Bachelor of Exercise and Movement Science / Bachelor of Education (Secondary) (IX18)

Year offered: 2011
Admissions: Yes
CRICOS code: 070086J
Course duration (full-time): 4 years
Domestic Fees (indicative): 2011: CSP $2,721 (indicative) per semester
International Fees (indicative): 2011: $12,000 (indicative) per semester
Domestic Entry: February
International Entry: February
QTAC code: 429132
Past rank cut-off: 76
Past OP cut-off: 12
OP Guarantee: Yes
Assumed knowledge: English (4,SA); Maths B (4,SA); and at least one of Chemistry, Physics or Biology (4,SA)
Preparatory studies: For information on acquiring assumed knowledge visit http://www.qut.edu.au/assumed-knowledge
Total credit points: 432
Course coordinator: Enquiries to email: EMS - enquirieshms@qut.edu.au or phone: 07 3138 4697. Education - educationenq@qut.edu.au or 07 3138 3947
Campus: Kelvin Grove

Overview
The four-year Bachelor of Exercise and Movement Science/ Bachelor of Education (Secondary) covers the major elements of the single degree in secondary education as well as equipping students with both foundation knowledge in the exercise and movement sciences and their applications to health and wellness, or sport science and performance assessment.

Recommended Study
Health Education or Physical Education.

Career outcomes
Graduates of this four-year program pursue a broad range of careers including those in corporate and community health, wellness and fitness, and sports performance.

Pathways
Graduates can apply for admission to the HM44 Bachelor of Clinical Exercise Physiology if they should wish to achieve full Exercise Physiologist status.

Professional recognition
The Bachelor of Education (Secondary) is recognised by the Queensland College of Teachers as meeting the requirements for registration as a teacher in Queensland.

Further information
For information about this course, please call the School of Human Movement Studies on +61 7 3138 4697 or email enquirieshms@qut.com; or contact the Faculty of Education on +61 7 3138 3947 or e-mail: educationenq@qut.edu.au

Deferment
Domestic students can defer their offer in this course for one year. In exceptional circumstances up to 12 months of additional deferment may be granted.

Find out more on deferment.

Course structure

**Year 1, Semester 1**
- HMB171 Fitness Health and Wellness
- HMB313 Socio-Cultural Foundations of Physical Activity
- LSB131 Anatomy

**Year 1, Semester 2**
- HMB172 Nutrition and Physical Activity
- HMB276 Research in Human Movement
- HMB315 Games Based Learning in Physical Activity and Sport
- LSB231 Physiology

**Year 2, Semester 1**
- HMB171 Fitness Health and Wellness
- HMB313 Socio-Cultural Foundations of Physical Activity
- EDB002 Teaching and Learning Studies 2: Development and Learning
- EDB031 Secondary Field Studies 1

**Year 2, Semester 2**
- HMB272 Biomechanics
- HMB273 Exercise Physiology 1
- HMB275 Exercise and Sport Psychology
HMB282  Resistance Training  
UNIT  Second teaching area discipline unit  

**Year 3, Semester 1**  
HMB271  Foundations of Motor Control, Learning and Development  
HMB274  Functional Anatomy  
HMB377  Children in Sport  
SPB012  Classroom and Behaviour Management  

**Year 3, Semester 2**  
EDB003  Teaching and Learning Studies 3: Practising Education  
EDB032  Secondary Field Studies 2  
HMB331  Physical Education Curriculum Studies 2  

**Year 4, Semester 1**  
EDB004  Teaching and Learning Studies 4: Inclusive Education  
EDB033  Secondary Field Studies 3  
HMB431  Physical Education Curriculum Studies 3  

**Year 4, 6TP4**  
EDB005  Teaching and Learning Studies 5: Professional Work of Teachers  
EDB007  Culture Studies: Indigenous Education  
(Students must enrol in 6TP4 mode for both EDB005 and EDB007)  
EDB005 is delivered through the Stepping Out Conference, which is held over 3 days in "O" Week of Semester 2 (dates TBA).  

