

# POPH90118 Clinical Biostatistics

| <b>Credit Points:</b>                              | 12.5   |                |                            |                |  |                        |       |                        |                        |       |   |                        |       |   |                        |       |
|--|--|----------------|----------------------------|----------------|--|------------------------|-------|------------------------|------------------------|-------|---|------------------------|-------|---|------------------------|-------|
| <b>Level:</b>                                      | 9 (Graduate/Postgraduate)  |                |                            |                |  |                        |       |                        |                        |       |   |                        |       |   |                        |       |
| <b>Dates &amp; Locations:</b>                      | 2015, Parkville<br>This subject commences in the following study period/s:<br>Semester 1, Parkville - Taught online/distance.  |                |                            |                |  |                        |       |                        |                        |       |   |                        |       |   |                        |       |
| <b>Time Commitment:</b>                            | Contact Hours: None - This subject is taught via Distance Learning Total Time Commitment: 170 hours  |                |                            |                |  |                        |       |                        |                        |       |   |                        |       |   |                        |       |
| <b>Prerequisites:</b>                              | POPH90017 can be taken concurrently.<br><table border="1" data-bbox="387 573 1485 891"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>POPH90015 Mathematics Background for Biostatistics</td> <td>Semester 1, Semester 2</td> <td>12.50</td> </tr> <tr> <td>POPH90016 Epidemiology</td> <td>Semester 1, Semester 2</td> <td>12.50</td> </tr> <tr> <td>POPH90148 Probability and Distribution Theory</td> <td>Semester 1, Semester 2</td> <td>12.50</td> </tr> <tr> <td>POPH90017 Principles of Statistical Inference</td> <td>Semester 1, Semester 2</td> <td>12.50</td> </tr> </tbody> </table> | Subject        | Study Period Commencement: | Credit Points: | POPH90015 Mathematics Background for Biostatistics | Semester 1, Semester 2 | 12.50 | POPH90016 Epidemiology | Semester 1, Semester 2 | 12.50 | POPH90148 Probability and Distribution Theory | Semester 1, Semester 2 | 12.50 | POPH90017 Principles of Statistical Inference | Semester 1, Semester 2 | 12.50 |
| Subject  | Study Period Commencement:   | Credit Points: |                            |                |  |                        |       |                        |                        |       |   |                        |       |   |                        |       |
| POPH90015 Mathematics Background for Biostatistics | Semester 1, Semester 2   | 12.50          |                            |                |  |                        |       |                        |                        |       |   |                        |       |   |                        |       |
| POPH90016 Epidemiology                             | Semester 1, Semester 2   | 12.50          |                            |                |  |                        |       |                        |                        |       |   |                        |       |   |                        |       |
| POPH90148 Probability and Distribution Theory      | Semester 1, Semester 2   | 12.50          |                            |                |  |                        |       |                        |                        |       |   |                        |       |   |                        |       |
| POPH90017 Principles of Statistical Inference      | Semester 1, Semester 2   | 12.50          |                            |                |  |                        |       |                        |                        |       |   |                        |       |   |                        |       |
| <b>Corequisites:</b>                               | None   |                |                            |                |  |                        |       |                        |                        |       |   |                        |       |   |                        |       |
| <b>Recommended Background Knowledge:</b>           | None   |                |                            |                |  |                        |       |                        |                        |       |   |                        |       |   |                        |       |
| <b>Non Allowed Subjects:</b>                       | None   |                |                            |                |  |                        |       |                        |                        |       |   |                        |       |   |                        |       |
| <b>Core Participation Requirements:</b>            | 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.   |                |                            |                |  |                        |       |                        |                        |       |   |                        |       |   |                        |       |
| <b>Coordinator:</b>                                | Prof John Carlin   |                |                            |                |  |                        |       |                        |                        |       |   |                        |       |   |                        |       |
| <b>Contact:</b>                                    | <b><a href="mailto:john.carlin@unimelb.edu.au">john.carlin@unimelb.edu.au</a> (mailto:john.carlin@unimelb.edu.au)</b><br><b>OR</b><br>Academic Programs Office<br>Melbourne School of Population and Global Health<br>Tel: +61 3 8344 9339<br>Fax: +61 3 8344 0824<br>Email: <b><a href="mailto:sph-gradinfo@unimelb.edu.au">sph-gradinfo@unimelb.edu.au</a> (mailto:sph-gradinfo@unimelb.edu.au)</b><br><b>OR</b><br>Biostatistics Collaboration of Australia<br>Email: <b><a href="mailto:bca@ctc.usyd.edu.au">bca@ctc.usyd.edu.au</a> (mailto:bca@ctc.usyd.edu.au)</b><br>Website: <b><a href="http://www.bca.edu.au">www.bca.edu.au</a> (http://www.bca.edu.au)</b>      |                |                            |                |  |                        |       |                        |                        |       |   |                        |       |   |                        |       |
| <b>Subject Overview:</b>                           | Clinical agreement (kappa statistics, Bland-Altman agreement method, intraclass correlation); diagnostic tests (sensitivity, specificity, predictive values, ROC curves, likelihood ratio); statistical process control (special and common causes of variation, Shewhart, CUSUM and EMWA charts); and systematic reviews (process, estimating treatment effect, assessing heterogeneity, publication bias).   |                |                            |                |  |                        |       |                        |                        |       |   |                        |       |   |                        |       |

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| <b>Learning Outcomes:</b>            | To enable students to use correctly statistical methods of particular relevance to evidence-based health care and to advise clinicians on the application of these methods and interpretation of the results. |
| <b>Assessment:</b>                   | Four written assignments to be submitted during the semester worth 20%, 25%, 20% 25% respectively (approx 8 hours of work each). Contribution to online discussions, worth 10% (approx 6 hrs work).           |
| <b>Prescribed Texts:</b>             | None Resources Provided to Students: Printed course notes and assignment material by mail, email, and online interaction facilities Special Computer Requirements: Stata statistical software.                |
| <b>Breadth Options:</b>              | This subject is not available as a breadth subject.   |
| <b>Fees Information:</b>             | Subject EFTSL, Level, Discipline & Census Date, <a href="http://enrolment.unimelb.edu.au/fees">http://enrolment.unimelb.edu.au/fees</a>   |
| <b>Generic Skills:</b>               | Independent problem solving, critical appraisal of research literature, clarity of written expression, sound communication of technical concepts  |
| <b>Links to further information:</b> | <a href="http://www.sph.unimelb.edu.au">http://www.sph.unimelb.edu.au</a>   |
| <b>Notes:</b>                        | This subject is not available in the Master of Public Health.   |
| <b>Related Course(s):</b>            | Master of Biostatistics<br>Postgraduate Certificate in Biostatistics<br>Postgraduate Diploma in Biostatistics   |