



BCA STUDENT RESOURCES – TEXTBOOKS AND SOFTWARE GUIDE

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A few notes about your distance education requirements

The BCA program is delivered by distance means. **Access to a computer and the internet are essential study requirements.**

An **online learning management system (eLearning, trade name Blackboard)** is the main teaching tool. It is used for a variety of functions, including as an access point for study notes and materials, and importantly for people studying by distance, a communication tool for student/student and student coordinator discussions. Hard copy materials are also sent by post but you may experience delays in receiving these “study bricks” as new enrolments at universities may not be registered until after the semester start date. Email is also used on occasion, particularly as the first point of contact from the BCA coordinating office and unit coordinators.

Where textbooks are compulsory for particular units, they are listed in the tables below. Some strongly recommended texts are also listed.

At least one of the **Software packages** Stata, SAS or Excel is required for most units. Stata is used in a number of units, and SAS and Stata are compulsory for the units Data Management and Statistical Computing [DMC] and Longitudinal and Correlated Data (LCD). See page 7 for a full listing of software requirements per unit of study.

Please note that it's important to buy study resources as soon as possible.

As most students will be buying textbooks remotely, there are likely to be delays while materials are posted and in some cases, shipped. When buying books online, you should check whether publishers/retailers are in your home country or, if not, ship to it. Where available, you may find eBook versions. In the case of software, Stata and SAS are available to download online but you may need time to complete downloads and seek technical support where required.

More resources are available in [Student Resources](#) on the BCA website, including the **BCA Program Outline** which contains further details about the curriculum, unit of study content, pre/co-requisites, study requirements and delivery centres.

BCA TEXTBOOKS semester 1 - list per unit of study See pages 4 and 5 for notes on texts. These will help identify correct versions and list companion sites.									
UNIT OF STUDY DETAILS			TEXT BOOK DETAILS						
UNIT of study	Unit Coordinator/s	Sem	Title	Version	Compulsory / recommended	Author/s	Publisher	Year	ISBN
Epidemiology (EPI)	Dependent on university	1 & 2	See note: 9, p4		As prescribed by university	See note: 9, p4 for details of compulsory text for EPI at The University of Queensland.			
Mathematical Background for Biostatistics (MBB)	Gary Glonek, Steve Pederson (Adelaide)	1 & 2	Calculus Early Transcendentals See note 2, p 4 for edition advice & Student Companion Site	10 th edition	compulsory	Anton H, Bivens I, Davis S	Wiley	2012	9781118288092 !! See page p 4 for note about buying direct from Wiley.
			Elementary Linear Algebra See note 2, p 4 for Student Companion Site	11 nd edition	compulsory	Anton, Howard	Wiley	2013	9781118473504
Data Management & Statistical Computing (DMC)	Patrick McElduff (Newcastle)	1 & 2	SAS: Applied Statistics & the SAS Programming Language See note 3.i, p 4	5 th edition	compulsory if you have not used SAS previously	Cody RP, Smith JK	Prentice Hall	2006	9780131465329
			Stata: A short Introduction to Stata for Biostatistics updated for Stata 12 See note 3.ii, p 4		compulsory if you have not used Stata previously	Hills M & De Stavola B	London: Timberlake Consultants Ltd	2012	9780957170803
Probability & Distribution Theory (PDT)	Andrew Forbes / Rory Wolfe (Monash)	1 & 2	Mathematical Statistics with Applications (DO NOT BUY THE INTERNATIONAL EDITION) See note 4, p 4	7 th edition	compulsory	Wackerly DD, Mendenhall W, Scheaffer RL	Brooks/Cole, Cengage Learning	2007	9780495110811
Health Indicators & Health Surveys (HIS)	Judy Simpson (Sydney SPH)	1	Elementary Survey Sampling See note 5, p 4	7 th edition	compulsory	Scheaffer RL, Mendenhall W, Ott RL, Gerow KG	Brooks/Cole, Cengage Learning, Duxbury	2011	9780840053619
Survival Analysis (SVA)	Ken Beath (Macquarie)	1	Applied Survival Analysis	2 nd edition	compulsory	Hosmer D.W., Lemeshow S., May S.	Wiley Interscience	2008	9780471754992
			An Introduction to Survival Analysis Using Stata See note 3.ii, p 4	3 rd edition	recommended	Cleves M, Gould W, Gutierrez R, Marchenko Y	Stata Press	2010	9781597180740
Principles of Statistical Inference (PSI)	Liz Barnes (USyd NHMRC CTC)	1 & 2	Inference Principles for Biostatisticians	1 st edition	Recommended See note: 10, p4	Ian C. Marschner	Chapman & Hall / CRC Pr	2014	9781482222234
Linear Models (LMR)	John Carlin (UMelb) / Andrew Forbes (Monash)	1 & 2	Applied Linear Statistical Models See note 7, p 4	5 th edition	recommended	Kutner MH, Nachtsheim CJ, Neter J, Li W	McGraw-Hill/Irwin	2005	9780073108742
Longitudinal & Correlated Data (LCD)	Andrew Forbes (Monash) / John Carlin (UMelb)	1	Applied Longitudinal Analysis		recommended	Fitzmaurice G, Laird N, Ware J	John Wiley and Sons	2004	9780471214878