**Year 4, Semester 2**  
Please note that successful completion of all other coursework is required before students can commence the final Field Studies EDB034 and Internship EDB035.  
EDB034  Secondary Field Studies 4  
EDB035  Internship (Secondary)  

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<th>Health Discipline Studies</th>
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| PUB251  Contemporary Public Health  
(Year 1, semester 1) |
| PUB209  Health, Culture and Society  
(Year 1, semester 2) |
| HMB333  Child and Adolescent Health  
(Year 2, semester 2) |
| PUB530  Health Education and Behaviour Change  
(Year 3, semester 1) |

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<th>Maths Discipline Studies</th>
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| MAB120  Algebra and Calculus  
(Year 1, semester 1) |
| MAB101  Statistical Data Analysis 1  
(Year 1, semester 2) |
| MAB121  Calculus and Differential Equations  
(Year 2, semester 2) |
| MAB122  Algebra and Analytic Geometry  
(Year 3, semester 1) |

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<th>English Discipline Studies</th>
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| CLB320  Studies In Language  
(Year 1, semester 1) |
| KWB109  Writing Australia  
(Year 1, semester 2) |
| CLB323  Teaching Adolescent Literature  
(Year 2, semester 2) |
| CLB321  Writing Workshop  
(Year 3, semester 1) |

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<th>Biology Discipline Studies</th>
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| SCB112  Cellular Basis of Life  
(Year 1, semester 1) |
| SCB120  Plant and Animal Physiology  
(Year 1, semester 2) |
| SCB122  Cell and Molecular Biology  
(Year 2, semester 2) |
| SCB110  Science Concepts and Global Systems  
(Year 3, semester 1) |

Second Teaching Area Curriculum Studies 1, 2 and 3  

**Year 2, Semester 1**  

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CRICOS No: 00213J ABN 83 791 724 622
Curriculum Studies 1 - choose the appropriate curriculum unit for your second teaching area

MDB031 Science Education Curriculum Studies 1
CLB018 English Curriculum Studies 1
HMB292 Health Education Curriculum Studies 1
MDB021 Mathematics Curriculum Studies 1

Year 3, Semester 2

Curriculum Studies 2 - choose the appropriate curriculum unit for your second teaching area

MDB010 Biology Curriculum Studies 2
CLB019 English Curriculum Studies 2
HMB396 Health Education Curriculum Studies 2
MDB022 Mathematics Curriculum Studies 2

Year 4, Semester 1

Curriculum Studies 3 - choose the appropriate curriculum unit for your second teaching area

MDB033 Science Education Curriculum Studies 3
CLB020 English Curriculum Studies 3
HMB496 Health Education Curriculum Studies 3
MDB023 Mathematics Curriculum Studies 3

Potential Careers:
Director of Health Programs and Services, Educator, Fitness Assessor/Personal Trainer, Health Educator, Health Policy Officer, Health Promotion Officer, Public Health Program Manager, Secondary School Teacher, Sports Scientist.

UNIT SYNOPSIS

CLB019 ENGLISH CURRICULUM STUDIES 2
This unit provides an opportunity to develop a theorized understanding of the Queensland English Syllabus for Years 1-10 and to implement this understanding by developing lessons and curriculum units that are appropriate for the needs and interests of diverse learners in a range of sociocultural contexts.

Prerequisites: CLB018 Credit points: 12 Campus: Kelvin Grove Teaching period: 2011 SEM-2

CLB020 ENGLISH CURRICULUM STUDIES 3
This unit provides opportunities to develop a theorized understanding of the Queensland English Syllabus for Years 11 and 12, Senior English Communication (SAS) and the Senior English Extension (Literature) Syllabus, and to implement this understanding by analysing and developing senior English programs, teaching and assessment strategies that are appropriate for the needs and interests of diverse learners in particular sociocultural contexts.

Prerequisites: CLB019 Credit points: 12 Campus: Kelvin Grove Teaching period: 2011 SEM-1

CLB320 STUDIES IN LANGUAGE
This unit addresses the following topics: the language basis in current approaches to the teaching of English; nature and function of language; the dynamics involved in interactive situations; the appropriateness of language forms used in various social contexts; the educational implications of linguistic diversity within the community; the recognition of the developmental features of adolescent language.

Credit points: 12 Contact hours: 3 per week Campus: Kelvin Grove Teaching period: 2011 SEM-1

CLB321 WRITING WORKSHOP
The student, as writer, uses all the language modes in social contexts (either genuine or simulated) to lead to writing in a range of situations. Engagement in these writing situations is designed to bring about personal understanding of the following: the nature of the writing process; the influence of audience and purpose on the final written product; the range of genres (or forms) falling within the writing activity.

