





# COLLEGE OF HEALTH & BIOMEDICINE

Dr. Kerry Ryan Nursing and Midwifery St. Albans Campus 24 May 2013



### COLLEGE OF HEALTH & BIOMEDICINE STRATEGIC PLANNING

#### The College aims:

- to develop new HE postgraduate health and allied health courses
- to strengthen undergraduate courses and integrate VE and HE offerings to adopt an inter-professional approach to teaching and learning
- to adopt an interdisciplinary approach to research

#### Mission:

- To empower students to be global champions of health and health promotion
- To apply inter-professional education in the training of skilled professionals for the health and allied health workforce
- To conduct world renowned inter-disciplinary research and knowledge exchange addressing solutions to chronic disease

At a national level trend data indicates that the Australian workforce is ageing. The Western region of Melbourne indicates there is a disproportionate prevalence of chronic disease. Our teaching and learning and research therefore focuses on:

MELBOURNE AUSTRALIA

#### RESEARCH



Associate Professor Andrew McAinch

Biomedical and Lifestyle Diseases (BioLed) Research Unit

Associate Professor Alan Hayes



Western Centre for Health Research & Education (WCHRE)

Advanced Food System Research Unit

Associate Professor Todor Vasiljevic



Clinical & Community Health
Associate Professor
Mary Carolan



### **COLLEGE DISCIPLINES**



Food, Nutrition & Dietetics

**Paramedicine** 



Biomedical Sciences



Nursing & Midwifery





Dermal Science
Osteopathic Medicine





#### **OSTEOPATHY**

**Five-Year Program** 

Three-Year Bachelor Degree



Two-Year Masters Degree

Both are required for registration as an osteopath

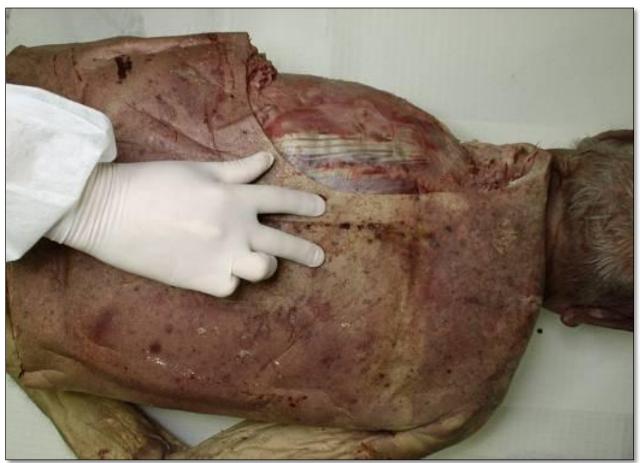




# INVOLVES EXPERT CLINICAL AND MANUAL TECHNIQUE INSTRUCTION THROUGHOUT THE 5 YEAR PROGRAM



# STUDENTS LEARN HUMAN ANATOMY IN STATE-OF-THE-ART ANATOMY LABORATORY WET LAB



Dissection of cadavers allows a truly 3-dimensional appreciation of anatomy





#### CLINICAL TRAINING IN VU TEACHING CLINICS FOR OSTEOPATHY STUDENTS FROM YEAR 3 – YEAR 5 TO CONSOLIDATE SKILLS NEEDED FOR CLINICAL PRACTICE



### **BIOMEDICAL SCIENCE**









### BIOMEDICAL SCIENCES COURSES

- Bachelor of Science (Biomedical Sciences) 4 streams are available
- wellness management
- science media and communications
- marketing of biomedical products, and
- medical research/clinical sciences

- Bachelor of Science / Bachelor of Psychological Studies
- It will prepare students to pursue professional studies in Science and/or Psychology, or
- to use the theoretical, practical and research skills gained to pursue a wide range of career and study options





### **BIOMEDICAL SCIENCES AREAS**

- Stem Cell Biology
- Neurophysiology
- Exercise physiology
- Muscle metabolism
- Immunology
- Cancer and cachexia