BCA TEXTBOOKS semester 2 - list per unit of study See pages 4 and 5 for notes on texts. These will help identify correct versions and list companion sites.

UNIT OF STUDY DETAILS			TEXT BOOK DETAILS						
UNIT of Study	Unit Coordinator/s	Sem	Title	Version	Compulsory or recommended	Author/s	Publisher	Year	ISBN
Epidemiology (EPI)	Dependent on university	1 & 2	See note: 9, p4		As prescribed by university	See note: 9, p4 for details of compulsory text for EPI at The University of Queensland.			
Mathematical Background for Biostatistics (MBB)	Maurizio Manuguerra (Macquarie)	1 & 2	Calculus Early Transcendentals See note 2, p 4 for edition advice & Student Companion Site	10 th edition	compulsory	Anton H, Bivens I, Davis S	Wiley	2012	9781118288092 !! See page p 4 for note about buying direct from Wiley.
			Elementary Linear Algebra See note 2, p 4 for Student Companion Site	11 th edition	compulsory	Anton, Howard	Wiley	2014	Paperback: 9781118864180 Hardcover: 9781118473504
Data Management & Statistical Computing (DMC)	Helena Romaniuk (UMelb)	1 & 2	SAS: Applied Statistics & the SAS Programming Language See note 3.i, p 4	5 th edition	compulsory if you have not used SAS previously	Cody R, Smith J	Prentice Hall	2005	9780131465329
			Stata: A short Introduction to Stata for Biostatistics updated for Stata 12 See note 3.ii, p 4		compulsory if you have not used Stata previously	Hills M & De Stavola B	London: Timberlake Consultants Ltd	2012	9780957170803
Probability & Distribution Theory (PDT)	Rory Wolfe / Andrew Forbes (Monash)	1 & 2	Mathematical Statistics with Applications (DO NOT BUY THE INTERNATIONAL EDITION) See note 4, p 4	7 th edition	compulsory	Wackerly DD, Mendenhall W, Scheaffer RL	Brooks/Cole, Cengage Learning	2007	9780495110811
Principles of Statistical Inference (PSI)	Patrick Kelly (Sydney SPH)	1 & 2	Inference Principles for Biostatisticians	1 st edition	compulsory	Ian C. Marschner	Chapman & Hall / CRC Pr	2014	9781482222234
Design of Randomised Controlled Trials (DES)	Amy Salter (Adelaide)	2	Clinical Trials A Methodologic Perspective See note 8, p 4	2 nd edition	compulsory	Piantadosi S	Wiley	2005	9780471727811
Categorical Data & GLMs (CDA)	Mark Jones (UQ)	2	See note: 1, p4		No compulsory text book				
Linear Models (LMR)	John Carlin (UMelb) / Andrew Forbes (Monash)	1 & 2	Applied Linear Statistical Models See note 7, p 4	5 th edition	recommended	Kutner MH, Nachtsheim CJ, Neter J, Li W	McGraw-Hill/Irwin	2005	9780073108742
Bayesian Statistical Methods (BAY)	Lyle Gurrin (UMelb)	2	Bayesian Data Analysis See note 6, p 4	3 rd edition	compulsory	Gelman A, Carlin JB, Stern HS, Rubin DB, Dunson DB, Vehtari A	Chapman and Hall	2013	Hardback: 9781439840955 eBook: 9781439840962
Bioinformatics (BIF)	Nicola Armstrong, Natalie Thorne (for UMelb)	2	Biological Sequence Analysis: Probabilistic models of proteins and nucleic acids		compulsory	Durbin R, Eddy S, Krogh A, Mitchison G	Cambridge University Press	1998	9780521629713