Credit points: 12 Contact hours: 3 per week Campus: Kelvin Grove Teaching period: 2011 SEM-1

CLB323 TEACHING ADOLESCENT LITERATURE
This unit addresses the following topics: scope and nature of young adult literature; strategies for evaluation and selection; recent research into adolescents' reading needs, interests and responses; using young adult books in the curriculum.

Credit points: 12 Contact hours: 3 per week Campus: Kelvin Grove Teaching period: 2011 SEM-2
EDB002 TEACHING AND LEARNING STUDIES 2: DEVELOPMENT AND LEARNING
This unit has the dual purposes of promoting your own personal and professional development as life long, creative, autonomous learners, capable of reflection and high level thinking, and of enabling you, as educators, to promote similar development in your learners. Pursuit of these aims will involve an exploration of human development, from personal and interpersonal perspectives, with sensitivity to socio-cultural contexts, and with a particular focus on the theory, research and practice which informs educators about how learners construct knowledge and become creative, self-motivated thinkers and problem solvers.
Credit points: 12  Contact hours: 3 per week  Campus: Kelvin Grove and Caboolture  Teaching period: 2011 SEM-1

EDB003 TEACHING AND LEARNING STUDIES 3: PRACTISING EDUCATION
Education is a social and cultural activity. This unit provides a sociological and cultural studies framework that provides an insightful explanation of how education in its various sites is constructed and organised. The unit includes a socio-cultural analysis of an educational site which will be undertaken in conjunction with the Field Studies unit.
Credit points: 12  Contact hours: 3 per week  Campus: Internet, Kelvin Grove and Caboolture  Teaching period: 2011 SEM-2

EDB004 TEACHING AND LEARNING STUDIES 4: INCLUSIVE EDUCATION
This unit aims to develop students' understanding and appreciation of the contributions that diversity, belonging and trust make towards a quality learning environment for all learners. Students will learn to engage in teaching a broad range of students in diverse and inclusive ways utilising pedagogies and curriculum practices that enhance learning for all students and generate inclusive cultures within the school and classroom settings. Desired outcomes are achieved through descriptive, interpretative, analytic and expressive processes to share learning with fellow students and staff.
Credit points: 12  Campus: Kelvin Grove, External and Caboolture  Teaching period: 2011 SEM-1

EDB005 TEACHING AND LEARNING STUDIES 5: PROFESSIONAL WORK OF TEACHERS
Students will share the responsibility for shaping their beginning career learnings through a process of professional induction with a number of key significant stakeholders. The process will be proactive, collaborative and self determined and students will need to become professionally responsible for developing a professional development program that best accommodates their needs at the close of the teacher education program.
Prerequisites: EDB033, EDB023, or EDB013  Credit points: 12  Campus: Internet, Kelvin Grove, External and Caboolture  Teaching period: 2011 6TP4

EDB007 CULTURE STUDIES: INDIGENOUS EDUCATION
Numerous government reports and recent discussions about reconciliation have called for an increased commitment to Indigenous education in Australia. Teachers are increasingly being asked to improve their skill, knowledge and understanding to teach Indigenous students, and to teach curricula which incorporates Indigenous viewpoints on social, cultural and historical matters. This unit begins with an analysis of the students' own cultural place in the Australian context and afterwards moves towards an understanding of Aboriginal and Torres Strait Islander perspectives on history and contemporary issues, and an understanding of why Aboriginal and Torres Strait Islander students have been so disadvantaged by the Australian education system.
Credit points: 12  Contact hours: 3 per week  Campus: Internet, Kelvin Grove and Caboolture  Teaching period: 2011 6TP4 and 2011 SEM-2

EDB031 SECONDARY FIELD STUDIES 1
Designated Unit.
This unit focuses on the students' professional development as an educator, and reinforces the twin themes of teacher as researcher, and teacher as reflective practitioner. It provides the first set of teaching experiences, in a graduated sequence over the course of the BEd. Students develop the ability to plan, implement and evaluate effective teaching/learning programs. This requires an understanding of learner needs, curriculum knowledge, procedures for creating supportive classroom environments, and sensitivity to socio-cultural contexts.
Please note in Semester 2 this unit is ONLY available to students who have previously failed the unit and have received approval from the faculty to be enrolled in the alternate offering. This unit is not available to Visiting or Cross-Institutional students.
Prerequisites: HMB231, HMB292, CLB018, CLB036, CLB021, CLB051, CLB054, MDB015, MDB021, MDB031, or PUB343 (can be enrolled in the same teaching period)
Credit points: 12  Contact hours: 3 per week  Campus: Internet, Kelvin Grove and Caboolture  Teaching period: 2011 6TP4 and 2011 SEM-2

