# POPH90015 Mathematics Background for Biostatistics

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| **Credit Points:** | 12.50 |
| **Level:** | 9 (Graduate/Postgraduate) |
| **Dates & Locations:** | 2013, Parkville<br>This subject commences in the following study period/s:<br>Semester 2, Parkville - Taught online/distance.<br>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 Students Experiencing Academic Disadvantage Policy, academic requirements for this subject are articulated in the Subject Description, Subject Objectives, Generic Skills and Assessment Requirements of this entry. The University is dedicated to provide support to those with special requirements. Further details on the disability support scheme can be found at the Disability Liaison Unit website. |
| **Contact:** | Semester 1: Dr Gary Glonek, School of Mathematical Sciences, University of Adelaide<br>Semester 2: Dr Maurizio Manuguerra, Macquarie University<br>Biostatistics Collaboration of Australia<br>Email: bca@ctc.usyd.edu.au<br>Website: www.bca.edu.au<br>OR<br>Academic Programs Office<br>Melbourne School of Population Health<br>Tel: +61 3 8344 9339<br>Fax: +61 3 8344 0824<br>Email: sph-gradinfo@unimelb.edu.au |
| **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) 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:** | Healy, M.J.R. Matrices for Statistics, 2nd edition. Oxford University Press, 2000. (ISBN 978-0-19-850702-4) |
| **Breadth Options:** | This subject is not available as a breadth subject. |

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| **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<br>Postgraduate Certificate in Biostatistics<br>Postgraduate Diploma in Biostatistics |