- Cardiovascular disease
- Women's Health
- Sarcopenia
- Body composition
- Malaria
- Diabetes





### BIOMEDICAL SCIENCES TECHNIQUES

- Human Trials
- Animal models
- Stress tests
- Electrophysiology
- Histology
- Immunohistochemistry

- Endothelial function
- Muscle contraction
- Dietary interventions
- Cell culture
- Gene and protein expression
- Gait analysis





### FOOD, NUTRITION & DIETETICS











### FOOD, NUTRITION & DIETETICS

### RESEARCH EXPERTISE

- Solutions in technology
- Food Processing
- Dairy Processing Technologies
   & Techniques
- Grains, fruits & vegetable processing
- Separation & extraction processes
- Advanced membrane technologies

- Functional foods & Nutraceuticals
- Physiological properties of dietary proteins
- Improvement of functional properties of whey proteins
- Improvement of physiological functionality of whole grains
- Specialised processing to preserve functional qualities of foods





### FOOD, NUTRITION & DIETETICS RESEARCH EXPERTISE CONT..

- Enhancement of shelf life
- Technologies & techniques for increasing shelf life
- Novel methods for food preservation of bioactive materials
- Impact of food preservation technologies on functional properties
- Food safety & security
- Risk assessment of supply chain

- Physical chemistry of foods
- Food rheology
- Food property characterisation
   & modelling
- Impact of hydrostatic & hydrodynamic pressure on proteins
- Protein-protein & proteinpolysaccharide interactions
- Functional properties of dairy products





### DISCIPLINE OF DERMAL SCIENCE COURSES

Certificate III – Beauty Therapy

Certificate IV – Beauty Therapy

Diploma of Beauty Therapy

Bachelors Health Science – Dermal Therapies

Post Graduate Certificate Dermal Science





#### **DERMAL SCIENCE**

 Focuses on the skin and skin treatments, from the aesthetics, to disease and wound management







### DERMAL SCIENCE STRENGTHS:

- The only University in Australia offering this type of course
- Fast growing area both in enrolments and as an industry
- It provides a safety aspect for the community in better trained therapists, especially in new technologies like laser
- We are recognised by medical associations such as Australian Society of Aesthetic Plastic surgeons
- Staff are setting the standard in industry, as our course is the benchmark
- Innovative and passionate
- Strong clinical background, that have a strong industry link
- Beginnings of more intensive research in an area with a vast research potential





### **PARAMEDICINE**







### PARAMEDICINE STAFF SKILLS & CAPABILITIES

- 7 clinically qualified paramedic academics
- 1 physiologist
- 1 pharmacologist
- 1 psychologist
- 1 law and ethics expert.





#### PARAMEDICINE CURRENT RESEARCH ACTIVITY/ PROJECTS

- Psychological health of Paramedic students: A Comparitive Study
- Changes in psychological predictors of restrained eating in young adulthood:
   Collaborative study with University College Cork, Ireland
- Examination of coping styles and impact on health behaviours in university students:
   Collaborative study with University College Cork, Ireland
- Improving retention, engagement and success of Paramedic students from low SES backgrounds using the ParaConnect program: funding source: DEEWR: Higher Education Participation and Partnership program
- Improving the university experience and academic outcomes for low SES students in HBPX by implementing the STARC mentor program: funding source: DEEWR: Higher Education and Partnership Program





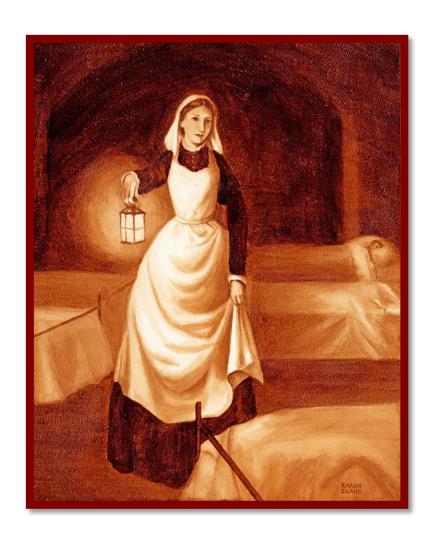
### PARAMEDICINE CURRENT RESEARCH ACTIVITY/ PROJECTS CONT..

