materials in health professions education. To develop and refine theoretical knowledge, learning design experience, and assessment practices. Gain hands-on experience with a range of learning technologies and platforms, including web-design, learning management systems, and digital communication.
Prerequisite: CLINED 711 or approval of Course Director

CLINED 718 **15 Points**
Professionalism in Clinical Education
Students will examine and critically reflect on the notion of professionalism in clinical education to ascertain how professionalism is fostered in health care settings. The course will address methods of teaching and learning professionalism.

CLINED 719 **15 Points**
Clinical Education in Action
Takes a broad look across essential topics in clinical education of relevance to all clinical teachers involved in teaching with patients, assessing students and planning lessons. Application to practice and peer observation are key components of this course.

CLINED 720 **15 Points**
Special Topic: Foundations of Cultural Safety for Clinical Education
Explores the principles and practice of cultural safety in health professions education in Aotearoa. This will include the specific proficiencies required for culturally safe health professionals, and the development of learning techniques and assessment modalities to teach and assess cultural safety.

CLINED 790 **60 Points**
CLINED 790A **30 Points**
CLINED 790B **30 Points**
Dissertation - Level 9
Corequisite: POPLHLTH 701 or equivalent experience
To complete this course students must enrol in CLINED 790 A and B, or CLINED 790

CLINED 795A **45 Points**
CLINED 795B **45 Points**
Research Portfolio - Level 9
Prerequisite: POPLHLTH 701
To complete this course students must enrol in CLINED 795A and B

CLINED 796A **60 Points**
CLINED 796B **60 Points**
Thesis - Level 9
Prerequisite: POPLHLTH 701 or equivalent experience
To complete this course students must enrol in CLINED 796 A and B

CLINED 797A **60 Points**
CLINED 797B **60 Points**
Research Portfolio - Level 9
Supervised research that represents the personal scholarly work of a student based on a coherent area of inquiry. Culminates in a conclusive piece of work related to a specific area of specialisation or scope of practice.
Prerequisite: POPLHLTH 701 or equivalent experience
To complete this course students must enrol in CLINED 797 A and B

Clinical Imaging

Stage II

CLINIMAG 201 **15 Points**
Radiographic Clinical Practice I
Introduces the fundamental knowledge and clinical skills necessary to perform a range of routine radiographic examinations with a patient-centred focus.

Stage III

CLINIMAG 303A **15 Points**
CLINIMAG 303B **15 Points**
Radiographic Clinical Practice II
Extends the fundamental knowledge and clinical skills

necessary to perform a range of routine and non-routine radiographic examinations, including specialised views and adaptive techniques. Provides the knowledge and clinical skills to perform a range of advanced radiographic imaging examinations with a patient centred focus, incorporating an evidence-based approach.
Restriction: CLINIMAG 301, 302
To complete this course students must enrol in CLINIMAG 303 A and B

Stage IV

CLINIMAG 402A **30 Points**
CLINIMAG 402B **30 Points**
Radiographic Clinical Practice III
Consolidates the knowledge and clinical skills necessary to perform all radiographic imaging examinations, with a patient-centred focus.
To complete this course students must enrol in CLINIMAG 402 A and B

Postgraduate 700 Level Courses

CLINIMAG 706 **15 Points**
Nuclear Medicine Specialised Clinical Applications
Addresses normal and altered radiopharmaceutical biodistribution appearances, and protocol selection and development, associated with cardiovascular, lymphatic and oncological applications in Nuclear Medicine, in addition to investigating new and evolving techniques and applications. An emphasis will be placed on integrating theory and clinical practice elements to facilitate sound clinical reasoning, decision-making and clinical competence.
Prerequisite: MEDIMAGE 720

CLINIMAG 707 **15 Points**
CT Clinical Practice
Provides students with a sound understanding of CT technology and its application including radiation safety and dose reduction. Addresses normal and abnormal Computed Tomography (CT) imaging appearances, protocol selection and modification, in relation to a range of standard clinical applications. Students will develop the knowledge, competencies, skills and attitudes needed to enable clinical competence in both academic and professional capability in CT practice and application to clinical practice.
Restriction: CLINIMAG 717, MEDIMAGE 710

CLINIMAG 708 **15 Points**
Mammographic Clinical Practice
Addresses normal and abnormal mammographic imaging appearances, technique evaluation and adaptation, and includes reflection on clinical practice relating to mammography. The course will ensure students develop the knowledge, competencies, skills and attitudes needed to demonstrate mastery in academic and professional mammographic practice.
Prerequisite: MEDIMAGE 707

CLINIMAG 709 **15 Points**
Principles of Clinical Ultrasound
Addresses normal and abnormal ultrasound imaging appearances, scanning techniques and applications associated with abdominal ultrasound examinations. An emphasis will be placed on integrating theory and clinical practice elements to facilitate sound clinical reasoning, decision-making and clinical competence. Develops clinical competence to the level expected of a trainee sonographer during the initial phase of clinical training.
Corequisite: MEDIMAGE 716
Restriction: CLINIMAG 719

CLINIMAG 710 **15 Points**
MRI Clinical Applications 1
Addresses normal and abnormal imaging appearances, protocol selection and development, and applications associated with a range of MRI examinations. Students will examine standard and advanced pulse sequences, in addition to investigating new and evolving techniques and applications. An emphasis will be placed on integrating theory and clinical practice elements to facilitate sound clinical decision making and clinical competence.
Prerequisite: MEDIMAGE 714
Restriction: CLINIMAG 701, 702

CLINIMAG 711 **15 Points**
MRI Clinical Applications 2
Addresses normal and abnormal imaging appearances, protocol selection and development, and applications associated with a range of MRI examinations. Students will examine standard and advanced pulse sequences in addition to investigating new and evolving techniques and applications. An emphasis will be placed on integrating theory and clinical practice elements to facilitate sound clinical decision making and clinical competence.
Prerequisite: MEDIMAGE 714
Restriction: CLINIMAG 702

CLINIMAG 712 **15 Points**
MRI Clinical Practice
Develops the knowledge, competencies, skills and attitudes needed to demonstrate mastery in both academic and professional capability in MRI practice.
Prerequisite: Departmental approval

CLINIMAG 713 **15 Points**
Ultrasound in Women's Health
Addresses normal and abnormal ultrasound imaging appearances, scanning techniques and applications relating to women's health. An emphasis will be placed on integrating theory and clinical practice elements to facilitate sound clinical reasoning, decision-making and clinical competence.
Prerequisite: MEDIMAGE 716
Restriction: CLINIMAG 703

CLINIMAG 714 **15 Points**
Ultrasound Clinical Applications
Addresses normal and abnormal ultrasound imaging appearances, adaptation of scanning techniques relating to the abdomen, musculoskeletal system, vascular system, small parts and paediatric imaging. Students will develop theoretical knowledge and reflect on competencies, skills and attitudes required for mastery in academic and professional ultrasound practice.
Prerequisite: CLINIMAG 709 or MEDIMAGE 716
Restriction: CLINIMAG 704

CLINIMAG 715 **15 Points**
Ultrasound Clinical Practice
Develops the knowledge, competencies, skills and attitudes needed to demonstrate mastery in both academic and professional capability in ultrasound practice.
Prerequisite: Departmental approval

CLINIMAG 716 **15 Points**
Nuclear Medicine Clinical Practice
Develops the knowledge, competencies, skills and attitudes

needed to demonstrate mastery in both academic and professional capability in Nuclear Medicine practice.
Prerequisite: Departmental approval

CLINIMAG 717 **15 Points**
CT Clinical Applications
Addresses normal and abnormal Computed Tomography (CT) imaging appearances, protocol selection and modification, and application to clinical practice.
Restriction: CLINIMAG 707

CLINIMAG 718 **15 Points**
Special Topic

CLINIMAG 719 **15 Points**
Ultrasound Abdominal Clinical Applications
Addresses normal and abnormal ultrasound imaging appearances, scanning techniques and applications associated with abdominal ultrasound examinations. An emphasis will be placed on integrating theory and clinical practice elements to facilitate sound clinical decision making and clinical competence.
Prerequisite: MEDIMAGE 716
Restriction: CLINIMAG 704, 714

CLINIMAG 720 **15 Points**
Ultrasound Specialised Clinical Applications
Addresses normal and abnormal ultrasound imaging appearances, scanning techniques and applications associated with specialised ultrasound imaging. An emphasis will be placed on integrating theory and clinical practice elements to facilitate sound clinical reasoning, decision-making and clinical competence.
Prerequisite: MEDIMAGE 716
Restriction: CLINIMAG 704, 714

CLINIMAG 721 **30 Points**
Mammographic Practice
An in-depth understanding of mammographic imaging of breast anatomy and pathology, and the principles of mammographic technology and image quality. Addresses the knowledge, skills and attributes needed to demonstrate competence in clinical mammographic practice.

CLINIMAG 722 **30 Points**
Extended Mammographic Practice
An in-depth understanding of mammography assessment, interventional techniques and quality assurance. Addresses the knowledge, skills and attributes needed to demonstrate competence in academic and extended clinical mammographic practice.

CLINIMAG 723 **15 Points**
PET-CT Imaging
Addresses the fundamentals of PET-CT and hybrid imaging including equipment, normal and altered radiopharmaceutical biodistribution appearances and a range of clinical applications. An emphasis will be placed on integrating theory and clinical practice elements to facilitate sound clinical reasoning and decision-making.
Prerequisite: MEDIMAGE 720

CLINIMAG 724 **15 Points**
Cardiac Ultrasound Clinical Practice
Refines and expands specialised skills, knowledge, and attitudes required to demonstrate proficiency in the competency domains set out by the New Zealand Medical Radiation Technologists Board, within the scope of practice of Cardiac Ultrasound.
Prerequisite: Department approval

CLINIMAG 725 **15 Points**
PET-CT Clinical Practice
Addresses the fundamentals of PET-CT and hybrid imaging including equipment, normal and altered radiopharmaceutical biodistribution appearances and a range of clinical applications. An emphasis will be placed on integrating theory and clinical practice elements to facilitate sound clinical reasoning, decision-making. Develops the knowledge, competencies, skills and attitudes needed to demonstrate mastery in both academic and professional capability in PET-CT practice.
Prerequisite: MEDIMAGE 720
Restriction: CLINIMAG 723

Dietetics

Postgraduate 700 Level Courses

DIETETIC 703 **15 Points**
Clinical Nutrition: Disease Pathophysiology and Management - Level 9
Provides basic and practical material for professional application of clinical nutrition knowledge to dietetic practice and case management. Includes the aetiology and pathophysiology of disease states that are relevant to, and underpin, nutritional management and/or treatment. Includes assessment of nutritional status and nutritional requirements, fluid and electrolyte management, nutrition therapy by tube feeding, and dietetic management of various disease states.

DIETETIC 707 **30 Points**
Professional Skills 1
Evaluates professional communication, organisation and management skills that will enable students to work effectively as dietitians. Students will describe and appraise nutrition information, dietetic expertise, judgement and reasoning to the nutrition assessment, intervention and evaluation of nutrition and dietetic process plans. Introduces the principles of food service systems and public health to optimise nutrition, health and well-being.
Restriction: DIETETIC 704

DIETETIC 708 **30 Points**
Professional Skills 2
Integrates professional communication, organisation and management skills that will enable students to work effectively as dietitians. Students will apply nutrition knowledge, dietetic expertise, judgement and reasoning to the nutrition assessment, intervention and evaluation of nutrition and dietetic process plans. Applies the principles of food service systems and public health to optimise nutrition, health and well-being.
Prerequisite: DIETETIC 707
Restriction: DIETETIC 705

DIETETIC 709A **15 Points**
DIETETIC 709B **15 Points**
Professional Skills 3
Advances effective communication skills to optimise nutrition, health, well-being for individuals and communities. Integrates and appraises the dietetic process as it applies to clinical and dietetic practice. Critically evaluates the scientific principles of clinical nutrition to enable the translation of the evidence to best practice. Apply communication and organisation principles, which

will ensure effective, management and leadership within varied environments.
Prerequisite: DIETETIC 708
Restriction: DIETETIC 706
To complete this course students must enrol in DIETETIC 709 A and B

DIETETIC 710 **15 Points**
Research Methods in Human Nutrition
An overview of research design and techniques used in human nutrition research. Including the formation and critique of research design, data procedures, analysis and ethical issues.

DIETETIC 793A **45 Points**
DIETETIC 793B **45 Points**
Thesis - Level 9
Prerequisite: DIETETIC 703, 708
To complete this course students must enrol in DIETETIC 793 A and B

Digital Health

Postgraduate 700 Level Courses

DIGIHLTH 701 **15 Points**
Principles of Digital Health
The study of information technology and information management concepts relevant to the delivery of high quality and cost-effective healthcare. Theoretical frameworks such as data management, decision support, strategic planning and implementation, change management, knowledge management and privacy and other ethical aspects of digital health are included.
Restriction: HLTHINFO 728

DIGIHLTH 702 **15 Points**
Health Knowledge Management
Analyses the role and dynamics of knowledge in the working environment in the health sector, and develops aspects of knowledge infrastructure.
Restriction: HLTHINFO 723

DIGIHLTH 703 **15 Points**
New Zealand Health Data Landscape
An overview of key issues to support the appropriate and effective use of large volumes of routinely collected data to drive improvements in the delivery of health care. Ethical and equitable use of health data, critical evaluation of health data, identification of analytic methods and appropriate interpretation to support health care decision-making are discussed. Specific datasets are not analysed.
Restriction: HLTHINFO 725

DIGIHLTH 704 **15 Points**
Artificial Intelligence in Healthcare
Familiarises students with the main developments and applications of artificial intelligence in healthcare. The theoretical concepts and the technology including predictive and generative artificial intelligence are outlined. Governance issues are also addressed.
Restriction: HLTHINFO 730

DIGIHLTH 705 **15 Points**
Digital Health Design and Evaluation
Examines the design and development of digital health tools to meet end-user and health service needs. A series of case studies are used to illustrate the different stages of digital health tool development, evaluation, and implementation. Health service, researcher and end-user perspectives are covered.

DIGIHLTH 706 **15 Points**
Health Data Analytics
Analyses, interprets, and presents quantitative data to assist decision making in the health sector. Fundamental elements of statistics, data management, visualisation, epidemiology and computing are covered.

Health Management

Postgraduate 700 Level Courses

HLTHMGT 721 **15 Points**
Health Management
The application of general management principles to health organisations and resources, with particular reference to the nature of health organisations and health professional teams. Includes theory and concepts supporting the effective management of health human resources and financial resources.
Restriction: POPLHLTH 721

HLTHMGT 729 **15 Points**
Strategic Health Management
The importance and contribution of strategic management to the health sector is established through the application of strategic management thinking and theory to complex systems. Skills in strategy formulation are developed through application of the logic and processes of strategy.
Restriction: POPLHLTH 729

HLTHMGT 754 **15 Points**
Health Leadership
Establishes the conceptual foundation of health leadership related to the self, others and organisations. Contemporary leadership frameworks are compared and linked to leadership theory and concepts in the context of improving health and outcomes.
Restriction: NURSING 732, POPLHLTH 754

HLTHMGT 755 **45 Points**
HLTHMGT 755A **15 Points**
HLTHMGT 755B **30 Points**
Project in Health Leadership - Level 9
An applied research-based project in an aspect of health leadership. The project provides a capstone experience to the degree. Students critically analyse real-world cases and problems and develop evidence-informed and innovative solutions through expert consultation and literature research.
To complete this course students must enrol in HLTHMGT 755 A and B, or HLTHMGT 755

Health Psychology

Stage I

HLTHPSYC 122 **15 Points**
Behaviour, Health and Development
Introduction to the relationship between behaviour and the major biological, cognitive and social-emotional processes, applying them to health and development across the life span. Focuses on aspects of behaviour and development particularly relevant for the healthcare professional.
Restriction: POPLHLTH 122

Postgraduate 700 Level Courses

HLTHPSYC 714 **15 Points**
Health Psychology
A review of the psychological factors involved in health and illness. Topics include: the understanding of patient behaviour in medical settings, preventative health behaviour, cognitive models of illness, stress and illness, communication and adherence to treatment, the psychology of physical symptoms and coping with chronic disease.

HLTHPSYC 715 **15 Points**
Research Methods in Health Psychology
A review of the principal methods used in the design, conduct and analysis of studies in the health psychology area. This will focus on quantitative research, but qualitative methodologies will also be addressed.

HLTHPSYC 716 **15 Points**
Psychoneuroimmunology
Outlines the nature of the human immune system, its measurement and limitations of current practices and models. The main focus of the course is the extent to which psychological processes such as stress, emotions, and social interactions have been found to influence immune behaviour and the implications of these findings for health and wellbeing. Various theoretical frameworks through which psycho-immune relationships might be understood are presented and discussed.

HLTHPSYC 717 **15 Points**
Emotions, Emotion Regulation, and Health
Extends content knowledge in health psychology by focussing on the expanding literature linking emotions and emotion regulation with health outcomes. The course provides an overview of the nature and functions of emotions, discrete versus dimensional approaches, developmental and cultural considerations, and the links between emotions and cognitive processes. Specific topics include direct and indirect pathways linking emotions and health, links between emotions and health-deleterious behaviours, symptom detection, screening behaviour, treatment decision-making, and adherence.

HLTHPSYC 719 **15 Points**
Health Psychology Assessment
Extends content knowledge in health psychology through the development of skills in the assessment and evaluation of constructs commonly used in health psychological research and practice. Includes consideration of general issues in psychometric theory and the specific assessment issues commonly confronting widely-used health psychological research designs, as well as detailed coverage of specific content areas including illness cognitions, health-related psychophysiology, emotions, and health outcomes.
Restriction: PSYCH 701, 747

HLTHPSYC 720 **15 Points**
Health Psychology Interventions
Reviews the underpinning theory base for approaches commonly used in health psychology interventions such as CBT, and applies these approaches to examples from the field of health psychology. Individual and group/community treatment targets will be considered, including common difficulties that impact on disease occurrence or management, and the psychological consequences of disease.
Restriction: PSYCH 701, 748

HLTHPSYC 742A **15 Points**
HLTHPSYC 742B **15 Points**
Professional Practice in Health Psychology
Focuses on the professional intervention skills necessary to practice health psychology. Topics include: interviewing and assessment skills, formulation of problems, design and evaluation of interventions and models for interdisciplinary and multidisciplinary functioning. Relevant contexts include: hospitals, hospices, consultancies, general practice etc.
Prerequisite: HLTHPSYC 746
To complete this course students must enrol in HLTHPSYC 742 A and B

HLTHPSYC 743 **15 Points**
Psychopathology and Clinical Interviewing
Common psychological disorders encountered in clinical practice and health settings. Practical teaching of clinical interview and diagnostic skills is completed in class.

HLTHPSYC 744 **15 Points**
Research Topic in Health Psychology
Offers the opportunity for academic staff to provide a specific course of study for one or several students. It is available only by arrangement between the staff member(s) and students.

HLTHPSYC 745A **45 Points**
HLTHPSYC 745B **45 Points**
Practicum in Health Psychology - Level 9
A practical component of supervised applied work of not less than 1,500 hours in approved health settings, and other work as required. A detailed written report of the work undertaken will be required of the student.
Prerequisite: HLTHPSYC 746
To complete this course students must enrol in HLTHPSYC 745 A and B

HLTHPSYC 746 **30 Points**
HLTHPSYC 746A **15 Points**
HLTHPSYC 746B **15 Points**
Pre-internship Placement
Requires students to undertake 300+ hours in at least two approved clinical placements in addition to associated workshops and training over a twelve month period.
To complete this course students must enrol in HLTHPSYC 746 A and B, or HLTHPSYC 746

HLTHPSYC 755 **15 Points**
Special Study

HLTHPSYC 757 **15 Points**
Psychosomatic Processes
Focuses on the psychological, social and biological mechanisms behind illnesses that present with medically unexplained symptoms. Such illnesses include: chronic fatigue syndrome, chronic pain, irritable bowel syndrome and the somatoform disorders. The diagnostic controversy surrounding these disorders and treatment approaches for these conditions will be addressed.

HLTHPSYC 758 **15 Points**
Technology and Health
Explores the growing field of digital health and the impact that technology is having on psychological treatments and healthcare delivery. The course will cover a range of eHealth interventions in patient populations as well as discuss issues surrounding the development and implementation of digital health interventions.

