BIOM40001 Introduction To Biomedical Research

Credit Points:	12.50
Level:	4 (Undergraduate)
Dates & Locations:	2012, Parkville This subject commences in the following study period/s: February, Parkville - Taught on campus.
Time Commitment:	Contact Hours: 30 Total Time Commitment: 120 hours (estimated)
Prerequisites:	BBiomed: Completion of third year. BSc (or equivalent): Completion of third year, of which at least 37.5 points in third year shall be in a relevant biomedical discipline.
Corequisites:	For BSc (Hons) or BBiomed (Hons): a relevant discipline-specific Honours coursework unit and a relevant Research Project in an MDHS department
Recommended Background Knowledge:	Three years of undergraduate 3 year sequence in a relevant biomedical science discipline.
Non Allowed Subjects:	None
Core Participation Requirements:	For the purposes of considering request for Reasonable Adjustments under the Disability Standards for Education (Cwth 2005), and Students Experiencing Academic Disadvantage Policy, academic requirements for this subject are articulated in the Subject Overview, Objectives, Assessment and Generic Skills sections of this entry. It is University policy to take all reasonable steps to minimise the impact of disability upon academic study, and reasonable adjustments will be made to enhance a student's participation in the University's programs. Students who feel their disability will impact on meeting the requirements of this subject are encouraged to discuss this matter with a Faculty Student Adviser and the Disability Liaison Unit: http://www.services.unimelb.edu.au/disability/
Contact:	Academic Coordinators: Associate Professor Tony Hughes **rahughes@unimelb.edu.au (mailto:rahughes@unimelb.edu.au)** Dr Gary Hime **g.hime@unimelb.edu.au (mailto:g.hime@unimelb.edu.au)** **Administrative Coordinator:** Medicine, Dentistry and Health Sciences Student Centre**http://sc.mdhs.unimelb.edu.au/contact (http://sc.mdhs.unimelb.edu.au/contact)**
Subject Overview:	This subject uses a structured approach to introduce students to processes and strategies at the core of modern biomedical research. In a series of 10 x 2hr tutorials, students are guided through the need for – and tools of – testable hypothesis formulation, data management and evaluation, data presentation, and research outcome communication. Specific case examples of experimental design and statistical testing techniques are considered. In the course of this, students are introduced to appropriate statistical approaches and software. Ethical practices relevant to both animal and human experimental biomedical research are reviewed and inculcated. Broad issues relating to research conduct and management are addressed in the context of Discussion Workshops. These topics include critical reading skills, management of intellectual property, scientific integrity and fraud, conflict of interest, e-research, publication production, reference management and archiving of data. Additional Workshops deal with advanced techniques utilised in contemporary medical research.
Objectives:	To develop a mature understanding of experimental design, experimental implementation, data evaluation and communication as it relates to modern biomedical research, in a broad ethical context. To acquire competency in statistical analysis, hypothesis testing and data presentation. To generate awareness of, and appropriate behaviours relating to, ethical conduct of animal and human experimental ethics, including regulatory requirements. To appreciate the need for the active management of intellectual property issues, scientific integrity and conflict of interest in

	a contemporary biomedical research context. To become aware of the scientific and technical basis of selected advanced techniques in biomedical research.
Assessment:	Two written reports (each not exceeding 3000 words) submitted during the semester, each worth 50%
Prescribed Texts:	None
Breadth Options:	This subject is not available as a breadth subject.
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Generic Skills:	To: • Develop critical reading skills. • Develop skills in a range of communication forms, oral and written. • Appreciate the roles of the individual and the team in contemporary medical research. • Develop appropriate time managements skills over both short and long time frames
Links to further information:	None
Notes:	This subject is only available to students enrolled in BSc (Honours); BBiomed (Honours); MSc (RT, Biomedical and Health Sciences)
Related Course(s):	Master of Science (Biomedical and Health Sciences)
Related Majors/Minors/ Specialisations:	Anatomy and Cell Biology Honours Program - Veterinary Bioscience Medicine (Austin Health / Northern Health) Medicine (Royal Melbourne Hospital and Western Health) Medicine (St Vincent's Hospital) Oral Health Science Otolaryngology Otolaryngology Paediatrics Pathology Pathology Pharmacology Physiology Physiology Primary Care (General Practice) Psychopharmacology [Psychiatry (Austin and Northern Health)] Surgery (Austin and Northern Health)