Bachelor of Applied Science (Human Movement Studies)/Bachelor of Health Science (Nutrition and Dietetics) (HL42)

Year offered: 2010
Admissions: No
CRICOS code: 031579M
Course duration (full-time): 5 Years
Domestic fees (indicative): 2010: CSP $3,800 (indicative) per semester
International Fees (indicative): 2010: $11,500 (indicative) per semester
Domestic Entry: February
International Entry: February
QTAC code: 425192
Past rank cut-off: 96
Past OP cut-off: 3
Assumed knowledge: English (4, SA), Maths B (4, SA), and Chemistry (4, SA)
Preparatory studies: For information on acquiring assumed knowledge visit http://www.studentservices.qut.edu.au/apply/ug/info/knowledge.jsp
Total credit points: 528
Standard credit points per full-time semester: 48 (6 semesters) 60 (4 semesters)
Course coordinator: HMS: Dr Ian Renshaw; Nutr&Diet: Dr Susan Ash (enquiries to HMS email: enquirieshms@qut.edu.au or phone: 07 3138 4697 OR Nutrition & Dietetics email: sph.studentcentre@qut.edu.au or phone: 07 3138 3368)
Campus: Kelvin Grove

Overview
This course has been replaced by HL22 Bachelor of Exercise and Movement Science/ Bachelor of Health Science (Nutrition and Dietetics) from first semester 2010.

Continuing students will complete their course requirements in HL42 Bachelor of Applied Science (Human Movement Studies)/Bachelor of Health Science (Nutrition and Dietetics).

This double degree program will prepare you as a multi-skilled professional who meets current requirements for employment as a nutritionist/dietitian, and in a range of exercise and sports science professions. At present, the demand for sports nutritionists is growing rapidly and there is a growing field in the area of rehabilitation science for people with dual qualifications.

Career Outcomes

Career settings include rehabilitation and hospital clinics, family and community services, corporate health and fitness, local and state government agencies, universities and colleges, institutes of sport, health and fitness industry, and personal training.

Professional Recognition
Graduates are eligible for membership of the Dietitians Association of Australia (DAA), and may enrol in the Accredited Practising Dietitian (APD) program.

Honours
A degree with honours may be awarded to a student who has recorded outstanding achievement in a component of the double degree program.

Other Course Requirements
There are additional costs associated with this course including the purchase of the practicum shirt (approximately $50), attainment of a current first aid certificate prior to the commencement of your third year, and a Blue Card to work with children depending upon the practicum site. Attendance at the orientation camp is highly recommended though not compulsory (approximately $115).

Students who are required to undertake placements off-campus may incur additional costs (for example travel and accommodation). Hepatitis B vaccination is required before placement in Queensland Health facilities.

OP Guarantee
The OP Guarantee does not apply to this course.

Deferment
QUT allows current Year 12 school leavers to defer their undergraduate admission offer for one year, or for six months if offered mid-year admission, except in courses using specific admission requirements such as questionnaires, folios, auditions, prior study or work experience.

Non-year 12 students may also request to defer their QTAC offer on the basis of demonstrated special circumstances.

Find out more on deferment.

Further Information
### Full-time Course structure

#### Year 1, Semester 1
- SCB111 Chemistry 1
- LSB131 Anatomy
- PUB251 Contemporary Public Health
- PUB474 Food Science

#### Year 1, Semester 2
- PUB201 Food and Nutrition
- HMB276 Research in Human Movement
- SCB121 Chemistry 2
- LQB488 Medical Physiology 2

#### Year 2, Semester 1
- HMB271 Foundations of Motor Control, Learning and Development
- HMB274 Functional Anatomy
- LQB381 Biochemistry: Structure and Function
- HMB171 Fitness Health and Wellness
- LQB388 Medical Physiology 1

#### Year 2, Semester 2
- HMB272 Biomechanics
- HMB273 Exercise Physiology 1
- LQB481 Biochemical Pathways and Metabolism
- PYB208 Counselling Theory and Practice 1
- PUB405 Nutrition Science