HLTHPSYC 796A **60 Points**
HLTHPSYC 796B **60 Points**
Thesis in Health Psychology - Level 9
To complete this course students must enrol in HLTHPSYC 796 A and B

Health Sciences

Postgraduate 700 Level Courses

HLTHSCI 700 **30 Points**
Working with People with Long-term Conditions - Level 9
Long-term conditions present one of the most challenging global epidemics of the twenty-first century. This course is designed to support the development of a responsive person-centred healthcare workforce to meet the needs of people living with long-term conditions and to work with them to improve their self-efficacy and health outcomes.
Restriction: NURSING 738

HLTHSCI 701 **30 Points**
Self-management for People Living with Long-term Conditions - Level 9
Self-management is a key strategy to maximise quality of life for individuals and their families living with long-term conditions. This course is designed to strengthen assessment of self-management, collaborative person centred goal setting and planning. It focuses on developing motivational communication skills and collaborative strengths-based approaches which support efficacy and activation.
Restriction: NURSING 771

HLTHSCI 702 **30 Points**
Principles of Primary Health Care - Level 9
Assists primary healthcare professionals working in diverse settings to put population health into practice through primary healthcare. Determinants of health, equity, community empowerment, partnerships and effective ways to care for people with long-term conditions in communities will be explored.
Restriction: NURSING 772

HLTHSCI 703 **30 Points**
Psychological Interventions in Health Care - Level 9
Focuses on increasing health professionals' skills in the use of psychological interventions for people who have acute or long term mental health or physical health problems. Explores evidence-based psychological models, such as Cognitive and Behaviour Therapy and Motivational Interviewing. Illness beliefs that impact on the person's ability to engage effectively with treatment plans, and self-management of their health problem/s, will also be critiqued.
Restriction: NURSING 760, 781

HLTHSCI 704 **30 Points**
Primary Health Care of Children and Young People - Level 9
Equips healthcare professionals with the knowledge to provide primary and community health care, from a global to a national and local level, for well children and young people and those with long term conditions. All aspects of the course will be underpinned by the United Nations Convention on the Rights of the Child (UNCRC). Epidemiology, whānau (family) focused partnerships and interventions will be addressed along with the management of common conditions in the 0–25 year age range.
Restriction: NURSING 716, 788

HLTHSCI 705 **30 Points**
Mental Health and Addiction for Health Professionals - Level 9
Uses a person-focused theoretical framework to explore mental health and addiction problems presenting in non-specialist mental health settings. Conceptualises mental health and addiction problems as frequently co-occurring. Engagement, assessment, collaborative solution focused interventions, referral and care coordination will be explored.
Restriction: NURSPRAC 718, 719

HLTHSCI 706 **30 Points**
Special Topic

HLTHSCI 707 **30 Points**
Special Topic

HLTHSCI 708 **30 Points**
Special Topic

HLTHSCI 710 **30 Points**
Acute Stroke Care
Students will develop advanced interdisciplinary knowledge about pre-hospital care, diagnosis and hyperacute stroke care, secondary stroke prevention, stroke pathophysiology and management of risk factors. Students will evaluate and critique stroke epidemiology and equity of access to stroke services. Skills in assessment of neurological impairment, rehabilitation needs, and discharge planning will be developed with reference to clinical guidelines and local contexts.
Restriction: NURSPRAC 705

HLTHSCI 711 **30 Points**
Stroke Rehabilitation
Students will develop knowledge of the biological processes underpinning neurological recovery after stroke. Students will also develop interdisciplinary understanding of assessment and interprofessional treatment strategies for impairments in communication, swallowing, vision, sensation, cognition, mood, continence, and movement. Skills in assessing independence and participation using standard scales will be also be developed for application in clinical practice.

HLTHSCI 712 **30 Points**
Advanced Stroke Care
Students will evaluate and critique contemporary and evidence-based advanced clinical assessments and decision-making regarding driving, returning to work, and engaging in physical activity after stroke, including the effects of cognition, mood, and fatigue. Students will also develop advanced skills in communicating with patients and whānau on topics including stroke risk factors, self-management and adjusting to life after stroke.
Prerequisite: HLTHSCI 710, 711

HLTHSCI 713 **30 Points**
Improving Stroke Care
The organisation and conduct of clinical research will be evaluated and critiqued, with specific examples from the stroke research evidence base. Critical thinking skills will be developed and applied to basic research and clinical trials. The role of the healthcare professional in translating research into practice will be explored with reference to contemporary implementation theories, models and frameworks.
Prerequisite: HLTHSCI 710, 711

HLTHSCI 714 **15 Points**
Stroke Research
Contemporary qualitative and quantitative research methods and clinical trial designs are evaluated and critiqued, with specific examples from the stroke research evidence base. Students will apply this knowledge by formulating a research question and developing a research proposal, including consideration of ethics and institutional approvals, and the timeframe and resources required.
Prerequisite: HLTHSCI 710-713

HLTHSCI 715 **30 Points**
Research in Practice
Provides students with an in-depth understanding of undertaking research in the health sector. Building on learnings from prerequisite courses, students are supported to operationalise their research through completion of an ethics application as well as collecting and analysing data.
Prerequisite: NURSING 746, 782

HLTHSCI 789 **30 Points**
HLTHSCI 789A **15 Points**
HLTHSCI 789B **15 Points**
Research Project
To complete this course students must enrol in HLTHSCI 789 A and B, or HLTHSCI 789

HLTHSCI 790 **60 Points**
HLTHSCI 790A **30 Points**
HLTHSCI 790B **30 Points**
Dissertation - Level 9
Restriction: HLTHSCI 792
To complete this course students must enrol in HLTHSCI 790 A and B, or HLTHSCI 790

HLTHSCI 792 **45 Points**
Research Project - Level 9
Clinical knowledge and research skills are applied to undertake a practice-oriented research project. Students will work under the direct supervision of a staff member to define their research question, plan and execute their research activities.
Prerequisite: HLTHSCI 710-714

HLTHSCI 793A **45 Points**
HLTHSCI 793B **45 Points**
Research Portfolio - Level 9
Supervised research that represents the personal scholarly work of a student based on a coherent area of inquiry. Culminates in a conclusive piece of work related to a specific area of specialisation or scope of practice.
To complete this course students must enrol in HLTHSCI 793 A and B

HLTHSCI 795 **45 Points**
HLTHSCI 795A **22.5 Points**
HLTHSCI 795B **22.5 Points**
Research Project in Health Practice - Level 9
An applied research-based project relating to an aspect of health practice in a specialised community development setting. Students will critically analyse real-world cases and problems and develop evidence-informed, innovative solutions to community health issues through literature search, consultation with community leaders and relevant health professionals and through application of relevant community development and change frameworks.
Prerequisite: 15 points from POPLHLTH 701, 704, 705
To complete this course students must enrol in HLTHSCI 795 A and B, or HLTHSCI 795

HLTHSCI 796A **60 Points**
HLTHSCI 796B **60 Points**
Thesis - Level 9
To complete this course students must enrol in HLTHSCI 796 A and B

HLTHSCI 797A **60 Points**
HLTHSCI 797B **60 Points**
Research Portfolio - Level 9
Supervised research that represents the personal scholarly work of a student based on a coherent area of inquiry. Culminates in a conclusive piece of work related to a specific area of specialisation or scope of practice.
To complete this course students must enrol in HLTHSCI 797 A and B

Named Doctoral Courses

HLTHSCI 800 **30 Points**
Research in Action
Extend scholarly capabilities and in-depth understanding in the critique of the major methodological approaches to research investigations in the health sector. This will include Mātauranga Māori and will provide the rationale for the selection of their methodological approach to the investigation of their identified health issue that is the focus of their thesis research.
Prerequisite: HLTHSCI 801

HLTHSCI 801 **30 Points**
Healthcare Strategy and Planning
Provides advanced skills in key areas necessary for high-performing health leaders at senior and/or executive levels. It will support the development of students' ability to sustained commitment to the development of new ideas and practices at the forefront of health service delivery in Aotearoa New Zealand and internationally and integration of these concepts into their proposed thesis.

HLTHSCI 802 **30 Points**
HLTHSCI 802A **15 Points**
HLTHSCI 802B **15 Points**
Critical Synthesis of Health Issue
Critically appraise and synthesise the relevant evidence to demonstrate independent and original investigation of the health issue that is the focus of the student's thesis research, including consideration and integration of Mātauranga Māori.
Prerequisite: HLTHSCI 800, 801

HLTHSCI 803 **30 Points**
Research Proposal
Integrates detailed understanding of the theory, methodology and professional context for investigating a defined issue within healthcare. The focus of the course is on the development of the proposal for the thesis research. Students will critically review and demonstrate the integration of the proposed research within healthcare practice and service development and the implications of for health equity.
Prerequisite: HLTHSCI 800-802

HLTHSCI 897A **120 Points**
HLTHSCI 897B **120 Points**
Thesis
Prerequisite: HLTHSCI 800-803

MBChB

Part II

MBCHB 221A **60 Points**
MBCHB 221B **60 Points**
MBChB Part II
Through clinical scenarios, lectures and laboratories, students are introduced to human health and the description and pathogenesis of disease processes as a basis for the systematic study of human illness. This is integrated with the study of human organ systems through components focusing on musculoskeletal, digestive, genitourinary, cardiovascular and respiratory systems, linked with practical work in anatomy, physiology, pathology, medical imaging, and professional, clinical and communication skills.
Restriction: MBCHB 203, 205, 206, 209, 210, 211
To complete this course students must enrol in MBCHB 221 A and B

Part III

MBCHB 311A **7.5 Points**
MBCHB 311B **7.5 Points**
Medical Humanities
A variety of options from the study of medical humanities.
To complete this course students must enrol in MBCHB 311 A and B

MBCHB 321A **52.5 Points**
MBCHB 321B **52.5 Points**
MBCHB Part III
Through clinical scenarios, lectures, laboratories and problem-solving sessions, students explore human health and illness in a multidisciplinary manner with particular focus on the nervous system, blood, immunity and infection, reproduction, development and aging, and how bodily systems are regulated. This is integrated with practical work in anatomy, physiology, pathology, medical imaging and professional, clinical and communication skills, as well as ward-based learning experiences.
Prerequisite: MBCHB 221
Restriction: MBCHB 303, 305, 306, 312, 313
To complete this course students must enrol in MBCHB 321 A and B

Stage IV

MBCHB 401A **60 Points**
MBCHB 401B **60 Points**
MBChB Part IV
During Part IV, students spend 33 weeks in eight clinical attachments: emergency medicine, anaesthesiology, musculoskeletal, surgery, general and specialty medicine, geriatrics and general practice. These attachments are complemented by four weeks of topic teaching on campus. There is also a compulsory Māori and Pacific Health module.
Prerequisite: MBCHB 311, 321
To complete this course students must enrol in MBCHB 401 A and B

Stage V

MBCHB 501A **60 Points**
MBCHB 501B **60 Points**
MBChB Part V
Students will complete academic study of forty one weeks of which thirty one are in clinical placements. These are: general practice, obstetrics and gynaecology, psychiatry, paediatrics, specialty surgery and a selective. There are three weeks of formal learning on campus including a Population Health week. Other projects and asynchronous learning also needs to be completed. Students may undertake the majority of study in a regional rural setting in Northland.
Prerequisite: MBCHB 401
To complete this course students must enrol in MBCHB 501 A and B

MBCHB 551A **60 Points**
MBCHB 551B **60 Points**
MBChB Part VI
Students undertake patient care, under supervision, in the disciplines of general practice, medicine, surgery, emergency medicine, psychiatry, paediatrics, and obstetrics and gynaecology. Students also complete a week of clinical imaging, a compulsory course in core resuscitation skills and a revision course in procedural skills. The 44-week year includes an optional element for students to undertake study in areas of medicine of their choice (the Elective), or complete a substantial research project, for a period of 10 weeks.
Prerequisite: MBCHB 501
To complete this course students must enrol in MBCHB 551 A and B

Medical Imaging

Stage I

MEDIMAGE 199 **0 Points**
English Language Competency
To complete this course students must attain a level of competency in the English language as determined by the School of Medical Sciences. This course must be completed prior to enrolling in Part III of the Bachelor of Medical Imaging (Honours) degree.

Stage II

MEDIMAGE 201 **15 Points**
Fundamentals of Medical Imaging
Provides a fundamental understanding of Medical Imaging practice. Students will examine components of the clinical setting including patient care, cultural competency, and ethical considerations, to prepare them for the clinical learning environment. Students will apply these concepts to radiographic imaging in the context of routine radiographic examinations.

MEDIMAGE 202 **15 Points**
Medical Imaging Science
Provides students with a fundamental understanding of ionising radiation in the context of medical imaging. Addresses x-ray production, instrumentation, x-ray detection, digital imaging and the principles of quality assurance. Also examines the biological effects of ionising radiation, dose, and radiation protection.
Corequisite: MEDIMAGE 203

MEDIMAGE 203 **15 Points**
Radiographic Imaging I
Develops student knowledge of routine radiographic examinations in a Medical Imaging department. The anatomical relationships of the body and the imaging

examinations are explored with reference to the appendicular and axial skeleton.
Prerequisite: MEDIMAGE 201
Corequisite: MEDIMAGE 202

Stage III

MEDIMAGE 300 **15 Points**
Medical Imaging for Biomedical Science
Examines the physical principles of image production, instrumentation and safety considerations of specialised medical imaging modalities, including magnetic resonance imaging (MRI), ultrasound and nuclear medicine. Students will compare normal and abnormal imaging appearances associated with each of these modalities, and investigate a range of clinical and research applications.
Prerequisite: MEDSCI 201, 203
Restriction: MEDIMAGE 306

MEDIMAGE 301 **15 Points**
Radiographic Imaging II
Extends knowledge of radiographic examinations and procedures in a Medical Imaging department. The anatomical relationships of the body and the imaging examinations are explored with focus on specialist views and adaptive techniques.
Prerequisite: MEDIMAGE 199, 203

MEDIMAGE 302 **15 Points**
Sectional Imaging Anatomy and Pathology
Develops understanding of anatomy and pathology as applied in Medical Imaging. Focuses on sectional imaging anatomy, normal variants and common pathologies as demonstrated on CT (computed tomography), MRI (Magnetic Resonance Imaging) and ultrasound images.
Prerequisite: MEDSCI 201, 203

MEDIMAGE 304 **15 Points**
Advanced Radiographic Imaging
Develops understanding of advanced radiographic imaging examinations including mammography, angiography, interventional procedures, and computed tomography. Addresses the physical principles of image production, instrumentation and dose considerations. Students will investigate a range of clinical applications, and normal and abnormal imaging appearances associated with each of these modalities.
Prerequisite: MEDIMAGE 202, 203

MEDIMAGE 305 **15 Points**
Professional Practice in Medical Imaging
Develops fundamental concepts of professionalism, reflective practice and communication to patient-centred care and professional practice in Medical Imaging.
Prerequisite: MEDIMAGE 201

MEDIMAGE 306 **15 Points**
Specialised Medical Imaging
Examines specialised medical imaging modalities including ultrasound, nuclear medicine, and magnetic resonance imaging (MRI). Addresses the physical principles of image production, instrumentation and safety considerations. Students will investigate a range of clinical applications, and normal and abnormal imaging appearances associated with each of these modalities.
Prerequisite: MEDIMAGE 202, 203

MEDIMAGE 307 **15 Points**
Research Methods
An introduction to the principles of research methodology and evidence-based practice as applied to medical imaging. Addresses the knowledge required to evaluate research and the development of skills and research ethics necessary to conduct medical imaging research.
Restriction: MEDIMAGE 723

Postgraduate 700 Level Courses

MEDIMAGE 701 **15 Points**
Imaging Anatomy and Pathology
Addresses the principles of medical science at whole body, organ, tissue, cellular and sub cellular levels by developing an integrated understanding of anatomy and pathology as it applies to medical imaging in the clinical context. Specific anatomical regions and pathologies will be investigated to explain imaging appearances and evaluate the role of a variety of imaging modalities in patient pathways.

MEDIMAGE 702 **15 Points**
Professional Issues in Medical Imaging
Students will investigate the concept of professional practice leading to an exploration of current professional issues relevant to medical imaging. The course will develop students' ability to reflect on, and respond to, the wide variety of professional, ethical, medico-legal and clinical workplace issues generated in a rapidly changing environment.

MEDIMAGE 707 **15 Points**
Mammographic Technology
Provides students with an in-depth understanding of mammographic technology and its application. The course addresses the scientific principles of the modality including image formation, technical parameters, radiation safety specific to mammography, image quality, artefacts, and quality assurance. Equipment developments and new and evolving techniques will be examined.

MEDIMAGE 708 **15 Points**
Nuclear Medicine Technology
Extends students' specialised theoretical knowledge and understanding of the underlying scientific principles of nuclear medicine technology. Students will develop the ability to apply this knowledge to obtain images of optimal diagnostic quality.
Prerequisite: MEDIMAGE 720

MEDIMAGE 710 **15 Points**
CT Imaging Technology
Provides students with specialised theoretical knowledge and understanding of the underlying scientific principles of CT technology. Students will develop the ability to apply this knowledge to obtain images of optimal diagnostic quality.
Restriction: CLINIMAG 707

MEDIMAGE 711 **15 Points**
Musculoskeletal Trauma Image Evaluation
Provides students with the knowledge to evaluate radiographs of common musculoskeletal trauma in the clinical setting. Using a systematic method of image interrogation and a critical approach, students will develop the ability to provide a preliminary clinical image evaluation of common musculoskeletal trauma radiographs.

MEDIMAGE 712 **15 Points**
Musculoskeletal Pathology Image Evaluation
Provides students with the knowledge to evaluate radiographs of common musculoskeletal pathologies in the clinical setting. Using a systematic method of image interrogation and a critical approach, students will develop

the ability to provide a preliminary clinical image evaluation of common musculoskeletal pathology radiographs.

MEDIMAGE 713 **15 Points**
Special Studies

MEDIMAGE 714 **15 Points**
Fundamentals of Clinical MRI
Provides students with knowledge of the fundamental scientific principles of MRI. Students will examine components of the clinical environment in the context of patient care and safety. In addition, students will evaluate common clinical applications, developing the ability to analyse standard imaging protocols and explain normal and abnormal MR imaging appearances.

MEDIMAGE 715 **15 Points**
MRI Technology
Extends students' specialised theoretical knowledge and understanding of the underlying scientific principles of MR technology. Students will develop the ability to apply this knowledge to obtain images of optimal diagnostic quality.
Prerequisite: MEDIMAGE 714
Restriction: MEDIMAGE 703, 704

MEDIMAGE 716 **15 Points**
Fundamentals of Clinical Ultrasound
Provides students with knowledge of the fundamental scientific principles of ultrasound. Students will develop the ability to apply this knowledge to different patient populations. In addition, students will investigate standard sonography imaging techniques and analyse sonographic imaging appearances.

MEDIMAGE 717 **15 Points**
Ultrasound Imaging Technology
Explores the principles of ultrasound physics and instrumentation. Students will learn about the properties of sound waves and their behaviour with tissues in the production of ultrasound images, including the construction of artefacts, and develop the ability to manipulate and optimise image production by refining components and controls of the ultrasound machine, while considering the importance of bioeffects and safety.

MEDIMAGE 718 **15 Points**
Acute Chest Image Evaluation
Provides students with the knowledge to evaluate acute chest radiographs in the clinical setting. Using a systematic method of image interrogation and a critical approach, students will develop the ability to provide a preliminary clinical image evaluation of common acute chest radiographs.

MEDIMAGE 719 **15 Points**
Paediatric Image Evaluation
Provides students with the knowledge to evaluate radiographs of common paediatric trauma and pathologies in the clinical setting. Using a systematic method of image interrogation and a critical approach, students will develop the ability to provide a preliminary clinical image evaluation of common paediatric radiographs.

MEDIMAGE 720 **15 Points**
Fundamentals of Clinical Nuclear Medicine
Provides students with knowledge of the fundamental scientific principles of nuclear medicine. Students will examine components of the clinical environment in the context of patient care and safety. In addition, students will evaluate common clinical applications, developing the ability to analyse standard imaging protocols and explain normal and altered biodistribution and nuclear medicine imaging appearances.

MEDIMAGE 721 **15 Points**
MRI Safety
Extends students' understanding of the underlying physical principles related to a range of MRI safety issues. The course will provide students with the opportunity to explore these safety issues in greater depth and to apply this knowledge in critically evaluating current policies and practices. New and emerging safety topics will also be examined.
Prerequisite: MEDIMAGE 714

MEDIMAGE 722 **15 Points**
Special Topic: Introduction to Cardiac Ultrasound
Introduces cardiac ultrasound by exploring the analysis and interpretation of the 2D, M-mode, spectral Doppler, and colour Doppler components of the normal cardiac ultrasound examination. An emphasis will be placed on integrating theory and clinical practice elements to facilitate sound clinical reasoning, decision-making and clinical competence.