EDB032 SECONDARY FIELD STUDIES 2
Designated Unit
Through critical examination of the socio-cultural dimensions of these sites, this unit aims to utilise aspects of social enquiry to analyse the practice of teaching as a social
and cultural activity. At the same time, the unit aims to develop students’ pedagogical and curriculum skills as a teachers.

**Prerequisites:** EDB031, and HMB331, HMB396, CLB019, CLB025, CLB037, CLB022, CLB010, CLB013, CLB016, CLB028, CLB031, CLB034, CLB040, MDB010, MDB013, MDB016, MDB022, MDB025, MDB028, MDB453, or PUB643 (can be enrolled in the same teaching period)

**Credit points:** 12  
**Campus:** Internet, Kelvin Grove and External  
**Teaching period:** 2011 SEM-2

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**EDB033 SECONDARY FIELD STUDIES 3**  
**Designated Unit.**

Students will be required to design, implement and evaluate differentiated teaching strategies, programs and assessment tasks in inclusive and critically reflective ways and in a manner that is responsive to the diverse nature of the students in your courses. Students will be required to argue that their orientations to curriculum, teaching and assessment reflect practices that offer all students access to quality learning experiences.

**Prerequisites:** EDB032, and HMB431, HMB496, CLB020, CLB026, CLB038, CLB023, CLB053, CLB056, MDB017, MDB023, MDB033, or PUB743 (can be enrolled in the same teaching period)  
**Credit points:** 12  
**Campus:** Internet and Kelvin Grove  
**Teaching period:** 2011 SEM-1 and 2011 SEM-2

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**EDB034 SECONDARY FIELD STUDIES 4**  
**Designated Unit.**

This unit is designed to fully immerse the pre-service teacher into the field with a view to scaffolding their repositioning as an autonomous, critically reflective, inclusive professional teacher on completion.

**Prerequisites:** EDB033  
**Credit points:** 12  
**Campus:** Internet and Kelvin Grove  
**Teaching period:** 2011 5TP2 and 2011 SEM-2

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**EDB035 INTERNSHIP (SECONDARY)**  
**Designated Unit.**

This unit aims to induct students into the professional work of teachers. The aim of this unit is to apply the knowledge, skills and understandings of teaching and learning that students have acquired throughout the course in an extended time in the workplace.

**Prerequisites:** EDB034 (Can be enrolled in same teaching period)  
**Assumed knowledge:** Completion of all units in your course is assumed knowledge.  
**Credit points:** 12  
**Campus:** Internet and Kelvin Grove  
**Teaching period:** 2011 5TP3 and 2011 SEM-2

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**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:** 2011 SEM-1

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**HMB172 NUTRITION AND PHYSICAL ACTIVITY**

This unit is an introduction to principles of nutrition in relation to the physical activity setting, and the role of nutrition and physical activity in weight management. This unit also covers the essential elements of child growth and development (auxology) in relation to nutrition and health. The unit is designed to underpin studies in exercise physiology and sports nutrition.

**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Kelvin Grove  
**Teaching period:** 2011 SEM-1 and 2011 SEM-2

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**HMB231 PHYSICAL EDUCATION CURRICULUM STUDIES 1**

This unit provides students with a range of understandings and competencies for interpreting and managing the physical education environment for teaching and learning. It assists students to develop competencies needed for lesson planning and teaching at all school levels.

**Prerequisites:** HMB171 and HMB315  
**Credit points:** 12  
**Contact hours:** 3  
**Campus:** Kelvin Grove  
**Teaching period:** 2011 SEM-1

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**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:** 2011 SEM-1

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**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: 2011 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: 2011 SUM-2

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: 2011 SUM-2 and 2011 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 psycho-social development; leadership and team cohesion.
Prerequisites: PYB100 or PYB102 or EDB002  Credit points: 12  Contact hours: 3 per week  Campus: Kelvin Grove  Teaching period: 2011 SEM-2

