505-105 Mathematics B'Ground for Biostatistics

Credit Points:	12.50
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	Distance only
Time Commitment:	Contact Hours: None Total Time Commitment: 8-12 hours total study time per week
Prerequisites:	None
Corequisites:	None
Recommended Background Knowledge:	None
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 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. 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
Contact:	Dr Keith Dear, Australian National University Associate Professor Julian Leslie, Macquarie University Biostatiscs Collaboration of Australia School of Population Health, University of Melbourne
Subject Overview:	Basic algebra and analysis; exponential functions; calculus; series, limits, approximations and expansions; matrices and numerical methods.
Objectives:	On completion of this unit students will be able to follow the mathematical demonstrations and proofs used in biostatistics at Masters degree level, and to understand the mathematics behind statistical methods introduced at that level. The intention is to allow students to concentrate on statistical concepts in subsequent units, and not be distracted by the mathematics employed.
Assessment:	Three written assignments to be submitted during Semester: Two worth 40% each covering calculus, and matrices and numerical methods (approx 12 hrs work each). One worth 20% covering functions (approx 8 hrs work)
Prescribed Texts:	Anton H, Bivens I, Davis S. Calculus: early transcendentals version, 8th edition. Wiley, 2005. (ISBN 0471472441)Healy, M.J.R. Matrices for Statistics, 2nd edition. Oxford University Press, 2000. (ISBN 978-0-19-850702-4) Resources Provided to Students: Printed course notes and assignment material by mail, email, and WebCT Discussion groups. Special Computer Requirements: Microsoft Excel or Stata statistical software.
Recommended 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:	Independent problem solving, facility with abstract reasoning, clarity of technical expression

Links to further information:	http://www.sph.unimelb.edu.au
Notes:	This subject is not available in the Master of Public Health.
Related Course(s):	Master of Biostatistics Postgraduate Certificate in Biostatistics Postgraduate Diploma in Biostatistics