MEDIMAGE 723 **15 Points**
Research Methods
Provides students with a comprehensive understanding of the principles of research methodology and evidence based practice as applied to medical imaging. Addresses the knowledge required to evaluate research and the development of skills and research ethics necessary to conduct medical imaging research.
Restriction: MEDIMAGE 307

MEDIMAGE 724 **15 Points**
Ultrasound Assessment of Heart Disease 1
Expands on comprehension of the normal cardiac ultrasound examination, by developing the specialised skills and knowledge required to critically analyse and interpret ventricular function, pulmonary and systolic hypertension, aortic valve pathology, and the athlete's heart, using various ultrasound modalities. An emphasis will be placed on integrating theory and clinical practice elements to facilitate sound clinical reasoning, decision-making, and clinical competence.
Prerequisite: MEDIMAGE 717, 722

MEDIMAGE 725 **15 Points**
Cardiac Pathophysiology
Explores cardiovascular disease as it pertains to a disturbance in the normal structure and function of the heart. Students build on an introduction to normal cardiac structure and function to gain extensive knowledge of the changes to anatomy and physiology that lead to cardiovascular conditions. Students can integrate this knowledge of aetiology, clinical features, and treatment options, into the clinical setting.

MEDIMAGE 726 **15 Points**
Ultrasound Assessment of Heart Disease 2
Further develops the knowledge and skills required to critically analyse and interpret cardiac pathology and associated interventions including valvular heart disease, infective endocarditis, diseases of the aorta, cardiac masses, and systemic diseases. An emphasis will be placed on integrating theory and clinical practice elements to facilitate sound clinical reasoning, decision-making, and clinical competence. Students will continue their exploration of cultural safety.
Prerequisite: MEDIMAGE 724

MEDIMAGE 727 **15 Points**
Introduction to Congenital Heart Disease
Expands knowledge of normal foetal cardiovascular system development which is imperative to understanding the intricacies of congenital heart lesions. Integrates a comprehension of congenital heart lesions with a systematic segmental approach to scanning allows practitioners to identify congenital lesions and interrogate the haemodynamic consequences using ultrasound, pre- and post-medical intervention.

MEDIMAGE 728 **15 Points**
Advanced Concepts in Cardiac Ultrasound
Further develops the knowledge and skills required to critically analyse and interpret complex forms of heart disease while beginning to explore advanced echocardiography techniques. Complementary diagnostic modalities used in the investigation of heart disease are introduced. Integrating knowledge of a broader range of diagnostic modalities allows practitioners the opportunity to correlate diagnostic findings, and provide a deeper understanding of underlying pathology.
Prerequisite: MEDIMAGE 726

MEDIMAGE 729 **15 Points**
Theranostics
Addresses principles, theories and clinical applications of theranostics in nuclear medicine and molecular imaging. Radiopharmaceuticals, biodistribution, radiation safety aspects and the role of imaging in theranostics will be explored. In addition, students will investigate new and evolving techniques or applications.
Prerequisite: MEDIMAGE 720

MEDIMAGE 740 **30 Points**
MEDIMAGE 740A **15 Points**
MEDIMAGE 740B **15 Points**
Research Project - Level 9
To complete this course students must enrol in MEDIMAGE 740 A and B, or MEDIMAGE 740

Medical Science

Stage I

MEDSCI 100G **15 Points**
Human Mind and Body Relationships
Humans share with other living things the features of physical self-generation and adaptation to the environment. Humans also live in a mental (mind) world and maintain relationships with our perceived environments. Minds and bodies mutually affect one another. This mind/body dance, which is explored in this course, is what gives rise to all of human behaviour from simple daily activities to the highest forms of creativity.

MEDSCI 101G **15 Points**
Environmental Threats to Human Health
Our environment sustains our lives but at times threatens our health. These threats may occur naturally, or arise from damage we have inflicted on the environment. This course considers health impacts of climate change, pollution, lifestyle choices, poverty and affluence, workplace hazards, emerging infectious diseases, and dangers affecting cancer risk.

MEDSCI 142 **15 Points**
Biology for Biomedical Science: Organ Systems
Introduction to human biology with particular emphasis on integrated organ function. The course will deal with: structures and processes associated with the function of the nervous, locomotor, cardiovascular, respiratory, digestive, renal, endocrine, musculoskeletal and reproductive systems.
Restriction: HUMANBIO 142

Stage II

MEDSCI 201 **15 Points**
Human Structure and Function
Presents the structure of biological systems with special reference to human biology, from the levels of histology through to gross anatomy. Specific examples of the correlation between structure and function will be considered. An introduction to current techniques for the visualisation of biological structure will be presented.
Prerequisite: BIOSCI 107, MEDSCI 142

MEDSCI 202 **15 Points**
Microbiology and Immunology
An introduction to the nature and roles of bacteria, viruses, fungi and parasites as the causative agents of human diseases. Topics include: the defence mechanisms of the body, the immune system including autoimmunity and allergy, control of disease by antimicrobials, sterilisation, disinfection and infection control practice.
Prerequisite: BIOSCI 107, MEDSCI 142
Restriction: OPTOM 241, PHARMACY 203

MEDSCI 203 **15 Points**
Mechanisms of Disease
Outlines the basic mechanisms, operating at the molecular, cellular and tissue levels, by which human disease develops. These include genetic factors, cell injury, inflammation, repair, circulatory disturbances, and neoplastic change. These mechanisms are illustrated by descriptions of the pathogenesis of specific diseases that are relevant to the New Zealand situation, or are the focus of current biomedical research.
Prerequisite: BIOSCI 107, MEDSCI 142

MEDSCI 204 **15 Points**
Pharmacology and Toxicology
A solid grounding in the principles underlying pharmacology and toxicology, including the nature of drug targets, their interaction and response (pharmacodynamics), the fate of drugs within the body (pharmacokinetics), toxicity classification and testing, poisons and antidotes, adverse drug reactions, selective toxicity, drug discovery and development. Selected drug examples will be studied to illustrate key principles of clinical pharmacology.
Prerequisite: CHEM 110, MEDSCI 142, and 15 points from BIOSCI 106 or 107

MEDSCI 205 **15 Points**
The Physiology of Human Organ Systems
An integrative approach is used to study fundamental physiological processes which enable the body to overcome the challenge of life. Drawing on examples of normal and abnormal function, the course examines the interaction of vital physiological processes, from cellular control mechanisms to multiple organ systems. Topics include: control of fluid and electrolytes, cardiovascular control, energy use, and the delivery of oxygen and metabolites.
Prerequisite: BIOSCI 107, MEDSCI 142
Restriction: PHARMACY 205

MEDSCI 206 **15 Points**
Principles of Neuroscience
The impact of neuroscience revolution on our understanding of human physiology and biomedical research is reviewed. Topics include: mechanisms of neurotransmission, learning, memory, sensory perception (vision, hearing, touch and smell) and application of gene therapy for treating neurological diseases. Special emphasis is placed on the integration and control of physiological function by the nervous system. Examples include control of movement and coordination, regulation of reproduction, blood pressure, breathing, appetite, body weight and sexuality. Developmental neuroscience is also considered. Laboratory exercises provide insight into neural structure and function and include application of neuroimaging technologies.
Prerequisite: BIOSCI 107, MEDSCI 142

Stage III

MEDSCI 300 **15 Points**
Analytical Anatomy and Visualisation
Examines the analysis, description and quantification of anatomical structures, including visualisation methodologies and the challenges of imaging subcellular to whole organ anatomy. Emphasis is placed on emerging applications and technology, including computational anatomy, surgical planning and research applications. Appropriate uses of human tissue, modern imaging technologies, tissue preparation, imaging artefacts, and novel visualisation techniques will be explored.
Prerequisite: MEDSCI 201

MEDSCI 301 **15 Points**
Molecular Basis of Disease
An in-depth analysis of the cellular and molecular basis of disease, including the role of environmental and inherited risk factors, as well as mechanisms of response to cell injury and inflammation in the disease process. A number of examples will be studied including cancer and infectious disease.
Prerequisite: MEDSCI 203

MEDSCI 302 **15 Points**
Cancer Biology
A study of the scientific basis of cancer including: mechanisms underlying the pathogenesis of cancer, carcinogenesis, DNA damage and repair, properties of cancer cells (including abnormalities of growth and cell cycle control), the growth of tumours, the classification and histopathology of cancers, and an introduction to therapeutic strategies.
Prerequisite: BIOSCI 356 or MEDSCI 203

MEDSCI 309 **15 Points**
Biophysics of Nerve and Muscle
An advanced treatment of the physiology of excitable cells. Topics include: the biophysical basis of membrane potential, the spread of electrical activation and synaptic transmission, structure, excitation, mechanics and energetics of muscle and functional differences among muscle types. The approach is quantitative with particular emphasis on current advances in the field.
Prerequisite: MEDSCI 205, 206, or for BE(Hons) students, 15 points from MEDSCI 205 and 15 points from courses at Stage II listed in Part II of the Biomedical Engineering specialisation in the BE(Hons) Schedule

MEDSCI 311 **15 Points**
Cardiovascular Biology
An advanced treatment of the human cardiovascular system that provides an integrated framework for understanding the structure, function and regulation of the heart and circulation, and their modification by drugs. Topics include: the energetics and mechanics of the heart, the regulation of heart rhythm and the control of blood pressure and the regulation of flow through the microcirculation. The course is illustrated using examples drawn from current research in the field and from representative disease states.
Prerequisite: MEDSCI 205

MEDSCI 312 **15 Points**
Neuroendocrinology of Growth and Metabolism
An introduction to the mechanism controlling the production of hormones and how these achieve their effects in regulating body function. The course focuses in particular on the hormone systems controlling growth and metabolism and contrasts the differences between fetal and adult life. It also highlights how defects in endocrine systems are associated with conditions such as obesity and diabetes.
Prerequisite: MEDSCI 205

MEDSCI 313 **15 Points**
Reproductive Biology
Aspects of reproductive biology including: regulation of gonadal function, the menstrual and oestrus cycles, ovulation, spermatogenesis, feto-maternal physiology including placental function, animal reproduction and assisted reproductive technologies.
Prerequisite: 15 points from BIOSCI 107, 203, MEDSCI 142

MEDSCI 314 **15 Points**
Immunology
The biology, cellular and molecular events underlying the immune response. The nature and characteristics of antibody-mediated and cell-mediated immunity including antigen recognition and presentation, antibody and T cell receptor structure, immune regulation and cytokines, immunogenetics and histocompatibility. The relationships of the immune system to the activities of pathogenic organisms. Applied immunology including biotechnology, infection, autoimmunity, tumour immunology, transplantation and immunodeficiency.
Prerequisite: MEDSCI 202 or BIOSCI 201

MEDSCI 315 **15 Points**
Nutrition, Diet and Gene Interactions
Gene-X environment interactions are increasingly being recognised to play an important role in the risk and pathogenesis of various diseases. The interaction between genetics and dietary factors in modulating mechanism of gut, bone, cancer and metabolic disease will be considered in this course, as well as the technologies required to understand such interactions.
Prerequisite: BIOSCI 202 or 203

MEDSCI 316 **15 Points**
Sensory Neuroscience: From Molecules to Disease
The physiology of neurosensory systems in health and disease with an emphasis on clinical relevance and current advances in research. The course will provide in-depth coverage of mechanisms involved in each system at a broad systemic level, down to the molecular level. Topics include vision, hearing, balance, olfaction, taste, touch and pain.
Prerequisite: MEDSCI 206

MEDSCI 317 **15 Points**
Integrative Neuroscience: From Fetus to Adult
The development and function of the central nervous system in health and disease. Topics include development of the CNS, synaptic function in health and disease, development and pathophysiology of motor systems, perinatal and adult brain ischemia and neuroprotection, stroke, chronobiology/human circadian rhythm and olfactory dysfunction during dementia, Parkinson's and Alzheimer's disease. The objective of this course is to provide an overview of the development and function of the central nervous system in health and disease. The course explores the anatomy and physiology of the brain during development into adulthood, and highlights the pathologies of various central nervous system disorders.
Prerequisite: MEDSCI 206

MEDSCI 318 **15 Points**
Pharmacokinetics and Drug Toxicity
Considers the biochemical processes involved in achieving clinically-relevant drug concentrations that result in therapeutic effects and drug toxicity, from drug input, distribution, and elimination plus the ways in which these processes are described (pharmacokinetic modelling). Explores factors such as drug-drug interactions, pharmacogenetics, dosing and pharmacokinetic considerations in selected populations and that may influence both clinical effectiveness and drug toxicity.
Prerequisite: MEDSCI 204 and 30 points from MEDSCI 203, 205, BIOSCI 203
Restriction: MEDSCI 303, 306, 321

MEDSCI 319 **15 Points**
Molecular Pharmacology
Explores the cellular and molecular mechanisms of drug action with a focus on G-protein coupled receptors and biochemical targets for cancer therapy. Drug design is considered from the perspective of in silico modelling, biochemical assessment and intracellular signalling.
Prerequisite: MEDSCI 204 and 30 points from MEDSCI 203, 205, BIOSCI 203
Restriction: MEDSCI 304, 321

MEDSCI 320 **15 Points**
Pharmacology of the Brain and Body
Extends the principles of pharmacology acquired at Stage II to discuss how diseases can be treated in a variety of organ systems including the cardiovascular, gastrointestinal, endocrine, reproductive, and respiratory systems with emphasis on the central nervous system. Covers the mechanisms of action of drugs, and the influence of anatomy, physiology and pathology.
Prerequisite: MEDSCI 204 and 30 points from MEDSCI 203, 205, 206, BIOSCI 203
Restriction: MEDSCI 305, 307

MEDSCI 321 **15 Points**
Special Topic
Prerequisite: MEDSCI 204 and 30 points from BIOSCI 203, MEDSCI 203, 205
Restriction: MEDSCI 303, 306, 318, 319, 735

MEDSCI 399 **15 Points**
Capstone: Medical Sciences
Students will integrate and communicate knowledge attained during their study of medical sciences ranging from normal physiology through pathological process to the safe and effective use of medicines to treat diseases. Students will consider wider societal issues involved in research, such as human and animal ethics, within the context of Aotearoa and Te Tiriti o Waitangi.
Prerequisite: 15 points from MEDSCI 318-320 and 15 points from MEDSCI 301-321
Restriction: BIOMED 399, BIOSCI 399, PHARMCOL 399, PHYSIOL 399

Postgraduate 700 Level Courses

MEDSCI 700 **15 Points**
Drug Discovery Biology
Reviews recent studies on the use of chemical and genetic methods to characterise the role of proteins in disease and their potential as drug targets. Topics will include proteins involved in regulation of immune response, lipid mediated cell signalling pathways, drug-protein interactions, some discovery methods, and pre-clinical studies on mechanism of action.

MEDSCI 703 **15 Points**
Advanced Biomedical Imaging
Theory and practice of biomedical imaging from the sub-cellular to whole body level with specific emphasis on recent developments. Principles of digital image-processing and image analysis (including quantitative morphology), computed tomography and volume rendering and analysis. Imaging modalities including atomic force microscopy, light and confocal microscopy, electron microscopy, X-ray, CT, ultrasound and magnetic resonance imaging.

MEDSCI 704 **15 Points**
Stem Cells and Development
Stem cell biology and the genetic regulation of developmental processes will be examined in normal and disease settings. Blood, immunity, vascular networks and the kidney will be used as systems to explore important concepts in organ development and regeneration. This knowledge will be applied in understanding disease processes such as leukaemia, inflammation and kidney disorders, and in designing new therapeutic strategies.

MEDSCI 705 **15 Points**
Infection, Immunity and Disease
Examines the ways in which host immune mechanisms control infection, infectious organisms evade host defence mechanisms, and the consequences of these processes for the host. Examples of human infectious diseases will include: HIV, hepatitis B, influenza, tuberculosis and streptococcal infections. Consideration of the consequences of infection will incorporate discussion of immune self/non-self discrimination, immune tolerance and autoimmune mechanisms, including the impact of response against infections on autoimmunity.

MEDSCI 706 **15 Points**
Genomic Medicine
Examines a range of medical genetic disorders that illustrate principles of disease mechanisms, diagnosis and management. These will include: haemophilia, familial cancer, late-onset neurological disorders and mitochondrial disease.

MEDSCI 707 **15 Points**
Antimicrobials and Resistance
Antimicrobial resistance is a public health concern developing worldwide. The nature of antimicrobial agents will be explored by examining their discovery, development and mechanisms of action. Antimicrobial resistance will be studied to understand both mechanisms of resistance and the factors that drive resistance. Emphasis will be placed

on recent advances in the discovery of antimicrobials and the development of novel strategies for the control of infectious agents.

MEDSCI 708 **15 Points**
Advanced Immunology and Immunotherapy
Explores recent advances in immunology including the genes, proteins and cell types involved in the innate and adaptive immune response, with a focus on how key components are integrated at a systems level to determine immune outcomes. Examines a range of inflammatory and immune mediated diseases, together with methods of immunotherapy, including the latest approaches to combat cancer and autoimmune disease.

MEDSCI 709 **15 Points**
Nutrition in Health and Disease
The influence that dietary patterns, foods and food components have on the promotion and protection against the common nutrition-related diseases in New Zealand. The relevant epidemiological, clinical, and biochemical/physiological aspects of each disease are covered.

MEDSCI 710 **15 Points**
Nutrition Mechanisms
The mechanisms by which food and food components can influence disease processes. Topics covered include: the interaction between genotype and nutrition, antioxidants and oxidation protection mechanisms, dietary toxicology, the process of atherosclerosis, and the influence of the intra-uterine environment on growth and disease.

MEDSCI 711 **15 Points**
Clinical Nutrition
Prevention of malnutrition and maintenance of nutritional status during acute and chronic illness through 'artificial' or 'interventional' means. Diagnosis and quantitation of malnutrition, and monitoring of nutrition support therapy. Practical techniques, common complications and quality assurance through a multidisciplinary team approach. Includes treatment of anorexia nervosa and cancer cachexia.

MEDSCI 712 **15 Points**
Critical Evaluation of Nutritional Therapies
The suggested roles for micronutrients, 'nutriceuticals' and functional foods in general health, exercise performance and disease are evaluated using an evidence-based approach. The roles of micronutrients as dietary supplements and the potential actions of nutriceuticals and functional foods are also critically evaluated. Regulatory and ethical issues in the use of nutritional remedies are considered, including their use as supplements in chemotherapy or other conventional therapies, or in individuals with no symptoms.

MEDSCI 713 **15 Points**
Principles of Cancer Therapy
Examines the molecular and cellular processes underlying cancer treatment and the development of tumour-selective therapy; the principles of radiotherapy and chemotherapy; DNA and the basis for its interactions with anticancer drugs; recognition of DNA by proteins; exploitation of these processes by anticancer drugs, oncogenes and other regulatory gene products; signal transduction mechanisms and strategies for changing cell cycle control; cytokines and the role of host responses in cancer therapy; new approaches to cancer therapy including gene therapy and photodynamic therapy.
Prerequisite: MEDSCI 302

MEDSCI 714 **15 Points**
Advanced Cancer Biology
Advanced studies of concepts related to the biology of cancer. These will include: molecular mechanisms, signal transduction pathways, genomic instability, telomeres and telomerase, anoikis, DNA damage sensing mechanisms, and hypoxia and tumour progression.
Prerequisite: MEDSCI 302

MEDSCI 715 **15 Points**
Molecular Toxicology
Covers the current understanding of mechanisms implicated in toxicity of drugs and environmental chemicals plus the basis of inter-individual susceptibility. The course identifies strategies used to predict and prevent adverse reactions during drug development.

MEDSCI 716 **15 Points**
Advanced Drug Disposition and Kinetics
Advanced study of the absorption, distribution, metabolism and excretion of drugs, and the analysis of these processes. Also included are: in vivo/in vitro techniques in drug ADME studies used in drug development; drug analysis in biological matrices; and pharmaco-genomic aspects related to drug disposition.

MEDSCI 717 **15 Points**
Advanced Neuroscience: Neuropharmacology
An advanced study of current research topics in neuroscience. Involves critical analysis of the literature within the context of a series of major research themes that encompass models from molecular through to systems level neuroscience. Themes will be selected from the following areas: neurogenesis, neurodegeneration and/or addiction.