HMB276 RESEARCH IN HUMAN MOVEMENT
This unit includes principles of research: purposes, philosophy, applications. It addresses quantitative research including basic statistics, descriptive, ANOVA, correlation, regression and non-parametrics, 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  Credit points: 12  Contact hours: 3 per week  Campus: Kelvin Grove  Teaching period: 2011 SEM-2

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: 2011 SEM-2

HMB292 HEALTH EDUCATION CURRICULUM STUDIES 1
This is the initial unit in a series of three Health Education Curriculum units. Students are introduced to current health education curriculum documents with a specific focus on the Queensland Education System. The unit also provides students with a range of competencies for interpreting and managing the health education classroom as a complex social environment for teaching and learning.
Assumed knowledge: Completion of 24cp of Health Education units is assumed knowledge  Credit points: 12  Contact hours: 3  Campus: Kelvin Grove  Teaching period: 2011 SEM-1

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: 2011 SEM-1

HMB314 ALTERNATIVE PHYSICAL EDUCATION
This unit involves the application of movement principles to the analysis and development of techniques in all major swimming strokes, water rescue methods, and track and field events. Students explore teaching strategies, motivational, conditioning and training activities, the development of learning experiences for various ability
levels and event rules application.

Credit points: 12    Contact hours: 6 per week    Campus: Kelvin Grove

HMB315 GAMES BASED LEARNING IN PHYSICAL ACTIVITY AND SPORT

In this unit various game forms are analysed in order to identify fundamental game skills and problem areas in skill development. Emphasis is placed on the application of relevant movement knowledge and skills to suit game situations and on learning appropriate strategies for teaching and coaching selected games.

Credit points: 12    Contact hours: 6 per week for 9 weeks    Campus: Kelvin Grove    Teaching period: 2011 SEM-1 and 2011 SEM-2

HMB331 PHYSICAL EDUCATION CURRICULUM STUDIES 2

This unit extends the principles of professional practice established in the first curriculum studies unit and further encourages students to develop a critically reflective approach to teaching. Students learn how to extend professional practice with a range of understandings and competencies for interpreting and managing the health and physical education classroom as a complex environment for teaching and learning and develop competencies needed for planning and teaching a range of health and physical education units of work. Current health and physical education curriculum documents are explored.

Prerequisites: HMB231    Credit points: 12    Campus: Kelvin Grove    Teaching period: 2011 SEM-2

HMB333 CHILD AND ADOLESCENT HEALTH

This unit focuses on the wide range of factors that impact on the health of individuals in the two crucial stages of life: childhood and adolescence. An analysis is made of knowledge, beliefs and skills required for promoting health-enhancing behaviours during these ages and experience is provided on some of the skills needed to assess and maintain the health status of children and adolescents.

Credit points: 12    Contact hours: 3 per week    Campus: Kelvin Grove    Teaching period: 2011 SEM-2

HMB377 CHILDREN IN SPORT

This unit includes the following: physical development of the young athlete; physical maturation; benefits of participation in sport and physical activity; psycho-social issues; positive and negative effects of participation including competitive stress; injuries to the growing skeleton; overtraining, overuse injuries; strength training in childhood and adolescence; promotion of safety in sport; accreditation of teachers and coaches; policy guidelines for junior sport; Aussie sport program.

Credit points: 12    Contact hours: 3 per week    Campus: Kelvin Grove

HMB396 HEALTH EDUCATION CURRICULUM STUDIES 2

This is the second in a suite of three Health Education Curriculum units. It is designed to extend students with a range of understandings and competencies for interpreting and managing the health education classroom as a complex social environment for teaching and learning. It helps students to develop those competencies needed for planning and teaching health education units of work. It has an important role in preparing students for the professional practice component of the course, leading to the development of confidence and competence in class management skills, and facilitating the use of post-lesson and post-practicum reflection and evaluation.

Prerequisites: HMB292    Credit points: 12    Teaching period: 2011 SEM-2

HMB431 PHYSICAL EDUCATION CURRICULUM STUDIES 3

This unit develops students' competencies in the effective planning and implementation of school work programs and units of work consistent with the Senior Physical Education Syllabus. It will also develop students' skills and confidence in effective teaching practices specifically related to teaching physical education and will assist them to become independent and reflective learners.