#### Year 3, Semester 1
- HMB379 Disorders of Human Movement
- PUB326 Epidemiology
- PUB541 Medical Nutrition Therapy 1
- PUB530 Health Education and Behaviour Change

#### Year 3, Semester 2
- HMB275 Exercise and Sport Psychology
- PUB628 Advanced Food Studies
- PUB641 Medical Nutrition Therapy 2
- HMB282 Resistance Training

#### Year 4, Semester 1
- HMB277 Exercise and Sport Nutrition
- HMB382 Principles of Exercise Prescription
- PUB509 Community and Public Health Nutrition
- HMB313 Socio-Cultural Foundations of Physical Activity
- Elective from List A (See entry HM42 BAppSc(HMS))

#### Year 4, Semester 2
- HMB470 Practicum 1
- PUB506 Foodservice Management
- PUB645 Introduction To Dietetic Practice
- Elective from List A (See entry HM42 BAppSc(HMS))

#### Year 5, Semester 1
- PUB723 Clinical Dietetic Practice
- PUB821 Practice in Community Nutrition
- PUB822 Practice in Foodservice Management

#### Year 5, Semester 2
- HMB475 Practicum 2
- PUB606 Dietetic Management
- PUB821 Practice in Community Nutrition
- PUB822 Practice in Foodservice Management

**Note:** Students in 5th year must complete PUB821 and PUB822, but can choose in which semester to undertake each unit.

### Health Unit prerequisites/corequisites

For information on prereqs & coreqs visit: [www.hlth.qut.edu.au/study/forcurrentstudents/](http://www.hlth.qut.edu.au/study/forcurrentstudents/)

### Potential Careers:

Community Dietician, Community Nutritionist, Dietitian, Fitness Assessor/Personal Trainer, Health Promotion Officer, Nutritionist, Nutritionist/Dietitian, Policy Officer, Project Developer, Public Health Officer, Rehabilitation Professionals, Sports Scientist.

### UNIT SYNOPSES

Published on: 16 May 2011
HMB171 FITNESS HEALTH AND WELLNESS
The dimensions and interrelationships of health, physical activity and wellness are studied. Basic principles of conditioning and exercise prescription necessary to demonstrate the impact of physical activity on lifestyle diseases, health behaviours and wellness are examined. Principles and theory of behaviour change are employed.
Credit points: 12  Contact hours: 3-4 per week  Campus: Kelvin Grove  Teaching period: 2010 SEM-1

HMB271 FOUNDATIONS OF MOTOR CONTROL, LEARNING AND DEVELOPMENT
This unit introduces students to the behavioural and neural bases of movement control through an examination of the central nervous and neuromuscular systems, hierarchical control, human information processing and dynamical systems. It covers elements of sensory mechanisms related to movement. Foundations of motor learning and adaptation are introduced, linking underlying mechanisms of learning with principles that may be applied in teaching, coaching and rehabilitation.
Prerequisites: LSB131 or LSB231 or LSB255  Credit points: 12  Contact hours: 4 per week  Campus: Kelvin Grove  Teaching period: 2010 SEM-1

HMB272 BIOMECHANICS
This unit includes the application of mechanics as they apply to Human Movement including: kinematics and dynamics of human body models; quantitative analysis; impact; work and power; fluid dynamics; material properties.
Prerequisites: LSB131  Credit points: 12  Contact hours: 4 per week  Campus: Kelvin Grove  Teaching period: 2010 SEM-2

HMB273 EXERCISE PHYSIOLOGY 1
This unit describes the immediate physiological responses to exercise, and the adaptations that occur with long-term exercise training. Exercise places a demand on the human body to provide sufficient energy to perform. The metabolic, hormonal, cardiovascular and pulmonary systems must adapt to meet the challenge of homeostasis. The active skeletal muscle must increase extraction and utilisation of oxygen and other fuels, the cardiovascular system must respond to improved gas and fuel transport, and lung function must change to facilitate increased respiratory gas exchange.
NOTE for Summer Semester students: Teaching will not commence until January 2010, but some unit information will be available from 16 November 2009.