MEDSCI 718 **15 Points**
Pharmacology of Anaesthetics and Analgesics
General aspects of anaesthetics and analgesics. Topics covered include the development of modern anaesthesia, the mechanisms of action of drugs used in general and local anaesthesia, and issues surrounding safety and efficacy of anaesthesia, including drug error and circadian variation in drug action.

MEDSCI 719 **15 Points**
Pharmacometrics
An introduction to the application of mathematical models used in the interpretation of pharmacological observations. Computer-based analysis methods are investigated using individual and population-oriented approaches.

MEDSCI 720 **15 Points**
Biomedical Research Techniques
An introduction to some of the most commonly used techniques used in today's research laboratories; from tissue culture to confocal microscopy, RT-PCR to mass spectrometry, immunoassay to cloning. Emphasis is placed on understanding the principles behind the techniques, how they are applied to address specific questions, and how to evaluate and use the data they generate.

MEDSCI 722 **15 Points**
Clinical Pharmacology
The disposition and action of medicines in humans of all ages will be explored, as well as adverse reactions, effects of pregnancy, medicine classification, and evaluation of clinical trials. Emphasis is placed on understanding the sources of variability of medicines and the use of target concentration intervention.

MEDSCI 723 **15 Points**
Cancer Pharmacology
The pharmacological basis of the action of anti-tumour drugs relevant to human cancer therapy, emphasising the variability of chemotherapy effects, interactions between anti-cancer agents and early phase clinical trials.

MEDSCI 727 **15 Points**
Advanced Neuroscience: Neurophysiology
An advanced coverage of selected topics in neurophysiology and brain pathophysiology. Includes presentations and critical analysis by the students of the current scientific literature within the context of several major research themes that encompass models from molecular and cellular to systems level. Themes will be selected from the following module: (1) Astrocyte physiology and pathophysiology, (2) Spinal cord injury and the extracellular matrix, (3) Microglia physiology and pathophysiology, and (4) Biomarkers of dementia.
Prerequisite: MEDSCI 206, 317

MEDSCI 729 **15 Points**
Perinatal Physiology and Medicine
Fetal development has long-term consequences for health. This advanced course offers a wide range of research themes relating to fetal development and future health. Topics include: placental development, fetal physiology, and endocrine regulation and metabolic function during fetal and postnatal life. The course explores pathogenesis of disease and injury of the fetus and newborn, and how biomedical research leads to potential clinical treatment strategies.

MEDSCI 730 **15 Points**
Reproductive Science
Molecular regulation and coordination of normal reproduction. The reproductive disorders that arise when normal biological processes are disrupted. Recent molecular methods have enabled us to study these processes and to understand how they can go wrong. Genomic and proteomic approaches to the understanding of reproduction and reproductive disorders will be presented. Examination of the new technologies that allow us to overcome some of these reproductive problems.

MEDSCI 731 **15 Points**
Advanced Reproductive Biology
Focusses on recent scientific advances in the field of human reproductive biology and medicine, with an emphasis on developing critical thinking skills. Examines the scientific approaches used to understand normal and pathological pregnancies, recent advances in reproductive medicine, and the ethical implications and considerations of assisted reproductive technologies.

MEDSCI 732 **15 Points**
Molecular Aspects of Endocrinology and Metabolism
Explores how hormones are able to control such a wide range of physiological processes. Covers molecular aspects of hormone action with particular reference to the neuroendocrine and peripheral endocrine systems that control appetite and metabolism. Other topics covered include how defects in hormone action lead to diseases such as cancer, obesity, Type-2 diabetes and cardiovascular disease.

MEDSCI 734 **15 Points**
Advanced Cardiovascular Science
Examines the current state of the field of research relating to cardiovascular physiology, including critical analysis of the literature. This course portrays how an integrative physiological approach can reveal new levels of understanding in the field of cardiovascular research. Examples of this approach will be drawn from research programmes within the broad area of cardiovascular biology.
Prerequisite: 15 points from MEDSCI 309, 311, 312, 316, 317

MEDSCI 735 **15 Points**
Concepts in Pharmacology
Explores cellular and molecular mechanisms of drug action and drug discovery and development from the perspective of in silico modelling, biochemical assessment, intracellular signalling and human disease. Considers the pharmacokinetic processes involved in achieving clinically-relevant drug concentrations, the link between concentration and effect, the time course of effect and factors that may influence both clinical effectiveness and drug toxicity.
Restriction: MEDSCI 321

MEDSCI 737 **15 Points**
Biomedical MRI
Provides students with a thorough understanding of a range of biomedical MRI techniques as well as advanced clinical MRI applications such as functional imaging of the brain and cardiovascular system. Laboratories will cover MRI applications in basic science, and MRI applications in clinical medicine.

MEDSCI 738 **15 Points**
Biological Clocks
Chronobiology – the study of biological rhythms and the clocks that control them. Theory, anatomical location and molecular machinery of biological clocks will be covered, as will the control of rhythms of different time scales from days (circadian rhythms) to years (circannual rhythms). The influence the human circadian clock has on physiology and drug efficacy, and the effect hospitalisation has on the control of sleep cycles will be given special attention.

MEDSCI 739 **15 Points**
Advanced Sensory Neuroscience
Advanced study of the physiology of neurosensory systems in health and disease. Provides an in-depth coverage of the molecular, cellular and systemic mechanisms underlying vision and hearing.
Prerequisite: MEDSCI 316

MEDSCI 741 **15 Points**
Medical Imaging Technology - Level 9
Study of the physical processes underlying current clinical imaging techniques. Topics include: physical principles of image acquisition, processing and display; artefacts, image acquisition methods and parameters and their impact upon patient safety and image quality; management of radiation exposure; principles of X-Ray, fluoroscopic, mammographic, computed tomography, magnetic resonance imaging (MRI), nuclear medicine, ultrasound imaging; MRI safety; dose estimation and quality assurance. Emphasis is placed on patient and practitioner care, image quality and artefacts in relation to image interpretation.

MEDSCI 742 **15 Points**
Anatomy for Medical Imaging - Level 9
Study of clinical and radiographic human anatomy, as demonstrated by current imaging techniques. Topics include: developmental anatomy, surface anatomy, functional anatomy and cross sectional anatomy. Emphasis is placed on normal variants and range of normality, and

how to give a structured account of anatomy in relation to image analysis and identification.

MEDSCI 743 **15 Points**
Design and Analysis in Biomedical Research
An in-depth exploration of the principles of experimental design and data analysis in biomedical contexts. A focus on critical appraisal of choice of statistical tests to address experimental questions and appropriateness and limitations of analysis and interpretation of results will be undertaken. Practical and computer statistical packages are used.
Restriction: MEDSCI 725

MEDSCI 744 **15 Points**
Project Design in Biomedical Science
An individualised course of study in which each student will provide an exposition of the background to a specific research question in the biomedical sciences combined with a proposal of the best methods to investigate that specific question. A holistic consideration, including the ethical, regulatory, budgetary as well as, any other relevant aspects, of the chosen methods will be documented.
Prerequisite: 30 points from Medical Science at Stage III or higher with a B– or better
Restriction: BIOSCI 761, MEDSCI 701, OBSTGYN 705

MEDSCI 745 **15 Points**
Drug Development
Examines approaches for bringing potential new therapeutic drugs from the discovery bench into the clinic and the drug development process. Explores a variety of drugs and uses case studies to provide a practical understanding. Integrates multidisciplinary perspectives, drawn from academic and industry experiences, on practices that contribute to the development of safe and effective drug therapies.
Prerequisite: 30 points from Biological Sciences, Medical Sciences or Pharmacology at Stage III or higher, or equivalent

MEDSCI 746 **15 Points**
Special Topic

MEDSCI 747 **15 Points**
Special Topic

MEDSCI 748 **15 Points**
Special Topic

MEDSCI 760 **15 Points**
Early Life Nutrition, Lifelong Health
An in-depth exploration of the importance of the early life nutritional environment for health across the life course including critical appraisal of evidence from epidemiological, clinical, and pre-clinical studies.

MEDSCI 784A **45 Points**
MEDSCI 784B **45 Points**
Thesis - Level 9
To complete this course students must enrol in MEDSCI 784 A and B

MEDSCI 785A **45 Points**
MEDSCI 785B **45 Points**
Thesis - Level 9
To complete this course students must enrol in MEDSCI 785 A and B

MEDSCI 786A **60 Points**
MEDSCI 786B **60 Points**
Thesis - Level 9
To complete this course students must enrol in MEDSCI 786 A and B

MEDSCI 790 **60 Points**
MEDSCI 790A **30 Points**
MEDSCI 790B **30 Points**
Dissertation - Level 9
To complete this course students must enrol in MEDSCI 790 A and B, or MEDSCI 790

MEDSCI 793A **45 Points**
MEDSCI 793B **45 Points**
Research Portfolio - Level 9
Supervised research that represents the personal scholarly work of a student based on a coherent area of inquiry. Culminates in a conclusive piece of work related to a specific area of specialisation or scope of practice.
To complete this course students must enrol in MEDSCI 793 A and B

MEDSCI 794A **45 Points**
MEDSCI 794B **45 Points**
Thesis - Level 9
To complete this course students must enrol in MEDSCI 794 A and B

MEDSCI 796A **60 Points**
MEDSCI 796B **60 Points**
Thesis - Level 9
To complete this course students must enrol in MEDSCI 796 A and B

MEDSCI 797A **60 Points**
MEDSCI 797B **60 Points**
Research Portfolio - Level 9
Supervised research that represents the personal scholarly work of a student based on a coherent area of inquiry. Culminates in a conclusive piece of work related to a specific area of specialisation or scope of practice.
To complete this course students must enrol in MEDSCI 797 A and B

Medicine

Postgraduate 700 Level Courses

MEDICINE 700 **15 Points**
Designing Safer Systems
The application of improvement science and safety science methods to achieve better outcomes for patients by reducing harm, waste and variation in health care; includes a focus on measurement for improvement and the application of human factors theory and concepts to design a safer and more reliable health care system.

MEDICINE 702 **15 Points**
Understanding Complex Clinical Systems
Draws across domains of system science, safety science, complexity theory, and implementation science to help analyse how leaders understand and effect change in healthcare. A particular focus is on understanding how things go wrong and how organisational culture, power, and politics impact on models of effective leadership within clinical systems.

MEDICINE 703 **15 Points**
Special Studies in Medicine
Advanced study in a specific area usually related to the field of study of the thesis. Topics include, but are not restricted to, clinical neuroscience, bone science, rheumatology, geriatrics, cardiology, respiratory and renal medicine.

MEDICINE 740 **30 Points**
Special Topic

MEDICINE 741 **15 Points**
Special Topic

MEDICINE 742 **15 Points**
Special Topic

Māori Health

Foundation Courses

MAORIHTH 21H **12 Points**
Introduction to Biology
An introduction to the structure, function and processes of the human body at cellular and tissue levels. Special emphasis on the four primary tissues including membrane transport, muscle types and function, blood and the immune response, and basic neurobiology. Provides foundational knowledge of development post fertilisation and the anatomy and physiology of selected mammalian organ systems. Exposes students to the laboratory environment, particularly microscopy and dissection.

MAORIHTH 22H **12 Points**
Introduction to Anatomy and Physiology
Introduction to human biology through a study of the structure and function of mammalian organ systems. Topics of focus include: skin and derivatives, digestive, nervous, reproductive and urinary, bone, endocrine and circulatory systems. This course also exposes students to learning in a laboratory environment with a strong focus on microscopy and dissection.

MAORIHTH 23H **12 Points**
Introduction to Chemistry 1
An overview of general chemistry principles with an emphasis on the language of chemistry and the use of mathematics to determine answers to chemical problems. An emphasis is placed on the atomic scale of matter so that students are able to describe the macroscopic world using a molecular perspective and relate chemical structures to functions. Laboratory work includes techniques of simple qualitative and quantitative measurements.

MAORIHTH 24H **12 Points**
Introduction to Chemistry 2
Provides an overview of systematic organic chemistry illustrating the diversity and reactivity of organic compounds, including reaction mechanisms and application of chemical kinetics. Spectroscopic techniques will be discussed, including in relation to structure determination. A quantitative study of proton transfer reactions will allow for understanding of control of pH.

MAORIHTH 25H **12 Points**
Introduction to Population Health 1
Introduction to key concepts and foundational knowledge in population health. Concepts include models for conceptualising health, the aggregate health of groups, social determinants of health, social gradients in health outcomes, and health inequalities and inequities, and foundational understanding of health care systems.

MAORIHTH 26H **12 Points**
Introduction to Population Health 2
Explores patterns and distributions in health events, causal effects on health, and strategies for addressing health inequalities and inequities at a population level. Exposure to a foundational overview of epidemiology and population health concepts and relevant skills, including understanding and measuring the distribution of disease and illness in well-defined populations, will also be provided.

MAORIHTH 27H **12 Points**
Academic and Professional Development in Māori and Pacific Health 1
Presents study and academic writing skills essential for successful transition from secondary education or community contexts into tertiary study. Content focuses on a practical application of Population Health and Māori and Pacific health workforce development, while engaging students in their professional practice, cultural growth and leadership and communication.

MAORIHTH 28H **12 Points**
Academic and Professional Development in Māori and Pacific Health 2
Provides study and academic skills necessary for transition from foundation study to first year bachelor level study. Content areas focus on Māori and Pacific relevant examples of population health topics including: health status, determinants of health, barriers to access and quality of care and health interventions targeted at Māori and Pacific populations.

MAORIHTH 29H **12 Points**
Introduction to Mathematics
Provides foundation skills in mathematics and develops mathematical competence. Topics covered include measurement, notation, functions, equations, exponential growth/decay, logarithms and statistics. Examples used in the course will revolve around applications of mathematics in the health sciences.

MAORIHTH 30H **12 Points**
Introduction to Health Psychology
Introduction to key concepts and foundational knowledge in health psychology. Concepts include models and theories of behaviour change and development, including the relationship between major biological, cognitive and social-emotional processes. Broader social science approaches to behaviour, health and development across the lifespan will also be explored, as well as the application of health psychology for those wishing to pursue a career in health.

MAORIHTH 31H **12 Points**
Introduction to Physics
An introduction to physics relevant to health studies, including examples and illustrations that revolve around human physiology. Topics include mechanics, optics, waves, thermal physics, radiation and electricity.

MAORIHTH 32H **12 Points**
Special Topic

Stage II

MAORIHTH 201 **15 Points**
Introduction to Māori Health
Māori society, culture and values are explored. Historical

processes are reviewed within the context of the Treaty of Waitangi. The course will examine how these factors underpin the basic determinants of health and shape contemporary Māori health status in Aotearoa. Different approaches to improving Māori health and reducing inequalities will be critically examined.
Prerequisite: POPLHLTH 111

Stage III

MAORIHTH 301 **15 Points**
Māori Health and Practice
Māori health knowledge is used to develop effective public health practice for Māori contexts. Areas of focus include critical thinking, reflective practice, advocacy and the application of Kaupapa Māori principles.
Prerequisite: MAORIHTH 201
Restriction: POPLHLTH 201

Postgraduate 700 Level Courses

MAORIHTH 701 **15 Points**
Foundations of Māori Health
Provides an overview of the many dimensions of Māori Health. It examines the historical and contemporary determinants of Māori health status, and outlines strategies for improving Māori health in the context of the Treaty of Waitangi, and reducing health inequalities.
Restriction: MAORIHTH 301

MAORIHTH 705 **15 Points**
Māori Health Promotion and Early Intervention
Discusses the importance of health promotion and early intervention for Māori. Models of health promotion used by different Māori providers will be presented as well as assisting students to design and implement health promotion and interventions which are likely to be effective for Māori individuals, families, and communities.

MAORIHTH 706 **15 Points**
Māori Health: Policy and Practice
Critically examines public health policy and practice in Aotearoa/New Zealand with respect to Māori health and equity. Provides insights into the application of Kaupapa Māori principles in different areas of public health practice to advance Māori health.
Prerequisite: MAORIHTH 301 or 701

MAORIHTH 707 **15 Points**
Practicum in Māori Health
Provides the opportunity to develop social assessment and critical analysis skills through the documentation of an approved practicum. Students will be expected to be able to use and demonstrate knowledge of different Māori views, concepts and frameworks. Each student will have supervision and practicum developed appropriate to their learning interests.

MAORIHTH 708 **15 Points**
Special Studies

MAORIHTH 709 **15 Points**
Transformational Research for Māori Health
Provides a critical analysis of research and research processes with regard to their potential to colonise or liberate. Drawing on Kaupapa Māori Theory, the course examines how research can be undertaken in ways that are safe for Māori and that contribute to positive Māori development.
Prerequisite: MAORIHTH 710

MAORIHTH 710 **15 Points**
Kaupapa Māori Theory
Kaupapa Māori Theory (KMT) underpins a range of approaches employed to ensure policy, research and intervention processes emphasise Māori ways of knowing and being and work to prevent the further marginalisation of Māori. Students learn about the development of KMT and its use in the context of Māori health and development, and will experience and learn from a range of initiatives and projects that have KMT at their core.
Prerequisite: MAORIHTH 301 or 701
Restriction: MAORIHTH 702

MAORIHTH 711 **15 Points**
Special Topic: Māori Quantitative Methods
Provides students with an understanding of how to apply a Kaupapa Māori Research (KMR) approach to quantitative research methods (study design, analysis and dissemination) in the health sciences. It will expose students to a range of analytic and practical tools that can be drawn on in the design and conduct of quantitative research with Māori.
Prerequisite: MAORIHTH 301 or 701

MAORIHTH 792 **60 Points**
MAORIHTH 792A **30 Points**
MAORIHTH 792B **30 Points**
Dissertation - Level 9
Restriction: MPHEALTH 792
To complete this course students must enrol in MAORIHTH 792 A and B, or MAORIHTH 792

MAORIHTH 796A **60 Points**
MAORIHTH 796B **60 Points**
Thesis - Level 9
Restriction: MPHEALTH 796
To complete this course students must enrol in MAORIHTH 796 A and B

Nursing

Stage I

NURSING 104 **15 Points**
Applied Science for Nurses
Provides an opportunity for the application of specific and selected topics from the biological and physical sciences to be related to beginning nursing practice.

NURSING 105 **30 Points**
Nursing in Practice
An introduction to nursing as a profession including concepts of nursing practice, and communication skills. The theoretical basis for nursing practice as well as legal and ethical boundaries are introduced. The role of the nurse in health maintenance and health promotion is explored. Skills in assessment of clients and planning client care are introduced.

NURSING 199 **0 Points**
English Language Competency
To complete this course students must attain a level of competency in the English language as determined by the School of Nursing. This course must be completed prior to enrolling in Part II of the Bachelor of Nursing degree.

Stage II

NURSING 201 **60 Points**
Nursing Clients with a Pathophysiological Problem
A problem-based course where students acquire the skills associated with nursing clients requiring medical and surgical interventions and subsequent rehabilitation. Understanding the mechanisms of disease and prevention of such diseases is the basis for the course. Students are introduced to the principles of pharmacology and pharmacokinetics. Issues such as caring for clients with chronic pain and an understanding of death and grief are included. Practicums and teaching take place in a variety of clinical settings.
Prerequisite: 120 points at Stage I of the Bachelor of Nursing or equivalent

NURSING 202 **60 Points**
Mental Health, Addiction, (Dis)Ability and Enablement
Allows students to understand perspectives of mental health and illness, the crisis nature of mental illness and the therapeutic models of mental health management. Students acquire the specific nursing skills required to care for people with mental health problems and also those who have a long-term disability. Students undertake a range of clinical attachments in hospital and community settings.
Prerequisite: NURSING 201

Stage III

NURSING 301 **60 Points**
Community Health and Wellbeing
Concepts related to health and wellbeing for individuals, families and communities are addressed within the context of social, political and lifespan influences. Current national and global population health priorities for women, children and older people are explored, with focus on childbirth, childhood illness and ageing well. Clinical attachments are in a variety of acute and community settings.
Prerequisite: NURSING 201, 202

NURSING 302 **60 Points**
Professional Nursing Practice
Allows the student to make the transition from student to professional nurse. A period of practice in an elected area of clinical speciality is included. Issues such as the development of nursing knowledge, autonomy of practice, accountability for practice, and the legal and ethical parameters of competency as a nurse are emphasised.
Prerequisite: NURSING 301

Postgraduate 700 Level Courses

NURSING 700 **30 Points**
Special Topic

NURSING 701 **30 Points**
Research Project - Level 9
A personal scholarly exploration of an area of clinical nursing practice that reflects an understanding of research purpose and process. The project includes a critical and comprehensive review of relevant literature which results in new insights and understandings and considers how the application of these might affect existing service delivery or clinical practice models.