Prerequisites: HMB331    Credit points: 12    Contact hours: 3    Campus: Kelvin Grove    Teaching period: 2011 SEM-1

HMB496 HEALTH EDUCATION CURRICULUM STUDIES 3

This unit extends the principles of professional practice established in HMB292 and HMB396 and further encourages the development of a critically reflective approach to the teaching in that area. It emphasises planning and teaching in the senior secondary school and extends a student's ability to make independent judgments about curriculum decisions within syllabus guidelines and broader systems policies, while considering national and international trends in education and society. The unit also encourages exploration of current issues and emerging and future trends in subject areas.

Prerequisites: HMB331    Credit points: 12    Campus: Kelvin Grove    Teaching period: 2011 SEM-1

KWB109 WRITING AUSTRALIA

This unit provides you with opportunities to read, explore, discuss and evaluate a number of Australian texts written and published over the last twenty-five years. Upon completing this unit, you are able to understand and critically interrogate texts pertinent to contemporary
Australian society and culture.

**Equivalent:** KWB002, KWB710  **Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Kelvin Grove  
**Teaching period:** 2011 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:** Kelvin Grove  
**Teaching period:** 2011 SEM-1

**LSB231 PHYSIOLOGY**

This unit covers the general physiological principles such as homeostasis and how all systems in the body contribute to it. Topics include cells, transport processes, cardiovascular system, cardiac electrical activity, cardiac output, regulation of blood pressure, respiratory system, endocrine system, pulmonary ventilation and its function.

**Antirequisites:** LSB250  
**Equivalents:** LSB245  
**Credit points:** 12  
**Contact hours:** 4 per week  
**Campus:** Kelvin Grove  
**Teaching period:** 2011 SEM-2

**MAB101 STATISTICAL DATA ANALYSIS 1**

Experiments, observational studies, sampling, and polls; data and variables; framework for describing and manipulating probability; independence; Binomial and Normal distributions; population parameters and sample statistics; concepts of estimation and inference; standard error; confidence intervals for means and proportions; tests of hypotheses on means and proportions (one sample and two independent samples); inference using tables of counts; modelling relationships using regression analysis; model diagnosis; use of statistical software.

**Antirequisites:** BSB123, EFB101, MAB141, MAN101, MAB233  
**Assumed knowledge:** Grade of at least Sound Achievement in Senior Mathematics B (or equivalent) or MAB105 is assumed knowledge  
**Credit points:** 12  
**Contact hours:** 4 per week  
**Campus:** Kelvin Grove  
**Teaching period:** 2011 SUM-2, 2011 SEM-1 and 2011 SEM-2

**MAB120 ALGEBRA AND CALCULUS**

This unit introduces and reviews the elementary concepts of function, calculus, matrices and vectors with special reference to applications in science, technology and business where appropriate. Topics covered include the algebra of complex numbers, elementary functions (polynomial, trigonometric, exponential and logarithmic) and their properties, differentiation and integration methods and principles, geometric and algebraic applications of vectors and the solution of linear systems using matrices.

**Antirequisites:** MAN120  
**Assumed knowledge:** Grade of at least Sound Achievement in Senior Mathematics B (or equivalent) or MAB105 is assumed knowledge  
**Equivalent:** MAB110, MAB125, MAB180  
**Credit points:** 12  
**Contact hours:** 4 per week  
**Campus:** Kelvin Grove  
**Teaching period:** 2011 SEM-1, 2011 SUM-2 and 2011 SUM

**MAB121 CALCULUS AND DIFFERENTIAL EQUATIONS**

Building upon the foundations established in MAB120 or Senior Maths C, this unit addresses the significant role of mathematical modelling using differential equations for the description and resolution of simple and complex problems relevant to real world situations. The formulation and solution of such problems is supported by appropriate advanced mathematical concepts used for function approximation, differentiation and integration. Undertaking this unit will allow you to develop your problem solving skills, especially in the context of advanced mathematical techniques applied to ordinary differential equations used to model real world problems. You will also gain a deeper understanding of the concepts of the derivative and the integral, and how these may be used in applied contexts.