Students wishing to enrol up to the beginning of January will need to email enquirieshms@qut.edu.au
Prerequisites: LSB231 or LSB142  Credit points: 12

Contact hours: 4 per week  Campus: Kelvin Grove  Teaching period: 2010 SUM-2, 2010 SEM-2 and 2010 SUM-1

HMB274 FUNCTIONAL ANATOMY
This unit includes the following: surface anatomy of the trunk and upper and lower limb; morphological and mechanical properties of bone, muscle-tendon units with implications for physical activity; joint structure and function; analyses of movement tasks including walking and running; cinematography and electromyography in functional anatomy of movement tasks.
Prerequisites: LSB131 or LSB255  Credit points: 12  Contact hours: 4 per week  Campus: Kelvin Grove  Teaching period: 2010 SEM-1

HMB275 EXERCISE AND SPORT PSYCHOLOGY
This unit includes the following: introduction to the psychological factors which influence performance, participation and adherence to both sport and exercise programs; personality and the athlete; attention and arousal; relaxation theory and practice; aggression and psychological development; leadership and team cohesion.
Prerequisites: PYB100 or PYB012 or EDB002  Credit points: 12  Contact hours: 3 per week  Campus: Kelvin Grove  Teaching period: 2010 SEM-2

HMB276 RESEARCH IN HUMAN MOVEMENT
This unit includes principles of research: purposes, philosophy, applications. It addresses quantitative research including basic statistics, descriptives, ANOVA, correlation, regression and non-parametris, and basic research design hypothesis testing. Qualitative research includes methodology, data collection, and theory building. Research presentation includes: writing a research report and developing conclusions. This unit also considers application of research, examples in human movement, related literature, computer data analysis, and information retrieval.
Prerequisites: LSB131 or LSB255  Credit points: 12  Contact hours: 3 per week  Campus: Kelvin Grove  Teaching period: 2010 SEM-2

HMB277 EXERCISE AND SPORT NUTRITION
This unit considers the relationship between nutrition and exercise and physical activity. Areas covered include dietary and energy requirements in exercise and sport and substrate utilisation at the cellular level during exercise. The influence that nutrition has on performance via changes in body composition, fuel utilisation, blood biochemistry and ergogenic aids will also be covered. Nutritional supplements and water and electrolyte balance in exercise and sport are also part of this unit.
Prerequisites: HMB172 or PUB201  Credit points: 12  Contact hours: 3 per week  Campus: Kelvin Grove  Teaching period: 2010 SEM-1
**HMB282 RESISTANCE TRAINING**
This unit aims to equip students with the basic knowledge, skills and competencies required for exercise prescription in resistance training for muscular fitness. Students build on prior knowledge of biomechanics, anatomy, physiology and motor control to develop understanding of the mechanical and physiological determinants of muscular fitness. The unit incorporates a blend of theoretical background, practical knowledge and skills in the main areas of muscular hypertrophy, strength, power and endurance. This understanding is then used to critically analyse resistance training programs.

**Prerequisites:** LSB131  
**Credit points:** 12  
**Campus:** Kelvin Grove  
**Teaching period:** 2010 SEM-2

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**HMB313 SOCIO-CULTURAL FOUNDATIONS OF PHYSICAL ACTIVITY**
This unit lays a foundation in the disciplines of the socio-cultural areas which underpin the study of human movement. It serves as an introduction to the historical, sociological, philosophical, anthropological and cultural foundations of sports, games and leisure activities.