TEXTBOOKS – notes to the tables on pages 2 and 3 (see pictures of books and supplier notes on page 5)

1. Not compulsory textbook listings: recommended references are listed in the current BCA Program Outline and unit Study Guides provided by unit coordinators.

2. MBB textbooks:

Calculus Early Transcendentals, 10th Edition, Anton et al.

There are a number of similar editions. Be sure to search by the ISBN number. See the entries for this book on pages 2 and 3.

OR, if buying direct from Wiley, please note that the ISBN numbers may have been changed (same version with some additional WileyPlus features): If not available at [this link](#): insert “Calculus: Early Transcendentals, 10th Edition” in the search field on the Wiley website.

Note: WileyPlus versions are ok to purchase but the bonus WP online features in these additions are not required for BCA MBB.

Student companion sites:

[Calculus Early Transcendentals, 10th Edition](#)

[Elementary Linear Algebra](#)

Note that the book *Elementary Linear Algebra: Applications*, also published by Wiley, is identical to the listed text, except that it contains an additional chapter (meaning that it costs more).

3. DMC textbooks and software: If you have not used SAS or Stata previously, it is recommended that you have access to the text for the relevant software.

3.i SAS textbook and software compatibility: The latest (2006) version of the textbook, *Applied Statistics & the SAS Programming Language*, refers to SAS 9. DMC has a minimum software requirement of SAS version 9.2.

There is also a 4th edition widely available, ISBN 978-0137436422. This book is OK for use in DMC.

3.ii Buy Stata text books from [Stata Bookstore](#).

DMC: [A Short Introduction to Stata for Biostatistics \(Updated to Stata 12\)](#)

SVA: [An Introduction to Survival Analysis Using Stata](#)

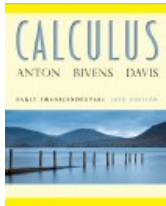
4. **PDT textbook:** **There are multiple printings of this textbook, each with a different ISBN. Make sure you purchase the textbook with the designated ISBN.** “International” editions have been published outside of the US. These editions do not correspond to study note references. There are multiple versions and page numbers are different in each version, and questions are not numbered in the same order.
5. **HIS textbook:** The edition noted in the table is the latest one, published in 2011. The 6th edition (2006, ISBN 9780534418052) is also ok to use.
6. **BAY textbook:** Students will be able to do BAY provided they have a copy of either the 2nd Edition or 3rd Edition of Bayesian Data Analysis. If they have neither they should buy the 3rd Edition.
7. **LMR textbook** (recommended only): Note that this book is now out of print. New and used copies can be bought on various sites, such as Amazon, Abe books or Fishpond. **Do not buy the international version.**
8. **DES textbook:** This book is required for the unit. However, not all chapters are referred to. It is recommended that, in the first instance, you try to find it at your local or university library, or workplace.
9. **EPI at University of Queensland:** “Essential Epidemiology: An introduction for students and health professionals”, by Webb and Bain, 2nd edition, 2011, (Cambridge University Press), ISBN 9780521177313
10. **PSI textbook:** Publishers [website](#)
This book was first published in Dec 2014. It is **recommended** for SEMESTER 1, 2015 and **compulsory** for SEMESTER 2, 2015.