**Antirequisites:** MAN121  
**Assumed knowledge:** Grade of at least Sound Achievement in Senior Mathematics C (or equivalent) or MAB120 or MAB100 or MAB125  
**Equivalent:** MAB111, MAB126, MAB131, MAB182  
**Credit points:** 12  
**Contact hours:** 4 per week  
**Campus:** Kelvin Grove  
**Teaching period:** 2011 SEM-1, 2011 SUM-2, 2011 SEM-2 and 2011 SUM

**MAB122 ALGEBRA AND ANALYTIC GEOMETRY**

Building upon the foundations established in MAB120 or Senior Maths C, this unit addresses the significant role of mathematical modelling using vectors, matrices and multivariable calculus for the description and resolution of simple and complex problems relevant in the real world. The formulation and solution of such problems is supported by appropriate advanced mathematical concepts used for function approximation, differentiation and integration. Undertaking this unit will allow you to develop your problem solving skills, especially in the context of advanced mathematical techniques applied to vectors, matrices and multivariable functions used to model real world problems.

**Assumed knowledge:** Grade of at least Sound Achievement in Senior Mathematics C (or equivalent) or MAB120 or MAB100 or MAB125  
**Equivalent:** MAB112, MAB127, MAB132  
**Credit points:** 12  
**Contact hours:** 4 per week  
**Campus:** Kelvin Grove  
**Teaching period:** 2011 SEM-1, 2011 SEM-2 and 2011 SUM

**MDB010 BIOLOGY CURRICULUM STUDIES 2**

This unit provides an opportunity to develop as an learner-centred teacher who can plan to meet the needs of individual students in a varied, stimulating and safe environment.
Prerequisites: MDB031  Credit points: 12  Campus: Kelvin Grove  Teaching period: 2011 SEM-2

MDB021 MATHEMATICS CURRICULUM STUDIES 1
Teachers of middle and secondary school mathematics need a range of understandings and skills to be effective practitioners in the complex social and technological environment of the classroom. This unit introduces students to the teaching and learning of mathematics at the secondary school level. It begins development of students' knowledge and understanding of the secondary mathematics curriculum and their curriculum development skills. The unit is an important component of preparation for Field Studies 1.
Assumed knowledge: 24 credit points in Mathematics discipline studies is assumed knowledge.  Credit points: 12  Contact hours: 3 per week  Campus: Kelvin Grove  Teaching period: 2011 SEM-1

MDB022 MATHEMATICS CURRICULUM STUDIES 2
This unit develops students' understanding of the mathematics curriculum and extends their knowledge and understanding of inclusive learner-focused approaches to mathematics curriculum development.
Prerequisites: MDB021  Credit points: 12  Campus: Kelvin Grove  Teaching period: 2011 SEM-2

MDB023 MATHEMATICS CURRICULUM STUDIES 3
This unit extends students' knowledge and understanding of mathematics curriculum with an emphasis on catering for the range of students engaged in secondary education, inclusive practices and diagnosis of mathematical learning difficulties.
Prerequisites: MDB022 or MDB453 (can be enrolled in the same teaching period)  Credit points: 12  Campus: Kelvin Grove  Teaching period: 2011 SEM-1

MDB031 SCIENCE EDUCATION CURRICULUM STUDIES 1
This unit is to provide you with opportunities to examine praxis in science classrooms in order to help you develop principles for the establishment and management of effective science learning environments.
Assumed knowledge: 24 credit points in discipline studies from any of the following is assumed knowledge: Biology, Chemistry, Earth Science, Physics, and Science Studies.  Credit points: 12  Campus: Kelvin Grove  Teaching period: 2011 SEM-1

MDB033 SCIENCE EDUCATION CURRICULUM STUDIES 3
This unit is to provide opportunities for you to develop an understanding of the theoretical underpinnings of a selection of strategies and resources used in the teaching of science.

Prerequisites: MDB010 or MDB013 or MDB019 or MDB025 or MDB028  Credit points: 12  Campus: Kelvin Grove  Teaching period: 2011 SEM-1

PUB209 HEALTH, CULTURE AND SOCIETY
This unit is concerned with the social and cultural dimensions of health and illness and how they relate to health status and patterns of behaviour. The unit introduces students to thinking about health from sociological and anthropological perspectives, drawing on relevant concepts and theory to examine selected public health issues. Identifying and addressing social and cultural factors that shape people's health experiences of health, illness and health systems are integral parts of public health practice in terms of reducing health inequalities, delivering appropriate services, and ultimately improving population health outcomes.
Credit points: 12  Contact hours: 3 per week  Campus: Kelvin Grove  Teaching period: 2011 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: PUN106  Credit points: 12  Contact hours: 4 per week (KG and Ext Sem 1; KG Sem 2)  Campus: Kelvin Grove and External  Teaching period: 2011 SEM-1 and 2011 SEM-2