**Credit points:** 12  
**Contact hours:** 4 per week  
**Campus:** Kelvin Grove  
**Teaching period:** 2010 SEM-1

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**HMB379 DISORDERS OF HUMAN MOVEMENT**
This unit introduces a selection of disorders and disease states that limit or alter the capacity for movement and physical activity. Each is described in terms of relevant epidemiology and pathophysiology, emphasising the relationship between each disorder and movement or activity, together with factors affecting this relationship. The unit provides students with a basic knowledge of a selection of movement-related disorders, as a foundation for subsequent applications, whether in research, working with special populations, in rehabilitation, or in other clinical settings. The unit also enhances the ability of students to independently study disorders not covered in the unit.

**Prerequisites:** HMB271  
**Credit points:** 12  
**Contact hours:** 4 per week  
**Campus:** Kelvin Grove  
**Teaching period:** 2010 SEM-1

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**HMB382 PRINCIPLES OF EXERCISE PRESCRIPTION**
In this unit, students examine the physiological principles and methods used in training and conditioning programs at all levels of physical activity. The integration of fitness assessment and exercise prescription is a major component of the unit, introducing the student to these requirements in the context of aerobic conditioning, resistance training, weight loss and flexibility. There is a strong emphasis on putting theory into practice, including the development and utilisation of appropriate practical skills in both fitness assessment and exercise prescription.

**Prerequisites:** HMB273 and HMB282  
**Credit points:** 12

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**HMB470 PRACTICUM 1**
In the first of the Human Movement dedicated practicum units, students undertake in-depth experience at two different workplaces (40 hours each) while maintaining ongoing involvement in the School's clinics (20 hours). The student is provided with an extended opportunity to apply classroom learned knowledge and skills under the supervision of Human Movement Practitioners. Workplace involvement is preceded by a vocational skill seminar and workshop program while an interactive analysis program is instigated post practicum.

**Prerequisites:** HMB382  
**Credit points:** 36  
**Campus:** Kelvin Grove  
**Teaching period:** 2010 SEM-1 and 2010 SEM-2

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**LQB381 BIOCHEMISTRY: STRUCTURE AND FUNCTION**
This unit extends basic organic chemistry theory to the level of the biological macromolecules. A clear understanding of the structure and function of these molecules is essential to a student's understanding of the metabolism of living cells. Hence this biomolecular unit is a fundamental prerequisite for all advanced units in the various disciplines in the field of life sciences.

**Prerequisites:** (SCB121 and SCB122) or (SCB111 and SCB121) or SCB113  
**Antirequisites:** LSB275 and LSB325 and LSB308  
**Credit points:** 12  
**Contact hours:** 4 per week  
**Campus:** Gardens Point  
**Teaching period:** 2010 SEM-1

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**LQB388 MEDICAL PHYSIOLOGY 1**
This unit deals specifically with the physiological systems that are responsible for the maintenance of health in humans. In the course of the semester students will investigate half the systems that constitute the human body (with the remainder dealt with in the second semester unit Physiology 2 [LQB488]). The unit offers a useful frame of reference for students enrolled in courses such as animal biology, biochemistry, microbiology, molecular biology, nutrition and human movements. Together with Physiology 2 [LQB488] this unit is a prerequisite to the third level unit,
Applied Physiology [LQB588] and will be of particular interest to students considering medicine as a postgraduate career option.

**Prerequisites:** SCB120, LSB131, LSB142, LSB255, LSB258 or NRB270  
**Antirequisites:** LSB358  
**Credit points:** 12  
**Contact hours:** 4 per week  
**Campus:** Gardens Point  
**Teaching period:** 2010 SEM-1  

**LQB481 BIOCHEMICAL PATHWAYS AND METABOLISM**
The study of biochemistry and cell biology, along with molecular biology, provides students with the knowledge required for the proper understanding of the structure and function of living organisms at the molecular level. As such, this unit extends the studies begun in the unit LQB381 Biochemistry into the metabolic processes occurring in living cells, and provides students with a basis for further studies in biochemistry as well as support for other units in the third year of the course.