NURSING 732 **30 Points**
Leading and Managing Changes in Healthcare
Theoretical and practice principles of leadership and management in the context of healthcare organisations. Utilises an action based learning model, mentorship and project work.

NURSING 735 **30 Points**
Clinical Education Practicum
Application and critical analysis of educational theories and concepts in a clinical learning environment. Utilises an action based learning model and project work.

NURSING 740 **30 Points**
Nurse Practitioner Prescribing Practicum - Level 9
Clinical practicum facilitating mastery of the Nursing Council of New Zealand Nurse Practitioner (NP) competencies for autonomous clinical practice in the Nurse Practitioner scope of practice. Critically analyse clinical cases and develop evidence-informed and innovative solutions through expert consultation and primary literature review. Students will prepare a portfolio demonstrating expert autonomous clinical practice for complex medical and nursing problems.
Prerequisite: NURSING 743

NURSING 741 **30 Points**
Education for Clinical Practice
Professional learning is essential to enable healthcare professionals to function competently in the complex world of clinical practice. Health care professionals are required to become actively involved in teaching colleagues involved in healthcare and patients. Effective clinical teaching and learning is enabled by laying a foundation in educational theory and practice.

NURSING 742 **30 Points**
Biological Science for Practice
Focuses on common pathologies acknowledging the New Zealand Health Strategy, giving particular attention to areas where health promotion, preventative care, chronic disease management and cost impact for New Zealand.

NURSING 743 **30 Points**
Nurse Practitioner Advanced Practicum
Synthesises advanced clinical decision making within the Nurse Practitioner competency framework and prepares for autonomous clinical practice.
Prerequisite: NURSING 785

NURSING 744 **30 Points**
Critical Care Specialty Nursing Practicum
Gives critical care nurses the opportunity to extend their clinical skills and practice knowledge and to advance clinical decision-making by utilising a range of guided learning experiences. The focus is on continued development of clinical expertise, using a practice development approach emphasising person-centred, evidence-based practice, and critical thinking practice to improve health outcomes.
To complete this course students must enrol in NURSING 744 A and B, or NURSING 744

NURSING 745 **30 Points**
Principles of Medication Management
Focuses on the principles and practice of medication management to improve and extend the knowledge and skills of registered nurses in clinical specialty roles and prepare them for delegated prescribing roles in partnership with clients and collaborating with medical colleagues and the health care team. It is not the intention of this course to prepare nurses for authorised prescribing (nurse practitioner).
Restriction: NURSING 761

NURSING 746 **30 Points**
Evidence-based Practice and Implementation - Level 9
Considers the types of evidence that inform nursing practice and implementation, and examines barriers and enablers to the application of evidence to practice. Provides students with the tools to locate and appraise evidence and requires the student to engage in research activities resulting in a substantial research essay.
Restriction: NURSING 720

NURSING 748 **30 Points**
Primary Health Care Nursing
Assists primary healthcare nurses working in diverse settings to put population health principles into practice through primary healthcare. Determinants of health, equity, community empowerment, partnerships and effective ways to care for people with long-term conditions in communities will be explored.
Restriction: HLTHSCI 702, NURSING 772

NURSING 749 **30 Points**
Special Topic: Whānau Ora – Tahi
The concept of Whānau Ora is to achieve maximum health and well-being for whānau. Students' knowledge of the concept will be extended and an understanding of Whānau Ora in nursing praxis will be demonstrated. Through guided learning experiences, clinical and academic support, students will self-reflect on nursing praxis and explore equity and social justice in the context of Te Tiriti o Waitangi.

NURSING 773 **30 Points**
Advanced Assessment and Clinical Reasoning
Nurses make a variety of diagnoses in their daily practice. Advanced nursing practice requires skilled health assessment, estimation of probabilities and evidence-based diagnostic reasoning. This complex cognitive process is developed in relation to skills and knowledge required for sound clinical reasoning.
Restriction: NURSING 770

NURSING 774 **30 Points**
Nursing People in Acute Mental Health Crisis
The concept of recovery forms the basis of exploring nursing care of people in states of acute crisis. The course focuses on models of acute care, collaborative care, risk assessment and management, and maintaining a safe, non-coercive environment. Students will be expected to engage in critical reflection and analysis of practice issues and case studies.

NURSING 775 **30 Points**
Leadership and Management for Quality Health Care
Builds management and leadership knowledge, competence and business acumen through project based learning. Focuses on critical thinking, quality service delivery and improvements and maximises organisational performance and change management.

NURSING 778 **30 Points**
Health Promotion and Early Detection of Cancer
Examines the latest knowledge and research available around health promotion, risk assessment and early intervention for cancer and consider the implications for nursing practice. Content addressed includes epidemiology, genetic risk, nutrition, lifestyle and environmental screening, surveillance, government policies and interventions.
Restriction: NURSING 767

NURSING 779 **30 Points**
Special Studies

NURSING 780 **30 Points**
Mental Health and Addiction Nursing
Introduces a person-focused theoretical framework to explore mental health and addiction problems in healthcare. Conceptualises mental health and addiction problems as frequently co-occurring. Engagement, assessment, collaborative solution focused interventions, referral and care coordination will be explored.

NURSING 782 **30 Points**
Research Methods in Nursing and Health
Explores the philosophical underpinnings of research methodologies and assists students to understand the major distinctions between quantitative and qualitative approaches. Students will critique research studies and apply research findings to practice. They will gain a practical appreciation of research ethics. By the end of the course, students will be able to apply their learning to the development of a basic research proposal.
Restriction: NURSING 768

NURSING 783 **30 Points**
Special Topic: Pae Ora
Pae Ora encourages the wider health sector to work collaboratively, to provide high-quality and effective health and disability services at all levels. This course has been designed for those who wish to develop and consolidate a sophisticated understanding of the principles of Pae Ora (Mauri Ora – healthy individuals; Whānau Ora – healthy families; Wai Ora – healthy environments) in their practice area.

NURSING 784 **30 Points**
Advanced Emergency Nursing Practicum
Specialty Emergency nurses provide advanced nursing care and need expertise in assessment, diagnostic processes and therapeutic decision making. Advanced assessment skills along with injury and condition specific management models are taught with a focus on clinical decision making for clients in emergency and accident and medical clinic settings. Designed to refine advanced emergency nursing skills for nurses working in specialty emergency nursing roles.
Prerequisite: NURSING 773 or equivalent, and practising in an advanced nursing role

NURSING 785 **30 Points**
Clinical Reasoning in Pharmacotherapeutics - Level 9
Builds on prior knowledge to establish an advanced understanding of pharmacotherapeutics and the application of the principles of pharmacokinetics, pharmaco-dynamics to prescribing practice in advanced practice roles; and develops nursing skills in clinical reasoning for safe and effective prescribing.
Prerequisite: NURSING 742, and 770 or 773 or NURSPRAC 720
Restriction: NURSING 706, 722

NURSING 787 **30 Points**
Fundamentals of Nursing Care
Introduces the novice student to professional and theoretical knowledge in nursing; including clinical assessment skills, cultural awareness and specific ethical issues in nursing. Provides an overview of theories, policies and structures related to the New Zealand health context.

NURSING 789 **30 Points**
Research Project - Level 9

NURSING 790A **45 Points**
NURSING 790B **45 Points**
Research Portfolio - Level 9
Supervised research that represents the personal scholarly work of a student based on a coherent area of inquiry. Culminates in a conclusive piece of work related to a specific area of specialisation or scope of practice.
To complete this course students must enrol in NURSING 790 A and B

NURSING 795 **60 Points**
NURSING 795A **30 Points**
NURSING 795B **30 Points**
Dissertation - Level 9
Restriction: NURSING 792
To complete this course students must enrol in NURSING 795 A and B, or NURSING 795

NURSING 796A **60 Points**
NURSING 796B **60 Points**
Thesis - Level 9
To complete this course students must enrol in NURSING 796 A and B

NURSING 797A **60 Points**
NURSING 797B **60 Points**
Research Portfolio - Level 9
Supervised research that represents the personal scholarly work of a student based on a coherent area of inquiry. Culminates in a conclusive piece of work related to a specific area of specialisation or scope of practice.
To complete this course students must enrol in NURSING 797 A and B

Nursing Practice

Postgraduate 700 Level Courses

NURSPRAC 701 **30 Points**
Cardiac Specialty Nursing
Draws on evidence from biomedical and social science research to equip nurses for the care and treatment of cardiac patients. Students will be expected to integrate evidence from a range of sources and apply this to the practice of cardiac nursing.
Restriction: NURSING 730

NURSPRAC 702 **30 Points**
Critical Care Specialty Nursing
Draws on evidence from biomedical and social science research to equip nurses for the care and treatment of critical care patients. Students will be expected to integrate evidence from a range of sources and apply this to the practice of critical care nursing.
Restriction: NURSING 730
To complete this course students must enrol in NURSPRAC 702 A and B, or NURSPRAC 702

NURSPRAC 703 **30 Points**
NURSPRAC 703A **15 Points**
NURSPRAC 703B **15 Points**
Paediatric Cardiac Specialty Nursing
Draws on evidence from biomedical and social science research to equip nurses for the care and treatment of paediatric cardiac patients. Students will be expected to integrate evidence from a range of sources and apply this to the practice of paediatric cardiac nursing.
Restriction: NURSING 730
To complete this course students must enrol in NURSPRAC 703 A and B, or NURSPRAC 703

NURSPRAC 704 **30 Points**
Cancer Specialty Nursing
Draws on evidence from biomedical and social science research to equip nurses for the care and treatment of patients with cancer. Students will be expected to integrate evidence from a range of sources and apply this to the practice of cancer nursing.
Restriction: NURSING 730

NURSPRAC 706 **30 Points**
Orthopaedic Specialty Nursing
Draws on evidence from biomedical and social science research to equip nurses for the care and treatment of orthopaedic patients. Students will be expected to integrate evidence from a range of sources and apply this to the practice of orthopaedic nursing.
Restriction: NURSING 730

NURSPRAC 707 **30 Points**
Registered Nurse First Surgical Assist
Draws on evidence from biomedical and social science research to equip nurses for the care and treatment of surgical patients. Students will be expected to integrate evidence from a range of sources and apply this to the practice of RNFSA nursing.
Restriction: NURSING 730

NURSPRAC 708 **30 Points**
Emergency Specialty Nursing
Draws on evidence from biomedical and social science research to equip nurses for the care and treatment of patients in the emergency setting. Students will be expected to integrate evidence from a range of sources and apply this to the practice of emergency nursing.
Restriction: NURSING 730

NURSPRAC 710 **30 Points**
Palliative Care Specialty Nursing
Draws on evidence from biomedical and social science research to equip nurses for the care and treatment of palliative care patients. Students will be expected to integrate evidence from a range of sources and apply this to the practice of palliative care nursing.
Restriction: NURSING 730

NURSPRAC 711 **30 Points**
Pain Nursing Specialty Nursing
Draws on evidence from biomedical and social science research to equip nurses for the care and treatment of patients experiencing pain. Students will be expected to integrate evidence from a range of sources and apply this to the practice of nursing patients with pain.
Restriction: NURSING 730

NURSPRAC 712 **30 Points**
Diabetes Specialty Nursing
Draws on evidence from biomedical and social science research to equip nurses for the care and treatment of diabetic patients. Students will be expected to integrate evidence from a range of sources and apply this to the practice of nursing patients with diabetes.
Restriction: NURSING 730

NURSPRAC 713 **30 Points**
Paediatric Intensive Care Nursing
Draws on evidence from biomedical and social science research to equip nurses for the care and treatment of paediatric intensive care patients. Students will be expected to integrate evidence from a range of sources and apply this to the practice.
Restriction: NURSING 730

NURSPRAC 715 **30 Points**
Endoscopy Specialty Nursing
Draws on evidence from biomedical and social science research to equip nurses for the care and treatment of patients undergoing an endoscopy procedure. Students will be expected to integrate evidence from a range of sources and apply this to the practice of endoscopy nursing.
Restriction: NURSING 730

NURSPRAC 716 **30 Points**
Ophthalmology Specialty Nursing
Draws on evidence from biomedical and social science research to equip nurses for the care and treatment of ophthalmology patients. Students will be expected to integrate evidence from a range of sources and apply this to the practice of ophthalmology nursing.
Restriction: NURSING 719

NURSPRAC 717 **30 Points**
Practicum for RN Designated Prescribers
Prepares registered nurses to apply for prescribing rights as Designated Prescribers. Provides nurses with the opportunity to develop knowledge and skills in the application of pharmacotherapeutic concepts to prescribing as a designated prescriber. This includes direct supervision of prescribing activities in the clinical area and the ability to work closely and effectively in a multidisciplinary team environment.
Prerequisite: NURSING 742, 773, 785

NURSPRAC 718 **30 Points**
Contemporary Mental Health and Addictions Nursing Practice
Explores contemporary mental health and addictions nursing practice from both socio-political and practice-skills perspectives. Focuses on developing awareness of the unique mental health and addictions context of Aotearoa/New Zealand and the cultural and values based practices and policies which have emerged. Builds on foundational therapeutic and interpersonal skills and develops knowledge and skills in contemporary, evidence-based mental health and addictions nursing interventions.
Restriction: NURSING 786

NURSPRAC 719 **30 Points**
Clinical Practice in Mental Health and Addictions
A clinically based course focusing on history taking, assessment, formulation and nursing care planning. There is an emphasis on mental health, physical health and addictions assessment and the development of nursing formulation skills.

NURSPRAC 720 **30 Points**
Advanced Mental Health Assessment - Level 9
A clinically based course covering history taking, assessment and case formulation in advanced clinical practice for mental health nurses. There is an emphasis on comprehensive mental health assessment, and negotiation of a client-focused plan of care.

NURSPRAC 721 **45 Points**
Integrative Nursing Practice
A problem-based course where students develop the knowledge and assessment skills associated with nursing clients across a variety of clinical settings. The course provides learning opportunities for students to gain knowledge, skills and develop attitudes that will ensure safe nursing practice. Principles of medication management to prepare students for practice as a registered nurse are integrated into the course.

NURSPRAC 722 **30 Points**
Transition to Professional Nursing Practice
Enables students to transition from student to registered nurse through an extended period of clinical practice. Integration of nursing knowledge and legal and ethical parameters of competency will occur alongside the development of autonomy and accountability of practice.

NURSPRAC 723 **30 Points**
Paediatric Intensive Care Nursing Practicum
Extends specialised nursing skills for the nurse in paediatric cardiac and intensive care settings. Through guided learning experiences and support from clinical and academic mentors, students set and achieve individual learning goals. Focus is on practice development and clinical leadership, demonstrating understanding of quality healthcare and the socio-political and cultural contexts of health and wellbeing.
Prerequisite: NURSPRAC 713
Restriction: NURSING 730, 744

NURSPRAC 724 **30 Points**
Special Topic: RN First Surgical Assist Practicum
Refines specialised nursing skills for expanded scope of practice for a Registered Nurse First Surgical Assistant. Through guided learning experiences and support from clinical and academic mentors, students set and achieve individual learning goals. Focus is on practice development and clinical leadership, demonstrating an understanding of quality healthcare and socio-political and cultural contexts of health and wellbeing.
Prerequisite: NURSPRAC 707
Restriction: NURSING 730, 744

NURSPRAC 725 **30 Points**
Special Topic: Endoscopy Nursing Practicum
Refines specialised nursing skills for the expanded scope of practice for Nurses performing endoscopy. Through guided learning experiences and support from clinical and academic mentors, students set and achieve individual learning goals. Focus is on the development of practice and clinical leadership, demonstrating understanding of quality healthcare standards and the socio-political and cultural contexts of health and wellbeing.
Prerequisite: NURSPRAC 715
Restriction: NURSING 730, 744

NURSPRAC 726 **30 Points**
Mental Health Nursing Practicum
Extends mental health nurses' knowledge and skills in clinical practice, scholarly activity, and leadership to improve health outcomes. Through guided learning experiences and support from clinical and academic mentors, students set and achieve individual learning goals. Focus is on the development of person-centred, reflective practice demonstrating understanding of the socio-political and cultural contexts of health and wellbeing.
Restriction: NURSING 744

NURSPRAC 727 **30 Points**
Perioperative Nursing Specialty
Draws on evidence from biomedical and social science research to equip nurses for the care and treatment of patients across the perioperative continuum. Students will integrate evidence from a range of sources and apply this to the practice of caring for people requiring surgical intervention.

NURSPRAC 728 **30 Points**
Frailty in Aged Care Nursing
Frailty is an age-related, progressive geriatric syndrome related to pathological changes in underlying physiological and psycho-social function and the leading cause of mortality and morbidity in older people. Draws on evidence from biomedical and social science research to equip nurses for the care and treatment of older people affected by frailty.

NURSPRAC 729 **30 Points**
Special Topic

NURSPRAC 730 **30 Points**
Special Topic

NURSPRAC 731 **30 Points**
Special Topic

NURSPRAC 732 **30 Points**
Special Topic

Obstetrics and Gynaecology

Postgraduate 700 Level Courses

OBSTGYN 705 **15 Points**
Special Topic in Obstetrics and Gynaecology

OBSTGYN 712 **15 Points**
Contraception and Pre and Early Pregnancy
An evidence-based approach to contraception and pre and early pregnancy care. Mechanisms, side effects and contraindications of methods of contraception are covered. Pre pregnancy care will include preconceptual counselling and the psycho-social aspects of pregnancy care such as effects of drugs, alcohol, smoking and travel. Best practise and referral guidelines for early pregnancy ante natal care will be covered including diagnosis and management of early pregnancy problems such as recurrent miscarriage, ectopic pregnancy, gestational trophoblastic disease and hyperemesis.

OBSTGYN 713 **15 Points**
Pregnancy and Postnatal Care in the Community
Common problems of pregnancy for primary care. Includes pregnancy care in the community, obstetric emergencies, common disorders in pregnancy, birth matters, the immediate postpartum period, the newborn.

OBSTGYN 715 **15 Points**
Medical Gynaecology 1
Women's health and sexually transmitted diseases, menstrual disorders, pelvic pain and dyspareunia, vulva problems and vaginal discharge, menopause management.

OBSTGYN 716 **15 Points**
Medical Gynaecology 2
Pathophysiology and clinical management of infertility, gynaecological malignancies, family violence, adolescent gynaecology, termination of pregnancy, urogynaecology.

OBSTGYN 717 **30 Points**
OBSTGYN 717A **15 Points**
OBSTGYN 717B **15 Points**
Practical Obstetrics and Gynaecology
Practice of obstetrics and medical gynaecology, practical procedures in obstetrics and gynaecology including competency in examinations, cervical smear taking, and insertion of intrauterine contraceptive devices. Competency in normal labour and delivery and minor surgical procedures encountered in obstetric practice. Requires the completion of a logbook approved by the Clinical Supervisor and Head of Department.
Corequisite: OBSTGYN 721 and 722, or 724 and 725
To complete this course students must enrol in OBSTGYN 717 A and B, or OBSTGYN 717

OBSTGYN 722 **15 Points**
Gynaecology Residential
Approaches to women's health issues, history and examination principles and procedures, issues of screening, hormone replacement therapy and case-based studies. This course must be completed prior to students sitting the clinical and written examinations.
Restriction: OBSTGYN 719

OBSTGYN 723 **15 Points**
Special Studies

OBSTGYN 724 **15 Points**
Obstetrics Residential
Attitudes to women's health, including cultural and ethical issues. History-taking techniques and techniques for minor procedures are developed.
Restriction: OBSTGYN 721

OBSTGYN 725 **15 Points**
Gynaecology Residential
Approaches to women's health issues, principles and procedures associated with history-taking and examination. Issues of screening, hormone replacement therapy and other case-based studies are addressed.
Restriction: OBSTGYN 722

Ophthalmology

Postgraduate 700 Level Courses

OPHTHAL 703 **30 Points**
Special Topic: Research Methods and Skills for Eye Research
A comprehensive overview, focusing primarily on the ophthalmic arena. Includes: research, methodologies, literature reviews, implementation and appraisal of qualitative and quantitative research, developing research questions and writing up of research for presentation and publication. Provides skills specific to eye research that may not be relevant to other health care professionals.