PUB530 HEALTH EDUCATION AND BEHAVIOUR CHANGE
This unit gives students the skills to bring about change in health-related behaviours through educational interventions. Topics covered include key health education and behaviour change theories, frameworks, strategies; approaches to bring about change in different contexts; research and design of educational interventions to suit different target populations in different settings, using evidence-based practice; and health literacy as a function of health education.
Antirequisites: PUB329, PUB341  Credit points: 12  Campus: Kelvin Grove  Teaching period: 2011 SEM-1

SCB110 SCIENCE CONCEPTS AND GLOBAL SYSTEMS
You will undertake interdisciplinary study of the physical, geological and biological concepts relating to the origins of life; from the creation of matter and planets, to the emergence of life in all its complexity, culminating in evolution of earth ecosystems. Human influences, overlaid upon earth’s complex systems, will be examined as to their type, extent, and impact. In counterpoint, you will explore the breadth of philosophical developments underlying our search for knowledge; fundamental thoughts and ideas that span the last 2,500 years of human history. Ultimately, these concepts evolved through the development of a scientific method and we explore its workings in relation to the ongoing enterprise of human understanding.

Credit points: 12  Contact hours: 4.5 per week
Campus: Gardens Point  Teaching period: 2011 SEM-1

SCB112 CELLULAR BASIS OF LIFE

Scientists from all disciplines need an appreciation and a broad overview of the characteristics and functioning of the five groups of living organisms (bacteria, protists, fungi, plants and animals), and their interactions with the inanimate world. SCB112 Cellular Basis of Life is a first semester unit that is essential for many students undertaking courses requiring biological knowledge. Through integrated lecture and laboratory classes, this unit provides you with a foundation for later more advanced studies in your course or major (eg such as medical science, biomedical science, pharmacy, optometry, biochemistry, biotechnology, microbiology, geosciences, ecology, business and education among others). The aim of this unit is to introduce you to the wide diversity of living organisms while emphasising the unity of life processes at the cellular, biochemical and biophysical levels.

Antirequisites: LQB182, LSB118  Credit points: 12  Contact hours: 4 per week  Campus: Gardens Point  Teaching period: 2011 SEM-1 and 2011 SEM-2

SCB120 PLANT AND ANIMAL PHYSIOLOGY

Regardless of which area of biology you decide to specialise in, you will need to understand the complex interactions between cells, tissues, organs and organ systems that comprise multi-cellular organisms. Although many living processes can be explained at the levels of biochemistry, biophysics and cell biology, a true understanding of complex, multicellular organisms requires integration of knowledge drawn from all of these areas, combined with the more complex physiological and structural levels you will learn about in this unit. The knowledge gained in this and other first level units provides you with the conceptual framework necessary to understand processes occurring from the cellular to the whole organism level and to higher levels of organisation.

Prerequisites: SCB112  Equivalents: NRB270  Credit points: 12  Contact hours: 4.5 per week  Campus: Gardens Point  Teaching period: 2011 SEM-2

SCB122 CELL AND MOLECULAR BIOLOGY

SCB122 Cell and Molecular Biology 1 equips students with a comprehensive understanding of the molecular basis of the cell. This unit expands on the basic principles and concepts relating to cell structure, function, perpetuation and specialisation introduced in SCB112 and introduces students to fundamental molecular mechanisms central to the organisation of the cell. Students will be shown how macromolecular interactions are crucial to information flow and heredity. Students are taught the relationships between chromosomes, genes and cellular function and ultimately how these may determine an organism’s phenotype. This unit underpins cell biology and molecular biology units that are offered in second year Life Science units. SCB122 is also ideal for interfaculty students (eg Education, Business, Arts) who will undertake no further life science studies.

Prerequisites: SCB112. SCB112 can be studied in the same teaching period. Antirequisites: LSB238  Credit points: 12  Contact hours: 4.5 per week  Campus: Gardens Point  Teaching period: 2011 SEM-2

SPB012 CLASSROOM AND BEHAVIOUR MANAGEMENT

This unit integrates concepts of behaviour development, management and discipline within a defensible pattern of classroom management and appropriate curricula processes.

Credit points: 12  Campus: Internet, Kelvin Grove, External and Caboolture  Teaching period: 2011 SEM-1, 2011 6TP4, 2011 SEM-2 and 2011 SUM