**Prerequisites:** LQB381 or LSB308  
**Antirequisites:** LSB275, LSB325, LSB408  
**Credit points:** 12  
**Contact hours:** 4 per week  
**Campus:** Gardens Point  
**Teaching period:** 2010 SEM-2  

**LQB488 MEDICAL PHYSIOLOGY 2**
This unit deals specifically with the physiological systems that are responsible for the maintenance of health in humans. In the course of the semester students will investigate half the systems that constitute the human body (with the remainder having been dealt with in the first semester unit Physiology 1 [LQB388]). The unit offers a useful frame of reference for students enrolled in courses such as animal biology, biochemistry, microbiology, molecular biology, nutrition and human movements. Together with Physiology 1 [LQB388] this unit is a prerequisite to the third level units, Applied Physiology [LQB588] and will be of particular interest to students considering medicine as a postgraduate career option.

**Prerequisites:** LSB131, LSB142, LSB255, LSB258, NRB270, or SCB120  
**Corequisites:** LSB658  
**Antirequisites:** LSB458  
**Credit points:** 12  
**Contact hours:** 4 per week  
**Campus:** Gardens Point  
**Teaching period:** 2010 SEM-2  

**LSB131 ANATOMY**
This unit includes basic concepts of anatomy: an overview of the structure of cells, body tissues, and body systems; aspects of surface anatomy which are relevant to human movement; musculoskeletal systems.

**Antirequisites:** LSB142, LSB182, LSB258  
**Equivalents:** LSB145  
**Credit points:** 12  
**Contact hours:** 5 per week  
**Campus:** Gardens Point  
**Teaching period:** 2010 SEM-1  

**PUB201 FOOD AND NUTRITION**
This unit includes the following: an introduction to the history of food and nutrition in Australia; the food system; the food supply; proteins, carbohydrates, fats, vitamins and minerals; food grouping systems; dietary guidelines; the recommended dietary intakes; nutrition through the life cycle; food and nutrition problems; nutrition as a public health issue; and international nutrition issues.

**Credit points:** 12  
**Contact hours:** 4 per week  
**Campus:** Kelvin Grove  
**Teaching period:** 2010 SEM-2  

**PUB251 CONTEMPORARY PUBLIC HEALTH**
This unit provides an introduction to the following: the philosophy and approach of public health; the traditional public health process; the multidisciplinary nature of public health; and health policy and its impact on public health. Recent reformulations of traditional public health approaches including health promotion, intersectoral action for health and healthy public policy are examined. The role of public health in Australia and overseas, its main discipline components and some of the constraints faced by public health is also addressed. This unit considers groups with special needs and contemporary issues.

**Antirequisites:** PUB106  
**Credit points:** 12  
**Contact hours:** 4 per week (KG and Ext Sem 1; KG Sem 2)  
**Campus:** Kelvin Grove and External  
**Teaching period:** 2010 SEM-1 and 2010 SEM-2  

**PUB326 EPIDEMIOLOGY**
Epidemiology is the core scientific method of public health. It is the study of the distribution of health and disease in the population and includes research into causes of disease and the effectiveness of public health programs. Epidemiological methods are used to generate the evidence base for clinicians, health promotion specialists, health educators, occupational and environmental health officers and health service managers.

**Antirequisites:** HLN710  
**Assumed knowledge:** Successful completion of 96cp is assumed prior knowledge  
**Credit points:** 12  
**Contact hours:** 3 per week (Ext PU40 Pub Hlth students only)  
**Campus:** Kelvin Grove and External  
**Teaching period:** 2010 SEM-1  

**PUB405 NUTRITION SCIENCE**
Nutrition science examines a range of nutrient components in our food supply, including the biochemical pathways and physiological effects in the body, possible health implications of deficiency or toxicity and important dietary sources. It integrates nutritional knowledge with the science of biochemistry and clinical physiology and provides the foundation on which further studies in nutrition can be built.

