

645-AA Postgraduate Diploma in Biostatistics

| Year and Campus: | 2009 | | | | | | | | | | | | |
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| Fees Information: | Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees | | | | | | | | | | | | |
| Level: | Graduate/Postgraduate | | | | | | | | | | | | |
| Duration & Credit Points: | | | | | | | | | | | | | |
| Coordinator: | Professor John Carlin Centre for Molecular, Environmental, Genetic and Analytic Epidemiology Tel: +61 3 8344 0733 Email: john.carlin@unimelb.edu.au | | | | | | | | | | | | |
| Contact: | Academic Programs Office School of Population Health Tel: +61 3 8344 9339 Fax: +61 3 8344 0824 Email: sph-gradinfo@unimelb.edu.au | | | | | | | | | | | | |
| Course Overview: | This course is a subset of the Master of Biostatistics (see that heading for further information). On completion of the Postgraduate Diploma in Biostatistics, students will have attained a similar range of skills required for employment as a biostatistician as those completing the Master of Biostatistics, without the workplace project and without the scope to complete elective subjects. | | | | | | | | | | | | |
| Objectives: | On completion of this course, graduates will: <ul style="list-style-type: none"> # be able to demonstrate a broad understanding of the mathematical background, theory and application of the principles of epidemiology and biostatistical methods in health and medical research # have acquired skills in complex statistical analyses to handle a variety of practical problems using modern statistical techniques and software # have acquired skills in data collection and data management, including database design, quality control procedures and the ethical handling of data # have developed skills to identify the relevant statistical issues in practical problems in medical/health settings and to propose and implement an appropriate statistical design and/or analysis methodology # have developed skills and demonstrated ability to present statistical results in a format suitable for publication in health-related journals or professional reports # have acquired the technical skills to be able to read methodological papers in the biostatistical literature and apply the methods described therein to practical problems # have developed the practical and technical skills to progress to further postgraduate studies in biostatistics # be aware of professional codes of conduct and ethical standards such as those of the Statistical Society of Australia | | | | | | | | | | | | |
| Course Structure & Available Subjects: | This course is available on a part-time basis only, and at the maximum rate of 2 subjects per semester requires 2 years to complete (100 credit points). All subjects are taught by distance education, via a consortium of universities known as the Biostatistics Collaboration of Australia (BCA). For further details, see the BCA website: www.bca.edu.au . | | | | | | | | | | | | |
| Subject Options: | <p>CORE SUBJECTS</p> <p>Students must complete SEVEN of the following CORE subjects (unless exemptions are granted on the basis of equivalent prior study).</p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>505-108 Data Management & Statistical Computing</td> <td>Semester 1, Semester 2</td> <td>12.500</td> </tr> <tr> <td>505-107 Principles of Statistical Inference</td> <td>Semester 1, Semester 2</td> <td>12.500</td> </tr> <tr> <td>505-106 Epidemiology</td> <td>Semester 1, Semester 2</td> <td>12.500</td> </tr> </tbody> </table> | Subject | Study Period Commencement: | Credit Points: | 505-108 Data Management & Statistical Computing | Semester 1, Semester 2 | 12.500 | 505-107 Principles of Statistical Inference | Semester 1, Semester 2 | 12.500 | 505-106 Epidemiology | Semester 1, Semester 2 | 12.500 |
| Subject | Study Period Commencement: | Credit Points: | | | | | | | | | | | |
| 505-108 Data Management & Statistical Computing | Semester 1, Semester 2 | 12.500 | | | | | | | | | | | |
| 505-107 Principles of Statistical Inference | Semester 1, Semester 2 | 12.500 | | | | | | | | | | | |
| 505-106 Epidemiology | Semester 1, Semester 2 | 12.500 | | | | | | | | | | | |

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| 505-105 Mathematics B'Ground for Biostatistics | Semester 1, Semester 2 | 12.500 |
| 505-941 Categorical Data & GLMs | Semester 2 | 12.500 |
| 505-939 Design of Randomised Controlled Trials | Semester 2 | 12.500 |
| 505-940 Linear Models | Semester 2 | 12.500 |
| 505-975 Probability and Distribution Theory | Semester 1, Semester 2 | 12.500 |

ELECTIVE SUBJECTS

| Subject | Study Period Commencement: | Credit Points: |
|--|----------------------------|----------------|
| 505-938 Clinical Biostatistics | Semester 1 | 12.500 |
| 505-937 Health Indicators and Health Surveys | Semester 1 | 12.500 |
| 505-943 Longitudinal and Correlated Data | Semester 1 | 12.500 |
| 505-942 Survival Analysis | Semester 1 | 12.500 |
| 505-964 Advanced Clinical Trials | Semester 2 | 12.500 |
| 505-944 Bioinformatics | Semester 2 | 12.500 |

Entry Requirements:

- # An undergraduate degree with at least H2B (70%) average and two years of documented work experience relevant to the use of quantitative methods in health research; OR an undergraduate degree in mathematics, statistics, health or other sciences that includes tertiary-level mathematics, with at least H2B (70%) average.
 - # A demonstrated capacity for advanced mathematical work, indicated for example by a high level of achievement in secondary or tertiary mathematics.
 - # Successful completion of a tertiary-level statistics subject or demonstrated equivalent prior knowledge of statistics.
- The Selection Committee may conduct interviews or tests or may call for referee reports or employer references to elucidate any of the matters listed above.

Core Participation Requirements:

<p>For the purposes of considering request for Reasonable Adjustments under the Disability Standards for Education (Cwth 2005), and Student Support and Engagement Policy, academic requirements for this subject are articulated in the Subject Overview, Learning Outcomes, Assessment and Generic Skills sections of this entry.</p> <p>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 may impact on meeting the requirements of this subject are encouraged to discuss this matter with a Faculty Student Adviser and Student Equity and Disability Support: http://services.unimelb.edu.au/disability</p>

Graduate Attributes:

The Melbourne Experience enables our graduates to become: Academically excellent: have a strong sense of intellectual integrity and the ethics of scholarship have in-depth knowledge of their specialist discipline(s) reach a high level of achievement in writing, generic research activities, problem-solving and communication be critical and creative thinkers, with an aptitude for continued self-directed learning be adept at learning in a range of ways, including through information and communication technologies Knowledgeable across disciplines: examine critically, synthesise and evaluate knowledge across a broad range of disciplines expand their analytical and cognitive skills through learning experiences in diverse subjects have the capacity to participate fully in collaborative learning and to confront unfamiliar problems have a set of flexible and transferable skills for different types of employment Leaders in communities: initiate and implement constructive change in their communities, including professions and workplaces have excellent interpersonal and decision-making skills, including an awareness of personal strengths and limitations mentor future generations of learners engage in meaningful public discourse, with a profound awareness of community needs Attuned to cultural diversity: value different cultures be well-informed citizens able to contribute to their communities wherever they choose to live and work have an understanding of the social and cultural diversity in our community respect indigenous knowledge, cultures and values Active global citizens: accept

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| | social and civic responsibilities be advocates for improving the sustainability of the environment have a broad global understanding, with a high regard for human rights, equity and ethics |
| Generic Skills: | Please refer to the Course Objectives. |
| Links to further information: | http://www.sph.unimelb.edu.au |
| Notes: | All subjects are taught by distance education, via a consortium of universities known as the Biostatistics Collaboration of Australia (BCA). For further details, see the BCA website: www.bca.edu.au . Available to International students by distance only. Mid Year entry is available. |