Biostatisticians play essential roles in designing studies, analyzing data and creating methods to attack research problems as diverse as:

- Determination of major risk factors for heart disease, lung disease and cancer
- Testing of new drugs such as to combat AIDS
- Evaluation of impact on human health of environmental factors such as tobacco smoke, asbestos or pollutants
- Development of appropriate analysis methods in proteomics and genomics
- Evaluation of public health impacts from policy changes
- Evaluation and management of injury risk
- Detection and control of disease outbreaks such as from avian influenza
- Evaluation of hospital practices and health management data

Graduates with the degree of Master of Biostatistics across the world are internationally recognised and are in high demand in industry and government, particularly by pharmaceutical companies and drug regulators as well as medical investigators and public health researchers and policy groups. The demand for biostatisticians has been very strong in Europe and North America for at least the past three decades. We anticipate substantial growth in demand for biostatisticians in Australia and neighbouring regions especially with the growth in health industries that will occur in these regions. In order to provide students with a route to high quality careers in Biostatistics, we introduce in 2007 a Master of Biostatistics Program located in the Department of Statistics of the School of Mathematics and Statistics at the University of New South Wales (UNSW) in Sydney, Australia. The program will provide advanced coursework training in biostatistical theory and methods using an on-campus delivery mode with a significant project component.

**Careers**

The program is oriented towards graduates with a degree in an area with a significant quantitative component (such as Science, Engineering, Finance, Economics, Actuarial Science, Psychology, Epidemiology or Bioinformatics), who wish to develop their knowledge and skills in statistical and computational methods appropriate to biostatistics. The program is appropriate for graduates who plan to work as biostatisticians. The degree draws on contributions from specialists in Statistics and Public Health at UNSW as well as relevant UNSW Research Centres and Hospitals for which Biostatistics is essential.

**Admissions**

Entry is available in Session 1 only. The program consists of ten courses, each of 6 Units of Credit and a project of 12 Units of Credit. The possibility to take some courses in other Schools at UNSW or at other Universities exists with the approval of the Head of School of Mathematics and Statistics.
Articulation Rules

After Session 1 students may choose not to graduate from the Master of Biostatistics and instead apply to transfer to either the Graduate Diploma in Statistics or Master of Statistics Program provided the rules of admission into those degrees are satisfied. Students who initially satisfied the criteria for the Master of Biostatistics Program but enrolled into the Graduate Diploma in Statistics or Master of Statistics Program may transfer to the Master of Biostatistics Program after the first session.

Compulsory courses:

- MATH5826 Statistical Methods in Epidemiology
- MATH5885 Longitudinal Data Analysis
- MATH5906 Design and Analysis of Clinical Trials
- MATH5916 Survival Analysis
- MATH5876 Data Management for Statistical Applications
- MATH5806 Applied Regression Analysis
- MATH5905 Statistical Inference
- MATH5925 Project

Elective courses

A minimum of 18 units of credit from the following Elective Courses (or other courses approved by Head of School):

- MATH5945 Categorical Data Analysis
- MATH5815 Design of Experiments
- MATH5855 Multivariate Analysis
- MATH5845 Time Series Analysis
- MATH5835 Stochastic Processes
- MATH5836 Data Mining
- MATH5960 Bayesian Inference and Computation
- MATH5935 Statistical Consulting
- MATH5895 Nonparametric Analysis
- MATH5875 Sample Survey Design
- PHCM9913 Evidence Based Health Systems
- PHCM9422 Population Health, Epidemiology and Statistics
- PHCM9517 Advanced Biostatistics and Statistical Computing
- PHCM9911 Health Informatics Principles
- PHCM9922 Decision Support Systems
- BINF9010 Bioinformatics Methods and Applications
- BIOT7160 Genomics and Proteomics

Students with a prior undergraduate major or minor in Statistics of sufficient standard can enter the program directly. For students with sufficient prior knowledge in mathematics but without adequate knowledge in Statistics we recommend that they take the bridging courses MATH5846 and MATH5856 first (offered in Session 2).

For further details contact: Dr Sally Galbraith email: Sally.Galbraith@unsw.edu.au
For admissions contact: Dr Spiridon Penev email: S.Penev@unsw.edu.au