**Prerequisites:** (LSB308 or LQB381) and PUB201 and (LQB481 or LSB408). (LQB481 or LSB408) can be enrolled in the same teaching period.  
**Credit points:** 12  
**Contact hours:** 4 per week  
**Campus:** Kelvin Grove  
**Teaching period:** 2010 SEM-2
PUB436 EVIDENCE BASED PRACTICE  
Credit points: 12  
Teaching period: 2010 SEM-2

PUB474 FOOD SCIENCE  
To fulfil their needs as future professionals working in food and nutrition related areas, students explore the nature of foods and their constituents, studying the underlying scientific principles related to the manufacture, preservation, distribution and the final production of food items for consumption. This unit is available ONLY in courses where it is listed as a core unit.  
Prerequisites: PUB201  
Credit points: 12  
Contact hours: 5 per week  
Campus: Kelvin Grove  
Teaching period: 2010 SEM-1

PUB506 FOODSERVICE MANAGEMENT  
This unit includes the following: organisation and planning in foodservice; the hospital environment; the menu and menu planning; purchasing and storage of food; kitchen planning and design; food production systems; food distribution systems; human resource management in foodservice; finance and costing; hygiene; maintenance and safety; information systems; and total quality management.  
Prerequisites: PUB474  
Credit points: 12  
Contact hours: 3 per week  
Campus: Kelvin Grove  
Teaching period: 2010 SEM-1

PUB509 COMMUNITY AND PUBLIC HEALTH NUTRITION  
This unit includes the following: the measurement of the nutritional status of a community; nutrition monitoring and surveillance; food and nutrition policy at international, national and state levels; international nutrition issues; nutritional epidemiology; examination of the evidence of nutrition problems within Australia; at risk groups; tools and their validity for measuring nutritional status and nutrition outcome at the population and group level; and dietary intake methodology.  
Prerequisites: PUB201  
Credit points: 12  
Contact hours: 4 per week  
Campus: Kelvin Grove  
Teaching period: 2010 SEM-1

PUB530 HEALTH EDUCATION AND BEHAVIOUR CHANGE  
Antirequisites: PUB329, PUB341  
Credit points: 12  
Teaching period: 2010 SEM-1

PUB541 MEDICAL NUTRITION THERAPY 1  
This unit incorporates the best of a multidisciplinary, ‘whole client’ view of health care. The goals of MNT in preventative care are to keep people healthy in their communities, to reduce the incidence and severity of preventable diseases, to improve health and quality of life and to reduce medical costs particularly in drug therapy, surgery, hospitalisation and extended care. A sound understanding of the process of nutrition assessment enables students to undertake the assessment, planning, implementation and evaluation of dietary intervention in the more complex disease states.  
Prerequisites: PUB405 and LQB481, or LSB408 and LQB488 or LSB458  
Credit points: 12  
Teaching period: 2010 SEM-2

PUB606 DIETETIC MANAGEMENT  
This unit includes the following: history of dietetics and the role of management in dietetics; planning and organisation; leadership; peer review systems; total quality management; clinical costing; program evaluation and measuring effectiveness; information systems applied to dietetic management; managing change; casemix funding; management tools; marketing; planning community based programs; team building; and managing role conflict.  
Prerequisites: PUB506  
Credit points: 12  
Contact hours: 3 per week  
Campus: Kelvin Grove  
Teaching period: 2010 SEM-2

PUB628 ADVANCED FOOD STUDIES  
The unit provides students with an opportunity to acquire practical skills in the planning, preparation and delivery of nutrient altered foods suitable for a wide range of therapeutic diets. Students evaluate the outcome of incorporating nutrient modified food products into dietary regimens. Food standards, relevant developments and issues are also considered.  
Prerequisites: PUB474 and (PUB648 or PUB541) and PUB641. PUB641 can be enrolled in the same teaching period.  
Credit points: 12  
Campus: Kelvin Grove  
Teaching period: 2010 SEM-2

PUB641 MEDICAL NUTRITION THERAPY 2  
This unit builds on the extensive knowledge base of the theory and application of dietary treatment to disease and the principles of nutritional assessment development in Medical Nutrition Therapy 1.  
Prerequisites: (PUB541 or PUB648) and PUB628.  
Credit points: 12  
Teaching period: 2010 SEM-2