- Improving the transition of low SES students in health related courses within the School of Biomedical and Health Sciences: funding source: DEEWR: Higher Education Participation and Partnership Program
- Improving the academic success of students who enter university via The Portfolio Partnership Program (PPP) Paramedic Support Program: funding source: DEEWR; Higher Education Participation and Partnership Program
- Examining the preparedness of paramedic academics to teach Evidence Based Practice (EBP) to undergraduate students in Australia, NZ & UK. Professional requirement to be educated in EBP. Conflicting evidence from other medical fields. Minimal work on teaching Paramedics. No previous work in the area of teaching Paramedics EBP. Research will inform the teaching of EBP to Paramedics worldwide
- Investigation of the effect of position change on Valsalva manoeuvre (VM). VM is used worldwide to treat Supraventricular Tachycardia. Position change during the VM potentially increases the effect with more patients reverting to a normal cardiac rhythm and avoiding drug or electrical therapy. Has potential to change global medical practice.





### **NURSING AND MIDWIFERY**









### SOME THINK OF NURSE EDUCATION AS THIS.....



### AT VU IT IS MORE ABOUT THIS.. AIMING FOR REAL EXPERIENCE







#### PROGRAMS AND PATHWAYS OFFERED

Strongly based in the supporting disciplines of Bioscience, Pharmacology, Psychology and Sociology, and incorporates:

- Certificate 111 and 1V in Aged Care
- Certificate 111 in Home and Community Care
- Allied Health Assistance
- Certificate 111 in Health Service Assistance
- Certificate 1V in Health Supervision
- Gateway to Nursing
- Diploma of Nursing incorporating 400 Clinical placement hours
- Ba Nursing incorporating 800 Clinical placement hours
- Ba Midwifery
- Nursing (Honours)
- Master of Nursing (by Research)
- Doctor of Philosophy

#### **Clinical Models: Nursing and Simulation Laboratories**

- Strategic links with
- Sunshine Hospital
- Western Health through the Teaching-Training & Research Facility (TTR)





#### **NURSING AND MIDWIFERY RESEARCH**

There are three main areas of research

- (1) Mental health; prevention and early intervention in young people with mental health problems; promotion of recovery in people with severe and enduring mental illness;
- (2) Pregnancy research investigates women's pregnancy experiences, adverse outcomes and risk in pregnancy, perinatal health and morbidity, gestational diabetes, older maternal age and explores the health care and social challenges that impact upon women.
- (3) Acute and Chronic Illness research explores interventions which enhance standards of community and hospital care with the goal of improving patient outcomes.





### STAFF: EXCELLENT, ENGAGED AND ACCESSIBLE

- Are all Division 1 Registered Nurses and have AHPRA Registration
- Qualifications include Professorials, Doctorates and Masters
- Expertise in Curriculum and Course Development, Delivery, Teaching and Assessment
- International lecturing and teaching expertise including Canada, Indonesia, Denmark, Hong Kong, Korea, Vietnam, Sierra Leone, China, USA

"As Nurses of the West we understand cultural diversity and work towards cultural awareness and understanding in our nursing teaching and practice."





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- Separation & extraction processes
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- Functional foods & Nutraceuticals
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- Improvement of physiological functionality of whole grains
- Specialised processing to preserve functional qualities of foods





### DISCOVER HOW YOU CAN GRADUATE JOB-READY

**OPEN DAY 2013** 

SUNDAY 25 AUGUST FROM 10AM — 4PM FOOTSCRAY PARK CAMPUS BALLARAT RD, FOOTSCRAY