OPHTHAL 704 **30 Points**
Special Topic: Ophthalmic Technology
The theory, basic principles, techniques and interpretation of results for ophthalmic technology used in the diagnosis and treatment of eye disease. Technology covered includes: slit lamp biomicroscopy, tonometry, A-scan ultrasound, keratometry; IOL master, HRT, OCT, computerised topography, anterior segment photography, FFA, autorefraction and therapeutic lasers. The latest advances in ophthalmic technology will also be included.

OPHTHAL 705 **30 Points**
Special Topic: Management of Acute Eye Disease
Overview of the diagnosis and management of 'acute eye conditions' in the community and hospital settings including: signs and symptoms, differential diagnosis, treatment modalities and medium term management.

OPHTHAL 706 **30 Points**
Special Study in Ophthalmology
To provide an opportunity to study a selected field of ophthalmology at an advanced level by undertaking a detailed review of a selected topic or undertaking a research project in a field related to ophthalmology.

Optometry and Vision Science

Stage II

OPTOM 216A **15 Points**
OPTOM 216B **15 Points**
Introduction to Optometry
A clinically-focused course introducing students to optometric practice and addressing, at an introductory level, the ethical, cultural, theoretical and clinical aspects of the optometric examination. Topics covered include: preliminary tests from the eye examination, communication skills and clinical problem solving. The course will emphasise assessment utilising advanced equipment and the production of clinically relevant outcomes and diagnosis-supportive hypotheses.
To complete this course students must enrol in OPTOM 216 A and B

OPTOM 263A **15 Points**
OPTOM 263B **15 Points**
Essential Optics
An introduction to optics relevant to optometry and necessary to understand the optical performance of the eye, the design of ophthalmic lens applications, and the principles of operation of clinical instrumentation. Topics include; the basic principles of physical optics, the principles of image formation by lenses and lens systems mirrors and prisms, optics of the eye, ocular ametropia and aberrations.
Restriction: OPTOM 215, 262, 265
To complete this course students must enrol in OPTOM 263 A and B

OPTOM 272A **15 Points**
OPTOM 272B **15 Points**
Visual Science 1: Structure and Function of the Visual System
Anatomy and physiology of the eye and visual pathway. Topics include composition and structure of the tear film, neural processing in the visual cortex, aspects of visual function including spatial and temporal vision, motion perception and colour vision. Investigation of visual perception using psychophysical and electrophysiological techniques.
Restriction: OPTOM 151, 170, 171
To complete this course students must enrol in OPTOM 272 A and B

OPTOM 292A **7.5 Points**
OPTOM 292B **7.5 Points**
Issues in Optometry
Topics of special interest to students entering Optometry from overseas and from the graduate entry quota.
Prerequisite: Permission of Head of School
Restriction: OPTOM 191
To complete this course students must enrol in OPTOM 292 A and B

Stage III

OPTOM 316A **30 Points**
OPTOM 316B **30 Points**
Optometry
An integrative approach to the scope of optometric practice, addressing both the theoretical basis and clinical practice of the optometric examination, correction of refractive error and dispensing of optical appliances. Topics covered include: visual acuity, visual fields, colour vision, biomicroscopy, ophthalmoscopy, refractive examination, binocular examination, optical correction, lens materials and coatings, history taking, communication skills and clinical problem solving.
Restriction: OPTOM 211, 212, 265, 313, 314, 365, 366
To complete this course students must enrol in OPTOM 316 A and B

OPTOM 345A **7.5 Points**
OPTOM 345B **7.5 Points**
Principles of Ocular Pharmacology
General principles of pharmacology. Pharmacodynamics. Drug absorption, distribution and metabolism. Mechanism of drug action at receptors. Drugs and their application on ophthalmic practice. The autonomic nervous system: anatomy and physiology. Mechanisms of action of ocular pharmaceutical agents. Principles of pharmacological treatment of ocular disease. Drug interactions. Legislation on use of ocular pharmaceutical agents by optometrists in New Zealand and internationally. Introduction to therapeutic agents in optometric practice. Scope of treatment. Shared care.
Prerequisite: OPTOM 171 or 272
Restriction: OPTOM 245
To complete this course students must enrol in OPTOM 345 A and B

OPTOM 353A **7.5 Points**
OPTOM 353B **7.5 Points**
Ocular Pathology
Pathophysiology of the eye. Histopathology of eye disease. Pathology of orbit, lacrimal system, conjunctiva, cornea, uvea, lens and retina. Developmental anomalies of the eye.
Restriction: OPTOM 251
To complete this course students must enrol in OPTOM 353 A and B

OPTOM 375A **7.5 Points**
OPTOM 375B **7.5 Points**
Visual Science 2
To provide an understanding of visual information processing in human brain. In particular the cortical processing of shape, motion and colour, and development of the visual cortex will be addressed. A problem-oriented approach will develop critical thinking and problem solving skills. Students will acquire the ability to seek, evaluate

and retrieve scientific information on which to base their clinical practice.
Restriction: OPTOM 270
To complete this course students must enrol in OPTOM 375 A and B

OPTOM 392A **7.5 Points**
OPTOM 392B **7.5 Points**
Issues in Optometry 2
Prerequisite: Permission of Head of School
Restriction: OPTOM 291
To complete this course students must enrol in OPTOM 392 A and B

Stage IV

OPTOM 416A **15 Points**
OPTOM 416B **15 Points**
Clinical Optometry
Facilitates the transition from student to professional optometrist. Topics addressed include: structuring the routine optometric examination in a clinical setting, diagnosis and management of disorders of the visual system, case analysis, myopia control, visual ergonomics, vision screening, and visual standards. This course culminates in students examining and managing clients in the public University Clinics under supervision.
Restriction: OPTOM 312, 415
To complete this course students must enrol in OPTOM 416 A and B

OPTOM 430A **7.5 Points**
OPTOM 430B **7.5 Points**
Contact Lens Practice
Principles of contact lens fitting and clinical procedures used in contact lens practice. Topics include: current designs of contact lenses, soft and rigid materials used in contact lens manufacture, contact lens optics and verification techniques, contact lens fitting, patient contact lens care, and complications associated with contact lens wear.
Restriction: OPTOM 330
To complete this course students must enrol in OPTOM 430 A and B

OPTOM 442A **7.5 Points**
OPTOM 442B **7.5 Points**
Optometry for Special Populations
An advanced clinical course including consideration of visual disorders specific to children, adults with binocular vision abnormalities, or those with visual impairment including the older population. Topics include: developmental aspects and assessment of infants/children, investigation and management of binocular eye-movement disorders; and diagnosis and management of vision problems in visually impaired patients including electronic, optical and non-optical low vision appliances.
Restriction: OPTOM 341, 440, 441
To complete this course students must enrol in OPTOM 442 A and B

OPTOM 450A **15 Points**
OPTOM 450B **15 Points**
Diseases of the Eye and Visual System: Diagnosis and Management
Signs, symptoms and diagnosis of diseases of the eye, ocular adnexa and visual system, including neurological dysfunction and signs of systemic disease. Management of diseases of eye, ocular adnexa and visual system, including the use of therapeutic agents. Indications, contraindications and side effects of therapeutic agents for the treatment of ocular disease.
Restriction: OPTOM 351, 352, 355
To complete this course students must enrol in OPTOM 450 A and B

OPTOM 492A **7.5 Points**
OPTOM 492B **7.5 Points**
Issues in Optometry 3
Prerequisite: Permission of Head of School
Restriction: OPTOM 391
To complete this course students must enrol in OPTOM 492 A and B

Stage V

OPTOM 510A **15 Points**
OPTOM 510B **15 Points**
Advanced Clinical Optometry 1
Clinical work with responsibility, under supervision, for patients.
Restriction: OPTOM 410
To complete this course students must enrol in OPTOM 510 A and B

OPTOM 520A **15 Points**
OPTOM 520B **15 Points**
Advanced Clinical Optometry 2
Clinical work with greater emphasis on particular areas in optometry including: contact lenses, low vision, binocular vision, paediatric optometry and practice management.
Restriction: OPTOM 420
To complete this course students must enrol in OPTOM 520 A and B

OPTOM 560A **15 Points**
OPTOM 560B **15 Points**
Optometry in Practice
Supervised clinical work in locations external to the Grafton Campus Optometry Clinic. These locations may include University satellite clinics, private optometry practice, hospital eye departments, overseas institutions, or experience in other approved locations. Lectures address; legislation relevant to healthcare including registration and competency, occupational safety and health, ethics, practice management, small business management.
Restriction: OPTOM 462
To complete this course students must enrol in OPTOM 560 A and B

OPTOM 561A **30 Points**
OPTOM 561B **30 Points**
Optometry in Practice
Advanced clinical work experience in locations external to the Grafton Campus Optometry Clinic. These locations may include University satellite clinics, private optometry practices, hospital eye departments, private ophthalmology practices, overseas institutions, or other approved locations. Topics include; therapeutic management of eye disease, legislation relevant to healthcare including registration and competency, occupational safety and health, ethics, practice management, small business management.
Restriction: OPTOM 462, 560
To complete this course students must enrol in OPTOM 561 A and B

OPTOM 570A **15 Points**
OPTOM 570B **15 Points**
Research in Advanced Optometric Science
Study modules on a range of topics in optometry and vision science, with the focus being on developing an evidence-based approach on selected topics. Study will include supervised investigations into an approved topic relating to optometry and vision science, including clinical and applied research.
Prerequisite: OPTOM 416, 430, 442, 450
Restriction: OPTOM 470, 473, 475, 480
To complete this course students must enrol in OPTOM 570 A and B

OPTOM 592A **7.5 Points**
OPTOM 592B **7.5 Points**
Issues in Optometry 4
A number of special topics in Clinical Skills. Further information may be obtained from the School of Optometry and Vision Science.
Prerequisite: Permission of Head of School
Restriction: OPTOM 491
To complete this course students must enrol in OPTOM 592 A and B

Postgraduate 700 Level Courses

OPTOM 751A **15 Points**
OPTOM 751B **15 Points**
Special Study in Vision Science
The study of selected fields of vision science at an advanced level with detailed study of a particular field. The topic will be prescribed by the Head of School.
To complete this course students must enrol in OPTOM 751 A and B, or OPTOM 751

OPTOM 752A **15 Points**
OPTOM 752B **15 Points**
Special Study
To complete this course students must enrol in OPTOM 752 A and B, or OPTOM 752

OPTOM 757A **15 Points**
OPTOM 757B **15 Points**
Special Study in Optometry
The study of selected fields of optometry at an advanced level with detailed study of the particular field. The topic will be prescribed by the Head of School.
To complete this course students must enrol in OPTOM 757 A and B

OPTOM 759A **15 Points**
OPTOM 759B **15 Points**
Special Study
To complete this course students must enrol in OPTOM 759 A and B, or OPTOM 759

OPTOM 783A **15 Points**
OPTOM 783B **15 Points**
Research Project in Vision Science - Level 9
Supervised research that represents the personal scholarly work of a student based on a coherent inquiry at an advanced level into an approved topic related to vision science.
Corequisite: OPTOM 416, 430, 442, 450
Restriction: OPTOM 473, 570
To complete this course students must enrol in OPTOM 783 A and B

OPTOM 791A **45 Points**
OPTOM 791B **45 Points**
Research Portfolio in Clinical Optometry - Level 9
Advanced clinical optometry research in a chosen sub-specialist area of optometric practice. The area of special interest may include contact lenses, low vision, paediatric optometry, binocular vision, ocular disease management, or any other area approved by the Head of School.
To complete this course students must enrol in OPTOM 791 A and B

OPTOM 796A **60 Points**
OPTOM 796B **60 Points**
MSc Thesis in Optometry - Level 9
To complete this course students must enrol in OPTOM 796 A and B

Paediatrics

Diploma Courses

PAEDS 601A **60 Points**
PAEDS 601B **60 Points**
Diploma in Paediatrics
Covers: genetic and antenatal factors in development, neonatal paediatrics, assessment of a child's physical, intellectual, emotional and social needs, epidemiology of childhood disease, cultural factors and child health, general and preventative paediatrics, management of common disorders of childhood, and the practical working of the statutory and voluntary services available in New Zealand for the care of children. A logbook and dissertation must be completed.
To complete this course students must enrol in PAEDS 601 A and B

Postgraduate 700 Level Courses

PAEDS 700 **15 Points**
Special Topic

PAEDS 704 **15 Points**
Special Studies in Paediatrics
Advanced study in a specific area, usually related to the field of study of the thesis.

PAEDS 705 **15 Points**
Neonate and Infant Health
Students will learn about the pathogenesis, diagnosis and clinical management of common medical issues which affect infants from birth through the first year of life. Students will gain both theoretical and practical skills in clinical topics that affect neonates and infants.

PAEDS 706 **30 Points**
PAEDS 706A **15 Points**
PAEDS 706B **15 Points**
Paediatric Care (Toddler-Adolescent)
Focuses on the pathogenesis, diagnosis and clinical management of common acute and chronic medical issues that affect infants, children, adolescents and young adults from the first year of life onwards. Students will develop both practical and theoretical skills.
To complete this course students must enrol in PAEDS 706 A and B, or PAEDS 706

PAEDS 707A **30 Points**
PAEDS 707B **30 Points**
Clinical Portfolio
Students will draw on their paediatric clinical exposure to reflect and modify clinical practice to meet best practices. Students will be given the opportunity to apply complex clinical theory in a structured framework. Students will develop a deep understanding of the theoretical underpinnings in paediatric clinical medicine and proficiency to apply relevant skills.
Prerequisite: PAEDS 705, 706, 714
To complete this course students must enrol in PAEDS 707 A and B

PAEDS 708 **15 Points**
Population Youth Health
Youth injury prevention, resiliency factors and reproductive issues, and advocacy for young people. How do you make a difference in youth health? This course introduces key concepts in population youth health and utilises an evidence based approach and New Zealand practice examples to consider how youth health can be improved in communities and populations.
Restriction: POPLHLTH 732

PAEDS 710 **15 Points**
Clinical Care of Gender Diverse Youth
To develop and advance skills, knowledge and expertise in the clinical care of young transgender people.
Corequisite: PAEDS 712

PAEDS 712 **15 Points**
Youth Health Clinical Skills
Develops and extends knowledge and skills in clinical interviewing, comprehensive assessments and effective interventions with young people.

PAEDS 714 **15 Points**
Emergency Paediatrics
Designed for health care providers involved in the delivery of acute emergency care to children, this course combines theoretical knowledge with clinical practice. Students will learn to recognise and manage the important paediatric medical and surgical emergencies including the approach to the febrile child, management of seizures and the recognition and management of other acute medical and surgical paediatric conditions.

PAEDS 719 **15 Points**
Health, Education and Youth Development
Examines the overlap of health and education in the context of youth development by exploring the impact of past and current developments and strategies in both sectors on the wellbeing of young people. It reviews the 'business' of schools, the Health and Physical Education curriculum, school-based health and support services, whole school approaches to health, and the health and education needs of students not engaged with the school system.

PAEDS 720 **15 Points**
Advanced Youth Health
Extends students' knowledge of youth health and well-being and develops knowledge and skills for supporting or leading improvements or projects in youth health. Will include advanced understandings of youth development and develop youth health project ideas or service improvements for clinical, research or policy settings.

PAEDS 721 **15 Points**
Clinical Care of Adolescents and Young Adults with Cancer
To develop and advance skills, knowledge and expertise in the clinical care of adolescents and young adults with cancer.
Prerequisite: PAEDS 712

PAEDS 722 **15 Points**
Youth Health Practicum
Aims to give clinicians the opportunity to extend their professional youth health skills and expertise through a supervised self-directed learning practicum in youth health.
Prerequisite: PAEDS 720

PAEDS 723 **30 Points**
Research Methods in Child Health and Paediatrics - Level 9
Advanced exploration of the principles of epidemiology and their application to child health research, critical appraisal of scientific evidence, assessing ethical issues in child health research, developing research proposals, application of quantitative statistical methods, and appropriate reporting of health research. Equips students with theoretical knowledge and practical, analytical and critical thinking skills to design and undertake robust research.

PAEDS 790A **15 Points**
PAEDS 790B **15 Points**
Research Project - Level 9
Supervised research that represents independent scholarly work. Students are required to submit a written scientific report based on a methodical investigation at an advanced level into a topic related to child health.
Prerequisite: PAEDS 723
To complete this course students must enrol in PAEDS 790 A and B

Pharmacology

Stage III

PHARMCOL 399 **15 Points**
Capstone: Integrated Pharmacology
A capstone that applies fundamental principles of pharmacology and toxicology to the safe, effective and responsible use of drugs through investigation of a current area of pharmacological research. Emphasises experimental design, data collection, analysis, interpretation and presentation, as the scientific basis for rational, evidence-based decision-making.
Prerequisite: MEDSCI 204 and 30 points from MEDSCI 203, 205, 206, BIOSCI 203, and 30 points from MEDSCI 318-320
Restriction: MEDSCI 399

Postgraduate 700 Level Courses

PHARMCOL 787 **60 Points**
PHARMCOL 787A **30 Points**
PHARMCOL 787B **30 Points**
Dissertation - Level 9
Restriction: PHARMCOL 788, 789
To complete this course students must enrol in PHARMCOL 787 A and B, or PHARMCOL 787

PHARMCOL 788 **45 Points**
PHARMCOL 788A **22.5 Points**
PHARMCOL 788B **22.5 Points**
BSc(Hons) Dissertation - Level 9
Restriction: PHARMCOL 789
To complete this course students must enrol in PHARMCOL 788 A and B, or PHARMCOL 788

PHARMCOL 796A **60 Points**
PHARMCOL 796B **60 Points**
MSc Thesis in Pharmacology - Level 9
To complete this course students must enrol in PHARMCOL 796 A and B

Pharmacy

Stage I

PHARMACY 111G **15 Points**
Drugs and Society
The use of drugs in society including historical perspectives. Selected examples of the use of medicines in disease, recreational drug use and drug misuse, and cultural and ethnic influences on drug use. Differences between conventional and complementary medicines. The role of the pharmaceutical industry in drug discovery, manufacture and promotion. Legal and ethical issues pertaining to access to pharmaceuticals.

PHARMACY 199 **0 Points**
English Language Competency
To complete this course students must attain a level of competency in the English language as determined by the School of Pharmacy. This course must be completed prior to enrolling in PHARMACY 213.

Stage II

PHARMACY 211 **30 Points**
Applied Science for Pharmacy
Specific and selected aspects of chemistry, biochemistry, anatomy, physiology, immunology, microbiology, pathophysiology and pharmacology are explored in the context of beginning clinical pharmacy practice.

PHARMACY 212 **30 Points**
Pharmaceutical Science and Practice
The properties of materials, principles of pharmaceutical formulation, design of drug delivery systems and routes of administration of drugs are considered. The skills for competent pharmacy practice in New Zealand, including law, ethics, medicines information, clinical communication, cultural competence and elements of human behaviour are introduced.