PUB645 INTRODUCTION TO DIETETIC PRACTICE  
Prerequisites: PUB628 and PUB641 (can be enrolled in the same teaching period)  
Assumed knowledge: Completion of all prior core units in your course is assumed knowledge.  
Credit points: 12  
Teaching period: 2010 SEM-2

PUB723 CLINICAL DIETETIC PRACTICE  
Students are required to develop skills in the management of nutritional care of clients in the clinical setting, to a standard that allows entry to the Dietetics profession. This
unit incorporates the basic strategies of the dietetic care process, such as assessment, planning, implementation and evaluation of nutritional care, for clients who have a variety of disease states. Students also need to demonstrate basic skills in research in relation to clinical outcome.

**Prerequisites:** PUB645 and PUB641  
**Credit points:** 24  
**Campus:** Kelvin Grove  
**Teaching period:** 2010 SEM-1 and 2010 SEM-2

**PUB821 PRACTICE IN COMMUNITY NUTRITION**

**Prerequisites:** PUB645 and PUB509  
**Antirequisites:** PUB822-1, PUB821-2  
**Credit points:** 12  
**Teaching period:** 2010 SEM-1 and 2010 SEM-2

**PUB822 PRACTICE IN FOODSERVICE MANAGEMENT**

**Prerequisites:** PUB645 and PUB506  
**Antirequisites:** PUB822-1, PUB822-2  
**Credit points:** 12  
**Teaching period:** 2010 SEM-1 and 2010 SEM-2

**PYB208 COUNSELLING THEORY AND PRACTICE 1**

This unit develops the student’s knowledge of the counselling process and skills and provides practice in changing the ways in which people express, conceptualise and respond to their concerns. It builds upon the communication skills and concepts introduced in PYB007 and introduces a range of counselling approaches. It emphasises skills in solution oriented approaches but also covers a range of models and skills for workers in crisis situations. It provides a basis for further studies in counselling in clinical settings requiring psychotherapeutic intervention, and other modes of delivery such as couple, family or group work.

**Prerequisites:** PYB007 or PYB074 or HHB113 or SWB104 or PYB111 or PUB209  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Kelvin Grove  
**Teaching period:** 2010 SEM-2

**SCB121 CHEMISTRY 2**

Chemistry is the central science. This is a unit of fundamental importance as it covers the background and general principles that underpin understanding in many Science and Health related disciplines, particularly in regards to the chemistry of life. In this unit students will be introduced to fundamental aspects of chemistry including the electronic structure of atoms, chemical bonding and molecular structure. From this basis students will develop an understanding of the fundamentals of organic chemistry including chirality, functional groups and organic reactions which will lead to important bio-inorganic molecules and coordination complexes.

**Prerequisites:** (SCB111 or PCB142)  
**Antirequisites:** SCB113  
**Credit points:** 12  
**Contact hours:** 4.5 per week  
**Campus:** Gardens Point  
**Teaching period:** 2010 SEM-1 and 2010 SEM-2

**SCB111 CHEMISTRY 1**

This unit covers the fundamentals of general and physical chemistry. Topics include atomic and molecular structure, introduction to chemical bonding, reaction stoichiometry, thermochemistry, gas phase chemistry, reaction kinetics, equilibrium, acids, bases, buffers, oxidation, reduction and electrochemistry. The practical program involves experiments illustrating a range of chemical reaction types including precipitation reactions, acid-base chemistry and redox chemistry using analytical experimental methods. A comprehensive tutorial program (CHELP) complements the lectures and is designed to assist students to develop the problem solving skills required for further study in chemistry and related sciences.

**Antirequisites:** SCB113  
**Credit points:** 12  
**Contact hours:** 4.5 per week  
**Campus:** Gardens Point  
**Teaching period:** 2010 SEM-1 and 2010 SEM-2