BUYING TEXTBOOKS

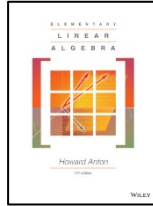
Compulsory texts

MBB

Early Transcendentals



Elementary Linear Algebra



DMC:

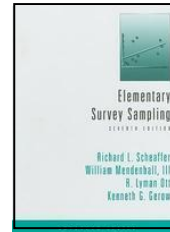
SAS



Stata



HIS



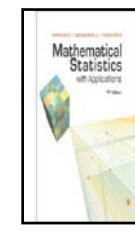
SVA



DES



PDT



BAY



BIF



CO-OP BOOKSHOP: If you are unable to buy compulsory books locally, you can order them (except Stata Press books) through the Co-op Bookshop website. Copies of all **compulsory** textbooks are ordered for the current semester.

Order online at www.coop.com.au

To find a book in the Coop site, click on the Textbook Search button; in the Step 1 field, choose BCA; in Step 2, choose the relevant semester; and in Step 3, enter the relevant BCA unit code (eg MBB) or the relevant ISBN.

Discounts for members vary between 5-10%. Apply on the CO-OP website.

Coop Bookshop contact: Academic Sales

02- 8935 8260 academicsales.sydney@coop.com.au

(When making enquiries to the shop, quote the BCA unit ID [eg MBB], not the USyd one, as their orders are listed by these generic IDs to suit the inter-university student cohort.)

OTHER SUPPLIERS: If you are unable to find the book locally or via the Co-op Bookshop, suppliers can be found online by doing a search on the ISBN number. Some suggested sources are listed below.

Amazon is a reliable source: www.amazon.com

If you are willing to pay \$35 USD you can get books couriered in about 3-4 days. Second-hand copies are often listed.

DA Information Services in Melbourne: www.dadirect.com.au Books have not been ordered by the BCA from these suppliers but may have been by Melbourne Universities.

2ND-HAND BOOKS: [Abe Books](http://AbeBooks)

This site has a good international cooperative textbook exchange.

Compare prices and delivery locations across vendors www.addall.com

SEARCHING FOR BOOKS ONLINE: Using the ISBN number to do a search is generally the quickest route and, where multiple editions exist, also the safest. ISBN numbers are listed in the far right-hand column of the tables on pages 2 and 3 of this Guide. Tip: If possible, order from suppliers that have an outlet in your home country as this will reduce postage times.

EBOOK VERSIONS of some textbooks are available. Even if you'd prefer to have a real book, the (possibly) cheaper and more immediately available "e" version may be useful to fill the gap while you are waiting for the hard copy to arrive in the mail. Note that free 'trial' copies available from some suppliers may only contain extracts of the contents. Links to some eBooks are listed above, but new ones are appearing all the time, so use the ISBN to search online for the latest releases.

...and, of course, you can always see whether you can pick up a bargain on eBay.

SOFTWARE REQUIREMENTS per unit of study

Most units of study require the use of SAS or Stata statistical software packages. You will need to choose one or the other. If doing DMC and/or LCD, you will need both. If you don't have the required software on your home computer, you will need to be able to access it somewhere for at least a few hours throughout the semester.

Both packages are used at various points throughout the BCA program. Stata is easier to get started with and is used in more of the units. SAS is only compulsory for DMC and LCD.

Place your software orders as soon as possible. You may need to buy SAS from the suppliers (see pages 7 and 9 for details) and Stata must be bought from the distributors, and you will need to install the software.