PHARMACY 213 **60 Points**
Pharmacy 1
The optimal drug treatment of dermatological, infectious and gastrointestinal diseases and disorders is explored through an integrated multidisciplinary systems-based approach. Clinical and professional skills in law and ethics, critical appraisal, medicines information, pharmaceutical compounding and calculations, clinical communication and cultural competence are introduced. Introductory experiential learning placements in industry, hospital and community pharmacy sites are provided.
Prerequisite: PHARMACY 199, 211, 212

Stage III

PHARMACY 311 **60 Points**
Pharmacy 2
Optimal drug treatment of respiratory, cardiovascular, renal and hepatic diseases and disorders are explored through an integrated multidisciplinary systems-based approach. Clinical pharmacy skills in law and ethics, dispensing, medicines information, adherence support, clinical communication, physical assessment and management are further developed. Experiential learning placements focus on development of pharmacy practice skills in community/hospital pharmacy settings throughout New Zealand.
Prerequisite: PHARMACY 211-213

PHARMACY 312 **60 Points**
Pharmacy 3
Optimal drug treatment of endocrine, musculoskeletal, ocular, obstetric, gynaecological and urological diseases is explored through integrated multidisciplinary systems-based approaches. Clinical pharmacy skills in law, ethics, dispensing, medicines information, clinical communication, management, quality and safety, and research skills are further developed. Further experiential learning placements focus on development of pharmacy practice skills in community/hospital pharmacy settings throughout New Zealand.
Prerequisite: PHARMACY 311

Stage IV

PHARMACY 413A **15 Points**
PHARMACY 413B **15 Points**
Research Inquiry in Pharmacy
Research methodologies for health, pharmaceutical sciences and pharmacy practice. Students gain foundations in research methods and ethics, capabilities in synthesising literature, analysing data and presenting research findings. Students work in groups to explore, conduct, and present results of research inquiries in appropriate written and oral formats.
Prerequisite: PHARMACY 312
Restriction: PHARMACY 410
To complete this course students must enrol in PHARMACY 413 A and B

Postgraduate 700 Level Courses

PHARMACY 701 **45 Points**
Medicine Optimisation 1
Evaluation of theoretical frameworks to assess health service design. Optimal drug treatment of cancers, neurological and psychiatric diseases and disorders are explored underpinned by critical appraisal of evidence. Clinical pharmacy skills in law, ethics, dispensing, aseptic compounding, medicines information, teamwork and leadership are consolidated. Advanced experiential learning placement opportunities are undertaken in sites throughout New Zealand and overseas locations.
Prerequisite: PHARMACY 312
Restriction: PHARMACY 411

PHARMACY 702 **45 Points**
Medicine Optimisation 2
Theories and critical appraisal of evidence applied to design health service innovations. Optimal treatment of musculoskeletal diseases, disorders and pain, children's and older persons' health issues, patients with multiple morbidities explored through an integrated multidisciplinary

systems-based approach. Clinical pharmacy skills in law, ethics, dispensing, medicines information, teamwork, leadership, pharmacoeconomics and health technology are further developed. Advanced experiential learning placement opportunities.
Prerequisite: PHARMACY 701
Restriction: PHARMACY 412

PHARMACY 750 **30 Points**
Pharmaceutical Formulation
Physiological and physicochemical factors in drug delivery and formulation of pharmaceutical products. Consideration of both traditional (e.g., solutions, semi-solids, solids, aerosols) and novel (e.g., liposomal) drug delivery systems based on the experimental literature.

PHARMACY 751 **30 Points**
Pharmaceutical Techniques
Experimental and analytical techniques in the assessment of pharmaceutical products and of drug action in biological systems. Consideration of pharmacopoeial and official standards, drug stability and drug metabolism.

PHARMACY 752 **15 Points**
Pharmaceutical Quality Assurance
Principles of good manufacturing practice (GMP), quality assurance and quality control as applied to pharmaceutical products and processes. Consideration of relevant industrial processes, legislation, safety issues, packaging, labelling, stability and regulatory requirements.

PHARMACY 753 **15 Points**
Pharmaceutical Regulatory Affairs
To synthesise knowledge pertaining to the registration and licensing of pharmaceutical products nationally and internationally and to effectively apply regulatory principles to the introduction of new pharmaceutical products to the New Zealand and global market.

PHARMACY 754 **15 Points**
Pharmaceutical Science Research Proposal
A comprehensive critical study of the literature pertaining to the proposed thesis research. This will include a review of the relevant methodologies, the analysis of research results and the relationship of published work to the proposed research.

PHARMACY 760 **15 Points**
Literature Review in Pharmaceutical Sciences
A thorough investigation of the current literature in a specified area leading to a comprehensive review with the intent of a review publication.

PHARMACY 762 **15 Points**
Literature Review in Pharmacy Practice
A thorough investigation of the current literature in a specified area of pharmacy practice or pharmacotherapy leading to a comprehensive review with the intent of a review publication.

PHARMACY 763 **15 Points**
Case Studies in Pharmacy Practice
The investigation and construction of case studies in a current area of pharmacy practice to a quality suitable for submission for publication.

PHARMACY 764 **30 Points**
Medicines Information and Critical Appraisal
Develops advanced skills in the retrieval, evaluation and dissemination of medicines information, as well as the ability to critically evaluate clinical literature in the context of selected common therapeutic areas.

PHARMACY 765 **30 Points**
Medicines Management and Pharmaceutical Care
Explores the concepts of medicines management and pharmaceutical care planning in the context of selected common therapeutic areas. The course will emphasise the role of the pharmacist in the optimisation of medicines therapy for individual patients.
Prerequisite: PHARMACY 764

PHARMACY 766 **30 Points**
Applied Pharmacotherapy
Embodies evidence-based practice and the philosophy of pharmaceutical care to achieve optimum therapeutic outcomes in patients with endocrine, cardiovascular, respiratory, mental health, neurological and gastrointestinal disease states.
Prerequisite: PHARMACY 764, 765

PHARMACY 767 **30 Points**
Advanced Pharmacotherapy
Explores current pharmacotherapeutics in the context of patients with complex pathologies and complex clinical needs, allowing for some specialisation in the student's areas of interest.
Prerequisite: PHARMACY 764, 765

PHARMACY 769 **30 Points**
Principles of Prescribing
Legal and ethical considerations; communication with patients and other health professionals; clinical reasoning and decision-making; physical assessment and diagnostic skills; 'mechanics' of prescribing; pharmacoeconomic considerations.

PHARMACY 770 **30 Points**
Prescribing Practicum
A practicum for prescribing: an experiential placement where the pharmacist develops experience in prescribing under the overarching guidance of a designated medical prescriber.
Prerequisite: PHARMACY 769

PHARMACY 771 **15 Points**
Special Studies

PHARMACY 772 **15 Points**
Special Studies

PHARMACY 773 **30 Points**
Special Topic

PHARMACY 774 **30 Points**
Special Topic

PHARMACY 789A **15 Points**
PHARMACY 789B **15 Points**
Research Project - Level 9
Supervised research that represents the personal scholarly work of a student based on a coherent inquiry at an advanced level into an approved topic related to pharmacy or health scholarship under supervision of School of Pharmacy academic staff and collaborators. Develop understanding about the nature and practice of research and capabilities in data analysis, academic writing and dissemination of research.
Prerequisite: PHARMACY 312
Restriction: PHARMACY 410, 413
To complete this course students must enrol in PHARMACY 789 A and B

PHARMACY 792 **60 Points**
PHARMACY 792A **30 Points**
PHARMACY 792B **30 Points**
Dissertation - Level 9
To complete this course students must enrol in PHARMACY 792 A and B, or PHARMACY 792

PHARMACY 796A **60 Points**
PHARMACY 796B **60 Points**
Thesis - Level 9
To complete this course students must enrol in PHARMACY 796 A and B

PHARMACY 797A **60 Points**
PHARMACY 797B **60 Points**
Research Portfolio - Level 9
Supervised research that represents the personal scholarly work of a student based on a coherent area of enquiry. Culminates in a conclusive piece of work related to a specific area of specialisation or aspect of practice in health.
To complete this course students must enrol in PHARMACY 797 A and B, or PHARMACY 797

Physiology

Stage III

PHYSIOL 399 **15 Points**
Capstone: Physiology
Advancements in science come through integrating knowledge and excellence in experimental design. Students will integrate and communicate knowledge attained during their physiology degree by developing a research proposal. Working in small groups, and in research group placements will explore scientific knowledge, and experimental design, as well as wider issues such as ethics, health economics, and Māori and Pasifika health advancement.
Prerequisite: 30 points at Stage III in Physiology
Restriction: BIOMED 399, MEDSCI 399, PHARMCOL 399

Postgraduate 700 Level Courses

PHYSIOL 787 **60 Points**
PHYSIOL 787A **30 Points**
PHYSIOL 787B **30 Points**
Dissertation - Level 9
Restriction: PHYSIOL 788, 789
To complete this course students must enrol in PHYSIOL 787 A and B, or PHYSIOL 787

PHYSIOL 788 **45 Points**
PHYSIOL 788A **22.5 Points**
PHYSIOL 788B **22.5 Points**
BSc(Hons) Dissertation - Level 9
Restriction: PHYSIOL 789
To complete this course students must enrol in PHYSIOL 788 A and B, or PHYSIOL 788

PHYSIOL 796A **60 Points**
PHYSIOL 796B **60 Points**
MSc Thesis in Physiology - Level 9
To complete this course students must enrol in PHYSIOL 796 A and B

Population Health

Stage I

POPLHLTH 101 **15 Points**
Introduction to Health Systems
Provides an overview and understanding of the New Zealand health system, including: history of health and health service delivery in New Zealand; the role and functioning of hospitals; primary care; purchasers and funders of health services; the role of insurance and private healthcare providers.

POPLHLTH 102 **15 Points**
Social Determinants of Health
A description and analysis of health within a social context. Discusses different models of health and provides a range of explanations for how social factors influence health. Options for addressing these issues are also explored.

POPLHLTH 103G **15 Points**
Epidemics: Black Death to Bioterrorism
Epidemics have devastated human populations and will continue to do so. This course looks at how epidemics can run rampant through society and how we can control them. It will include examples from the past and present, as well as outline future threats. A diversity of epidemics will be covered, from the plague, gambling, depression, pandemics, nun-biting and alien abduction.

POPLHLTH 111 **15 Points**
Population Health
To introduce frameworks and tools for measuring and understanding and improving the health of populations, both locally and globally. These frameworks and tools are derived from epidemiology, demography, public health, environmental health and global health sciences.

Stage II

POPLHLTH 202 **15 Points**
Research Methods in Health
Examines the different ways of approaching, designing and undertaking population health science research, covering research paradigms and methodologies, including both quantitative and qualitative methods.

POPLHLTH 203 **15 Points**
Health Promotion: Philosophy and Practice
Explains in detail the theoretical basis of health promotion; calling on current practice examples to bring the theory to life. Introduces international and New Zealand health promotion concepts and tools. Explains how health promotion practice rests on particular approaches, values and ethical considerations which directly link to a political analysis of deprivation and powerlessness.

POPLHLTH 204 **15 Points**
Health Care Ethics
An introduction to healthcare and medical ethics. A theoretical foundation of ethics in addition to the practical ethical issues relevant to healthcare professionals.

POPLHLTH 206 **15 Points**
Life Cycle Nutrition
Provides students with a general background and introduction to: the New Zealand diet; food preparation and meal patterns; dietary requirements during pregnancy and lactation, childhood and adolescence, lifestyle changes, maturity and ageing.

POPLHLTH 207 **15 Points**
Community and Cultural Development
An introduction to the study of community and cultural development as both philosophical approach and programme of practice for building active and sustainable communities from grassroots. Real world examples of effective practice will demonstrate the interdependence of theory, research and practice in health development. Emphasis is placed on collaboration and participation.
Prerequisite: POPLHLTH 102

POPLHLTH 208 **15 Points**
Mental Health Development
The importance of mental health to overall health and well-being is explored. Major threats to mental health are reviewed, and contemporary responses to mental ill health are placed in historical perspective. Current theory, research and practice related to mental health development, which includes both recovery-based approaches and mental health promotion practice (i.e., promotion of well-being) at the community and population levels are reviewed.
Prerequisite: POPLHLTH 102

POPLHLTH 210 **15 Points**
Equity and Inequalities in Health
Investigates the way in which social determinants lead to particular distributions of health in populations. Draws on a social epidemiological approach to explore ways in which inequalities in health (based on factors such as age, gender, ethnicity and socio-economic status) are created, then maintained or eliminated.
Prerequisite: POPLHLTH 102
Restriction: POPLHLTH 201

POPLHLTH 211 **15 Points**
Introduction to Environmental Health
Provides students with concepts and knowledge necessary to understand the influence of the environment on health, and also to understand how human activity affects the environment. Local, regional and global examples of environmental health issues, as well as success stories, are explored. The course introduces approaches that may be taken to identify, understand and reduce environmental hazards.

POPLHLTH 212 **15 Points**
Bio-behavioural Aspects of Drug Use
An introduction to the ways drugs exert their effects on the body, why drug dependence (addiction) occurs and what factors may predispose individuals to the development of drug dependence, including the aetiology of drug dependence and ways in which the study of bio-behavioural aspects of drug use has influenced public health interventions to reduce drug dependence.

POPLHLTH 213 **15 Points**
Special Topic: Positioning Pacific Health
Introduces Pacific perspectives and worldviews of health and wellbeing and examines the social, structural, economic and political determinants of health for Pacific peoples in New Zealand.
Prerequisite: POPLHLTH 101, 102, 111

POPLHLTH 214 **15 Points**
Special Topic

POPLHLTH 215 **15 Points**
Dynamics of Health Systems
Examines ways in which approaches to quality and efficiency can be understood to examine changes in health systems, in response to the environment. The influence of key players is a key focus throughout this course.
Prerequisite: POPLHLTH 101

POPLHLTH 216 **15 Points**
Quantitative Methods in Health
An introduction to and application of epidemiological and social science-based, quantitative principles, methods and skills used in health sector research.
Prerequisite: POPLHLTH 111, 202

Stage III

POPLHLTH 300 **15 Points**
Health Sector Professional Competencies
Develops core skills in areas of project management, financial management, communication, leadership, team development, and cultural competence. An integrated project development approach is used to expose students to the key principles in these areas and to enable them to build a development plan.
Prerequisite: POPLHLTH 204

POPLHLTH 301 **15 Points**
Strengthening Health Systems
The New Zealand health system in an international context. Health system reform, priority setting and rationing. Managed care and health integration. The future of healthcare in New Zealand.
Prerequisite: POPLHLTH 202, 215

POPLHLTH 302 **15 Points**
Health Services Placement
The placement with a health service organisation provides students with the opportunity for experiential learning and the development of competencies needed in the workplace. Theory and skills learned in previous courses are integrated and extended as students apply prior knowledge to a local health organisation and carry out tasks asked of them.
Prerequisite: HLTHPSYC 122, MAORIHTH 201, POPLHLTH 101, 102, 111, 202, 204, 210, 216

POPLHLTH 303 **15 Points**
Health Informatics
Students will explore the development and management of information systems in contemporary New Zealand healthcare services. Health informatics concepts, conceptualised in different healthcare settings, are critically reviewed in terms of their practical application.
Prerequisite: POPLHLTH 101, 202

POPLHLTH 304 **15 Points**
Principles of Applied Epidemiology
The application of an epidemiological approach in population health, including study of the principles of epidemiological thinking, epidemiological study design and analyses, and the application of these findings to population health. Modules will be taught through specific themes for example, a life course approach or injury prevention.
Prerequisite: POPLHLTH 111, 202, 216

POPLHLTH 305 **15 Points**
Community Nutrition
This course builds on POPLHLTH 206 'Life Cycle Nutrition' by providing students with a general overview of the determinants of population eating behaviours and the implications of current dietary behaviours and patterns on health.
Prerequisite: POPLHLTH 111, 206

POPLHLTH 306 **15 Points**
Health Promotion 2
Builds on the theory and practice in POPLHLTH 203, and examines in depth the relationship between economic and political processes and health status. The course also looks at the most effective strategies to put health promotion theory into practice. Mixed in with this will be an in-depth introduction to some of the emerging issues in health promotion, and a look at some of the specific areas of health promotion practice.
Prerequisite: POPLHLTH 203

POPLHLTH 307 **15 Points**
Communities and Addictions
Examines how addictions such as tobacco, alcohol, drugs and gambling seriously undermine the health of individuals and the communities in which they live and/or work. Case studies are used to understand the primary elements of community and cultural health development.
Prerequisite: 30 points at Stage II in Population Health

POPLHLTH 311 **15 Points**
Shaping Health Policy
Investigates recent changes to the ways in which governments seek to intervene to improve a population's health. NZ case studies will be used to illustrate the interrelationships between research, policy and practice in a devolved health system and the changing relationships between government agencies and health providers.
Prerequisite: POPLHLTH 202

POPLHLTH 312 **15 Points**
Health and Pacific People in NZ
An overview of the major health issues facing Pacific peoples, including analysis of the key determinants of health status, focusing on approaches to improving health for Pacific peoples through research, policy, public health programmes and health services. A critique of dominant paradigms of health and well-being in relation to Pacific communities in Aotearoa New Zealand is included with consideration of their effect on health outcomes.
Prerequisite: POPLHLTH 210
Restriction: POPLHLTH 201

POPLHLTH 313 **15 Points**
Health in Asian Communities
An overview of Asian health issues, including, the biological, ecological cultural, economic social and psychological factors that determine health for Asian New Zealanders is provided. Current practice, policy development and research priorities for Asian communities are included.
Prerequisite: POPLHLTH 210

POPLHLTH 315 **15 Points**
Special Topic: Systematic Reviews and Meta-analysis
The principles of interventional systematic reviews and meta-analysis and their role in evidence-based health practice. Topics include understanding the population of interest, developing search strategies, appraising quality of included studies, data extraction, understanding synthesis (meta-analysis) and interpretation of results in the health context.
Prerequisite: POPLHLTH 111 and 216

POPLHLTH 316 **15 Points**
Translating Health Information
To lead to improvements in health, information needs to be translated appropriately to influence decision makers. Builds the skills and knowledge to be able to both critique and synthesise existing health information as well as to apply analytical methods and presentation approaches to data in order to effectively communicate findings to different decision-making communities.
Prerequisite: POPLHLTH 202

Postgraduate 700 Level Courses

POPLHLTH 700 **15 Points**
Community Health Development
Provides a comprehensive overview of the principles, theories, and frameworks for undertaking community-level health development. Special emphasis on empowering and critical perspectives and the implications for health and determinants at a community-level of focus. Informed by current research and a comparative case study approach, the paper examines the opportunities and challenges in the delivery of health for, and by, diverse communities in New Zealand and globally.
Corequisite: POPLHLTH 722

POPLHLTH 701 **15 Points**
Research Methods in Health
A comprehensive overview, in relation to health, of theoretical underpinnings of research; the asking of research questions; literature reviews; the design, implementation and appraisal of qualitative and quantitative research; and the writing up and dissemination of research.
Restriction: CLINED 714, NURSING 768, POPLHLTH 202

POPLHLTH 704 **15 Points**
Undertaking Qualitative Health Research
Provides practical experience in the appraisal and use of qualitative methods in research in health. The development of studies from research questions through design, conduct, and analysis and interpretation of such studies are examined in detail. Students are required to prepare a portfolio examining the use of a specific methodological approach in qualitative health research.

POPLHLTH 705 **15 Points**
Evaluation Research Methods
Provides a comprehensive outline of the nature of programme evaluation in the health sector and an overview of a variety of approaches to programme evaluation and the appropriate use of research tools. Includes logic models, stakeholder analysis, the development of objectives, indicators, client surveys and interviews. Emphasis on mixed methods evaluation designs involving qualitative and quantitative data gathering.

POPLHLTH 706 **15 Points**
Statistics in Health Science
Provides an overview of statistics and statistical methods for health scientists. Covers a range of methods and tests, including regression.

POPLHLTH 708 **15 Points**
Epidemiology
Examines epidemiological study design, measures of effect, screening, appropriate statistics for epidemiology, with a focus on public health epidemiology.

POPLHLTH 709 **15 Points**
Evidence for Best Practice
Evidence based practice uses epidemiological data derived from valid and clinically relevant research. This includes the accuracy of diagnostic tests, the power of prognostic markers and the efficacy and safety of therapeutic, rehabilitative or preventive interventions. This evidence is integrated with relevant contextual evidence such

as patient and practitioner values, social, cultural and economic considerations to inform best practice.

POPLHLTH 711 **15 Points**
Systematic Reviews and Meta-analysis
The principles and critical appraisal of interventional systematic reviews and meta-analysis and their role in evidence-based practice. Topics include: protocol development, question formulation, identification of evidence, selection of studies for inclusion, appraisal and quality of included studies, extraction and recording of data, synthesis (meta-analysis) and interpretation of results and application.
Prerequisite: POPLHLTH 708 or 709 or equivalent experience
Restriction: POPLHLTH 315

POPLHLTH 715 **15 Points**
Global Public Health
Explores the globally distributed factors that impact health outcomes from a global perspective. Topics covered include principles of global health cooperation, patterns of disease and disability, global health governance, financing, leadership, and diplomacy for achieving health equity.

POPLHLTH 718 **15 Points**
Health and Public Policy
A discussion of policy studies frameworks, and how these can be used to analyse policy issues and processes relevant to health and healthcare.

POPLHLTH 719 **15 Points**
Health Economics
Fundamental economic concepts and their application to healthcare. Provides students with some analytical skills with which to address issues and problems in the funding and organisation of health services.

POPLHLTH 720 **15 Points**
Cost Effectiveness Evaluation
The application of economic methods to the evaluation of health services and programmes. The principles and techniques of economic evaluation, the process of measuring costs and benefits of health services, quality of life measurement.

POPLHLTH 722 **15 Points**
Organisation of Health Systems
The principles, structure, financing and organisation of health systems. Current issues and challenges facing health systems from a national and international perspective.

POPLHLTH 724 **15 Points**
Quality in Health Care
Quality healthcare is examined with an emphasis on strategies that enable individuals, teams, and services within healthcare organisations to implement and sustain performance improvement. Allows students to explore the quality principles to an area of their own choice.
Restriction: NURSING 775

POPLHLTH 725 **15 Points**
Environmental Health
Explores ways in which the environment affects human health. Studies links between industrial and agricultural development, environmental change and public health at local, national and global levels. Topics include the role of policies, legislation and public health actions in reducing environmental health risks.

POPLHLTH 726 **15 Points**
Health Protection
Current issues will be used to illustrate principles of health protection as an element of public health at local and national levels. The main inter-related topic areas within health protection (communicable disease control and surveillance; non-communicable disease control; food safety; alcohol and tobacco; air and water quality) will be discussed, along with identification of health hazards, development of prevention strategies, and field implementation methods.

POPLHLTH 733 **15 Points**
Health Promotion Theory and Models
Examines the values, theories and practice models of health promotion and in particular, an approach to the social determinants of health and health equity that seeks to empower individuals and groups to deal with these issues.

POPLHLTH 734 **15 Points**
Health Promotion Strategies
An overview of key strategies designed to promote health, with an emphasis on healthy public policy, partnerships, community action and advocacy and ways to link local, national and global actions. Practical and creative approaches to health promotion planning are explored through case studies, invited practitioners and the development of a group project with outcomes of empowerment and health gain.

POPLHLTH 735 **15 Points**
Mental Health Development: Theory and Principles
Mental Health Development (MHD) represents an emergent paradigm in the mental health sector, one which emphasises strengths, resilience and positive quality of life. It is applicable to all people, including those with mental illness, and to all aspects of mental health and social services. The course has a particular focus on the treatment and recovery for individuals affected by mental health problems.

POPLHLTH 736 **15 Points**
Mental Health Promotion
Examines the central role that positive mental health and well-being plays in the health of populations. It focuses on understanding the determinants of mental health and the processes by which these determinants affect mental health. The theory and application of mental health promotion practice, encompassing strategies for action at the societal, community and individual level, are discussed.

POPLHLTH 737 **15 Points**
Alcohol, Tobacco and Other Drug Studies
Provides an introduction and overview to studies on alcohol and other drugs. Incorporates theory and research developed within public health, mental health, and specialised treatment frameworks. Topics will include: coverage of historical developments, a review of major theoretical issues and an overview of current trends.

POPLHLTH 738 **15 Points**
Biology of Addiction
Explores the genetic and neurobiological factors that predispose individuals to develop addiction. The neuropharmacology of the main drugs of abuse and factors that are responsible for the variability in drug response (i.e. pharmacokinetics) will be presented. Current neurobiological models of addiction will be considered.

POPLHLTH 739 **15 Points**
Pacific Health
Examines a wide range of health issues related to Pacific health. Provides an in-depth analysis with evidence of the global, regional and local issues that determines the health of the Pacific population both in the Pacific region and in New Zealand.

POPLHLTH 746 **15 Points**
Ethics, Culture and Societal Approaches to Death
Approaches to death by Māori and other cultures. Resource and legal issues in the New Zealand context. Ethical issues: euthanasia versus palliative care, privacy, living wills and end of life medical decision-making; particularly treatment abatement. Duties after death, the nature of teamwork, the multidisciplinary nature of palliative care, the role of volunteers, emotional self care for palliative care providers, and home versus residential care.

POPLHLTH 751 **15 Points**
Special Studies

POPLHLTH 758 **15 Points**
Theoretical Concepts of Health
A number of theoretical explanations of public health are considered in order to address health issues in diverse communities. An ecological perspective of health will be explored and the specific models of population health will be critiqued.

POPLHLTH 760 **15 Points**
Principles of Public Health
Consideration of the principles underlying the modern practice of public health. Students examine the major core concepts in public health, including determinants of health, health equity, environments and health, health promotion and health systems.
Restriction: POPLHLTH 300, 302

POPLHLTH 763 **15 Points**
Human Vaccinology
Provides an examination of vaccinology as applied to humans and its application in the health sector. Includes consideration of immunology, vaccine form and function and vaccine design; through to vaccine development and manufacture, vaccine safety, immunisation controversies, policy and schedule. A core theme throughout the course will be communication of vaccine science including risk communication to different audiences including health professionals and the community.
Restriction: POPLPRAC 755

POPLHLTH 765 **15 Points**
Nutrition Interventions in Public Health - Level 9
Explores the use of community-based nutrition interventions to reduce nutrition-related health inequalities, and focuses on the use of appropriate theories to understand the nutrition issue; the use of data and research in the design of evidence based nutrition interventions; and the design of rigorous evaluation plans to determine the effectiveness of the intervention.

POPLHLTH 766 **15 Points**
Special Topic

POPLHLTH 767 **15 Points**
Health Services Research Methods
Focuses on teaching the knowledge and practical skills to conduct health services research. The course follows through the typical research process drawing on a range of different methodologies and methods, both quantitative and qualitative, to develop and answer research questions relating to the accessibility, quality and cost of health care and the improvement of health outcomes.
Restriction: POPLHLTH 702

POPLHLTH 768 **15 Points**
Special Studies in Addiction and Mental Health

POPLHLTH 769 **30 Points**
Interpersonal and Family Violence
Explores the magnitude and consequences of the problem of, and contributing factors to, interpersonal and family violence. Examines some of the major violence prevention and intervention activities currently undertaken in New Zealand. Considers how effective practices and policies might be disseminated at the individual, community, and national levels. Themes include: the epidemiology of violence, causes of violence, developing and evaluating interventions, and violence as a health issue.
Restriction: SOCHLTH 751

POPLHLTH 770 **30 Points**
Special Topic - Level 9

POPLHLTH 774 **15 Points**
Addictive Consumptions and Public Health
Focuses on the extensive health impacts of addictive consumptions, particularly in relation to the legalised consumptions of tobacco, alcohol and gambling. Outlines applications of public health principles to reducing harm from these consumptions. Critically examines the role of corporate industrial complexes in promoting these consumptions and in preventing policy and legislative reforms.
Restriction: POPLPRAC 709

POPLHLTH 776 **15 Points**
Public Health in Practice
Students will apply population health concepts, principles and methodologies from formal course work to current public health problems, and develop skills in communicating their solutions to a range of diverse audiences, while critically reflecting on their own position.
Prerequisite: 45 points from Master of Public Health Schedule

POPLHLTH 777 **30 Points**
Ethics, Culture and Societal Approaches to Death and Dying
Covers the approaches to death of different cultures, exploring resource and legal issues. Addresses ethical issues: euthanasia versus palliative care, privacy, living wills and end of life medical decision-making, treatment abatement, duties after death, the nature of teamwork, the multidisciplinary nature of palliative care, the role of volunteers, self-care for palliative care providers and home versus residential care.
Restriction: POPLHLTH 746

POPLHLTH 780 **60 Points**
POPLHLTH 780A **30 Points**
POPLHLTH 780B **30 Points**
Dissertation - Level 9
To complete this course students must enrol in POPLHLTH 780 A and B, or POPLHLTH 780

POPLHLTH 790 **60 Points**
POPLHLTH 790A **30 Points**
POPLHLTH 790B **30 Points**
Dissertation - Level 9
Restriction: COMHLTH 790
To complete this course students must enrol in POPLHLTH 790 A and B, or POPLHLTH 790

POPLHLTH 796A **60 Points**
POPLHLTH 796B **60 Points**
Thesis - Level 9
Restriction: COMHLTH 796
To complete this course students must enrol in POPLHLTH 796 A and B

Population Health Practice

Postgraduate 700 Level Courses

POPLPRAC 702 **15 Points**
Adult Mental Health and CBT Skills for Primary Care
A clinically focused course providing an overview of the recognition and management of adult mental health in primary care and other healthcare settings. Topics and content will enable an examination of mental illness in New Zealand including cultural approaches and epidemiology, assessment, identification, treatment and management options. Content covers high prevalence conditions (depression, anxiety) and long term conditions (bipolar disorder and schizophrenia). Topics will include recovery, resilience, CBT techniques and the effect of alcohol and drugs.

POPLPRAC 707 **15 Points**
Theory and Skills in Counselling Practice
The theory, research and practice regarding counselling and psycho-therapeutic approaches used in mental health and addiction service contexts. Approaches will be critically examined in terms of history, theory, social context and trends in research. Particular attention will focus on counselling methods currently in use within services.

POPLPRAC 708A **15 Points**
POPLPRAC 708B **15 Points**
Assessment and Intervention with Addiction
Develops understanding and competency in assessment and intervention work with clients having co-existing problems, specifically those most affected by alcohol and drug issues. It focuses on comprehensive assessment, effective clinical interventions, drug-specific interventions and culturally-specific approaches working with individuals, whānau, and communities. It will involve regular review of practice using case-based scenarios filmed with feedback from tutors, mentors and peers.
Corequisite: POPLHLTH 737, POPLPRAC 707
To complete this course students must enrol in POPLPRAC 708 A and B

POPLPRAC 710 **15 Points**
Community Health Development Practicum
Theoretical and practical principles of health promotion processes, combined with practical experience, in the context of relevant organisations, community groups and research projects. Students are expected to find their own placement for the practicum.

POPLPRAC 712 **15 Points**
Project Planning for Lifestyle Change
Focuses on the planning and development of interventions aimed at addressing lifestyle issues such as alcohol and other dangerous consumptions, obesity, lack of exercise and mental trauma. Students synthesise strategies from published literature and adapt them pragmatically for application in local contexts. Interventions will include those occurring in communities, primary and mental healthcare settings, hospitals, workplaces, and educational institutions.

POPLPRAC 720 **15 Points**
Psychosocial Issues in Palliative Care
The psychological and social study of patients with cancer or active, progressive disease, unresponsive to curative treatment. Existential philosophy and models of coping with suffering, communication in palliative care, psychiatric disorders in palliative care, and bereavement.

POPLPRAC 722 **15 Points**
Symptom Management in Palliative Care
Assessment and management of pain, nausea and vomiting, respiratory symptoms, delirium, and other symptoms commonly encountered in palliative care and at the end of life, together with an overview of palliative care emergencies, the role of radiotherapy in symptom management, and issues around nutrition and hydration at the end of life.

POPLPRAC 723 **15 Points**
Advanced Symptom Management in Palliative Care
Advanced concepts in the assessment and management of symptoms and situations, including the more challenging ones encountered within the palliative care approach to malignant and non-malignant advanced diseases.
Prerequisite: POPLPRAC 722

POPLPRAC 724 **15 Points**
Child and Adolescent Palliative Care
An examination of specific palliative care issues related to the care of children, adolescents, and their families.

POPLPRAC 739 **15 Points**
Urgent Primary Medical Care
Assessment and management of a broad range of acute conditions and related issues including: chest pain, dyspnoea, collapse, coma, anaphylaxis, diabetes, toxicology, psychiatry and environmental conditions.

POPLPRAC 740 **15 Points**
Urgent Primary Surgical Care
Assessment and management of acute surgical and subspecialty conditions and related issues including: trauma, head injury, abdominal pain, ophthalmology, ENT, gynaecology, pregnancy, and genito-urinary conditions.

POPLPRAC 753 **15 Points**
Special Studies

POPLPRAC 754 **15 Points**
Infant, Child and Adolescent Primary Mental Health
Provides an overview of the recognition and primary care management of mental health in the under-eighteen age group. A clinically focused course for primary care practitioners. The content covers attachment, early intervention, development, risk assessment, resilience and families. Topics include depression, anxiety disorders, substance use, eating disorders, first episode psychosis, pain, somatic presentations, disruptive behaviour disorders and common behavioural problems.

POPLPRAC 756 **30 Points**
Adult Rehabilitation Studies
Focuses on the rehabilitation of adults with an acquired or traumatic condition; including an in-depth exploration of the philosophy of rehabilitation interwoven with the development of clinical rehabilitation skills. The concepts addressed in rehabilitation reflect the eclectic nature of the discipline.
Restriction: POPLPRAC 728

POPLPRAC 758 **30 Points**
Biology of Ageing
The systematic analysis of the physiological changes in ageing and the relationship of these changes to current beliefs and theories around the ageing process. Current issues around biogerontology are discussed.
Restriction: POPLHLTH 749

POPLPRAC 759 **30 Points**
Engaging Pasifika Communities in Health
Examines the concepts and principles of Pasifika health engagement and applies them culturally and appropriately in a Pacific setting to improve Pasifika health outcomes.

POPLPRAC 761 **30 Points**
Mental Health in Old Age
Explores mental health in old age, including positive mental health and the range of mental health challenges facing older adults. There will be a focus on mental health issues and care across the health continuum, including primary care, specialist mental health services, and aged care services.
Restriction: NURSING 747, POPLPRAC 727

POPLPRAC 765 **15 Points**
Coexisting Problems: Theory and Principles - Level 9
Develops further knowledge and skills in working effectively with clients who suffer from coexisting mental health and addiction problems. Students will be presented with research and theory on existent problems and will examine recent developments in intervention strategies.
Prerequisite: POPLPRAC 708 or equivalent experience

POPLPRAC 766 **30 Points**
Special Topic in Palliative Care - Level 9

POPLPRAC 767 **30 Points**
Dementia Care
A clinically focused course that explores dementia within three specific areas; the brain, the diseases, and the person. It explores theoretical concepts and models of dementia care, and focuses on the partnership of individuals, carers and health professionals in the delivery of dementia care.

POPLPRAC 769 **30 Points**
Special Topic: Aged Care Practice - Level 9
Provides an in-depth understanding of the unique clinical and contextual complexities of providing health care in the aged residential care sector. Using rich data sources and standardised assessment tools it focuses on the quality of clinical care. Health professionals will explore the use of gerontological assessment to respond to identified need, inform care planning and care delivery at an individual and systems level.

POPLPRAC 770 **30 Points**
Special Topic - Level 9

POPLPRAC 771 **30 Points**
Special Topic: Multimorbidity and Complexity of Medicines Use in Older People
Explores multimorbidity and complexity of medicines use in older people including guidance for safe medicines use, common medications for multiple conditions balancing the risks and benefits of medicines use for robust and frail older people.

POPLPRAC 772 **30 Points**
Symptom Management in Palliative Care
An overview of key symptoms commonly encountered in patients with progressive diseases in palliative care and end of life. Addresses assessment and management of these common symptoms using evidenced-based learning.
Restriction: POPLPRAC 722

POPLPRAC 773 **30 Points**
Challenges in Symptom Management in Palliative Care
An overview of key symptoms commonly encountered in malignant and non-malignant patients in palliative care and at end of life. Addresses assessment and management of these common symptoms using evidenced-based learning.
Prerequisite: POPLPRAC 772
Restriction: POPLPRAC 723

POPLPRAC 774 **30 Points**
Psychosocial Issues in Palliative Care
An overview of the psychological and social study of patients with cancer or active, progressive disease, unresponsive to curative treatment. Covers existential philosophy and models of coping with suffering, spirituality, communication in palliative care, family systems, psychosocial assessments, psychiatric disorders in palliative care and bereavement.
Restriction: POPLPRAC 720

Psychiatry

Postgraduate 700 Level Courses

PSYCHIAT 713 **15 Points**
Special Study in Mental Health

PSYCHIAT 721 **15 Points**
Special Topic

PSYCHIAT 722 **15 Points**
Special Topic

PSYCHIAT 730 **30 Points**
PSYCHIAT 730A **15 Points**
PSYCHIAT 730B **15 Points**
Early Childhood Mental Health
Focuses on the identification, assessment and treatment of early emotional and behavioural problems and their link to the child's family and preschool environments.
Prerequisite: PSYCHIAT 740, 747, 768, or equivalent
Restriction: PSYCHIAT 771, 772
To complete this course students must enrol in PSYCHIAT 730 A and B, or PSYCHIAT 730

PSYCHIAT 740 **15 Points**
Child and Adolescent Psychopathology
Explores conceptualisations of mental disorder in children and adolescents from a biopsychosocial and developmental perspective. The DSM-5 classification is used as a framework, with consideration of the benefits and disadvantages of an illness model.

PSYCHIAT 741 **15 Points**
Therapy in Child and Adolescent Mental Health – Theory
Covers the range of treatment modalities used in child and adolescent mental health. Rationale and nature of current therapies will be covered. Students will undertake critical appraisal of the evidence base for therapy pertinent to specific clinical situations.
Prerequisite: PSYCHIAT 740

PSYCHIAT 747 **15 Points**
Child and Adolescent Development
Critically appraises and applies theoretical models and research literature on aspects of child and adolescent development important to mental health. For each of four age ranges, the main aspects of development are reviewed and developmentally appropriate ways of working with children are identified.

PSYCHIAT 766 **15 Points**
Youth Addiction and Co-existing Problems
An overview of key principles required to manage alcohol and drug problems within a Child and Adolescent Mental Health (CAMH) context. Includes a range of topics including aspects of screening, assessment and brief interventions, harm reduction, an introduction to motivational interviewing, and CBT in addiction treatment.

PSYCHIAT 767 **15 Points**
Special Studies

PSYCHIAT 768 **30 Points**
PSYCHIAT 768A **15 Points**
PSYCHIAT 768B **15 Points**
Assessment, Formulation and Treatment Planning in ICAMH
Involves a combination of theory and practice. Different methods of assessment, including developmentally appropriate history taking and mental state examination, and of formulation and treatment planning, are applied to a range of infant, child, and adolescent mental health (ICAMH) problems.
Corequisite: PSYCHIAT 740, 747
Restriction: PSYCHIAT 748, 749
To complete this course students must enrol in PSYCHIAT 768 A and B, or PSYCHIAT 768

PSYCHIAT 769 **15 Points**
CBT with Children, Adolescents and their Families 1
Explores Cognitive Behavioural Therapy (CBT) as an evidence-based treatment for children, adolescents and their families, and covers both theoretical and practical applications of CBT. Specifically designed for New Zealand based practitioners working clinically and/or therapeutically with families, students will learn the CBT model, treatment packages and strategies for depression and anxiety. There is also a strong focus on culturally appropriate interventions (especially those appropriate for Māori).
Prerequisite: PSYCHIAT 740, 747

PSYCHIAT 770 **15 Points**
CBT with Children, Adolescents and their Families 2
Examines advanced knowledge and skills applied to complex disorders. Builds on PSYCHIAT 769 and further extends the practitioner's knowledge and skill base to include more complex issues of Trauma, Anger, DBD, Self-esteem, OCD and Personality. The strong cultural focus continues, with issues for Māori families being considered in more depth. Students will also have access to New Zealand CBT resources and practice more in-depth CBT skills.
Prerequisite: PSYCHIAT 769

PSYCHIAT 773 **30 Points**
PSYCHIAT 773A **15 Points**
PSYCHIAT 773B **15 Points**
Youth Forensic Psychiatry
Students develop an in-depth understanding of offending, particularly for youth offenders, and the relationship to mental illness. Addresses key roles and responsibilities of key stakeholders and members of the multidisciplinary team in the justice and youth justice systems.
To complete this course students must enrol in PSYCHIAT 773 A and B, or PSYCHIAT 773

PSYCHIAT 774 **30 Points**
PSYCHIAT 774A **15 Points**
PSYCHIAT 774B **15 Points**
Special Topic
To complete this course students must enrol in PSYCHIAT 774 A and B, or PSYCHIAT 774

Transdisciplinary Migration Futures

Stage I

TDMIGR 100 **15 Points**
Migration Futures
Explores systems, patterns and experiences of international migration, globally and in Aotearoa New Zealand. Transdisciplinary and critical understandings of migration are developed to examine governance, economics and politics; health, well-being and identity; climate change; and social justice in diverse societies. Addresses the workings of migration policy, the experiences and stories of migrants and the cultural spaces of migrant communities.

Waipapa Taumata Rau

Stage I

WTRMHS 100 **15 Points**
Waipapa Taumata Rau: Foundations for effective health practice in Aotearoa
Ko Waipapa Taumata Rau tātou. Welcome to your study in Mātauranga Hauora, the Faculty of Medical and Health Sciences. This core course considers how knowledge of place enhances your learning, the significance of Te Tiriti o Waitangi, and how knowledge systems frame understanding. It provides foundational essential skills to support you in your first year and future studies.
Restriction: SCIGEN 102, 102G, WTR 100, 101, WTRBUS 100, WTRENG 100, WTRSCI 100