Unit	Software	Notes
Epidemiology (EPI)	none	<p>OPERATING SYSTEMS</p> <p>Macintosh systems are not recommended.</p> <p>Some of the listed packages do not support the Macintosh operating system. SAS is not compatible with the Mac OS.</p> <p>SUPPORT FOR SOFTWARE IN UNITS OF STUDY</p> <p>Unit coordinators may specify that students need to use either Stata or SAS or both for some, or all, of the unit. Software requirements are outlined in the unit description (as published in the BCA Program Outline and university handbooks). Further details may be provided in unit Study Guides. If both packages are required, information will be given on the extent to which help will be provided for each in the modules or sections in which they may be used. Generally one package will be recommended and supported while students may use another one if they choose, but are responsible for finding their own support for any difficulties they may encounter.</p> <p>If you need further help, please contact the BCA coordinating office: (02) 9562 5076 bca@ctc.usyd.edu.au</p>
Mathematical Background for Biostatistics (MBB)	Excel or Stata	
Probability & Distribution Theory (PDT)	Stata	
Health Indicators & Health Surveys (HIS)	SAS or Stata, Excel	
Data Management & Statistical Computing (DMC)	Stata and SAS	
<p>DMC students please note: you will need SAS and Stata. Introductory modules on these packages are a compulsory element of the unit.</p> <p>See page 7 for information about how to obtain these packages (in the case of SAS, this is dependent on your home university) and pages 8 and 9 for purchasing information.</p>		
Principles of Statistical Inference (PSI)	Stata or SAS	
Clinical Biostatistics (CLB)	Stata	
Design of Randomised Controlled Trials (DES)	none	
Linear Models (LMR)	Stata	
Categorical Data & GLMs (CDA)	Stata	
Survival Analysis (SVA)	Stata	
Bioinformatics (BIF)	Freeware will be downloaded	
Longitudinal & Correlated Data (LCD)*	Stata	
Bayesian Statistical Methods (BAY)	WinBUGS 1.4.3 and Excel or Stata	

OBTAINING SOFTWARE (see note about operating systems on the previous page)

SAS and Stata details listed are for education packages. These are considerably cheaper than the standard retail license fees.

If buying software directly from suppliers, students should state that they are studying BCA courses.

STATA	Microsoft Excel				
<p>Access to Stata</p> <p>You will need to buy the software directly from the distributors, Survey Design and Analysis Services</p> <p><i>Guidelines for buying Stata can be found on page 8.</i></p>	<p>Excel is available in the Microsoft Office Package.</p> <tr> <td data-bbox="215 547 1099 592">SAS</td> <td data-bbox="1099 403 1980 448">R</td> </tr> <tr> <td data-bbox="215 592 1099 917" rowspan="2"> <p>TBA (at 15/01/2015)</p> </td> <td data-bbox="1099 448 1980 547"> <p>Students may use R if they are comfortable with this package. R, Stata and SAS code will be provided in study notes, where possible.</p> </td> </tr>	SAS	R	<p>TBA (at 15/01/2015)</p>	<p>Students may use R if they are comfortable with this package. R, Stata and SAS code will be provided in study notes, where possible.</p>
SAS	R				
<p>TBA (at 15/01/2015)</p>	<p>Students may use R if they are comfortable with this package. R, Stata and SAS code will be provided in study notes, where possible.</p>				

BUYING STATA FOR BCA UNITS OF STUDY

You will need to buy Stata directly from the suppliers, available to students, at heavily discounted prices. Place your order via the [Survey Design website](#)

Options and prices for GradPlan download

(as at 13 January 2015*)

The BCA recommendation is for the first option, **Stata/IC**. Students are likely to be using the software for at least 3 years so they should buy the perpetual edition.

Stata/IC – suitable for medium size datasets

6 month edition:	\$84.00
12 month edition:	\$119.00
Perpetual edition:	\$229.00

Stata/SE – suitable for large datasets

12 month edition:	\$285.00
Perpetual edition:	\$479.00

Stata/MP2 – for those wanting faster processing

Perpetual edition:	\$843.00
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Stata/MP4 – for fast processing of complex analyses

Perpetual edition:

Perpetual licences never expire. You can use them forever.

Note that many computers available on the market today have dual core or quad core processors and can effectively make use of Stata/MP2 or MP/4 for fast analysis of large datasets.

The current release of Stata will run on Windows, Apple OSX and Linux operating systems. Typical delivery of software is via download only, although you can order a DVD for an extra charge if you wish. Each licence comes with 11,000+ pages of manual documentation in 20 volumes, provided in a PDF format.

With a Stata GradPlan licence you may upload the Stata software on up to three (3) of your own machines, regardless of operating system, for your own personal use.

Please note:

- To purchase Stata at these discounted prices you must use your *university email address* to order the software and quote your student number. The software will be delivered the next business day following receipt of payment. It will be delivered to your quoted university email address.
- Payment must be made at the time of placing the order on the website. Payment options available are Direct Deposit, Credit Card payment over the telephone, credit card via PayPal or Paypal.
- Prices include 10% GST and are subject to change without notice*.