



## 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)** 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 BCA administrators 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 are requirements for most units. Stata is used in a number of units, and Stata and SAS are compulsory in the unit Data Management and Statistical Computing [DMC]. See page 7 for a full listing.

**Please note that it's important to buy study resources as soon as possible.** As most students will be buying textbooks and software remotely from suppliers or home universities, there are likely to be delays while licenses are arranged (for some software) and materials are posted, or 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** useful, especially if you are starting late or you travel a lot.

**More resources** are available on the BCA website at [www.bca.edu.au/currentstudents.html](http://www.bca.edu.au/currentstudents.html), including the **BCA Program Outline** which contains further details about unit of study content, pre/co-requisites, study requirements and delivery centres.

BCA TEXTBOOKS semester 1 - list per unit of study (See page 4 for notes on texts. These will help identify correct versions and list companion sites.)									
UNIT OF STUDY DETAILS			TEXT BOOK DETAILS						
UNIT	Unit Coordinator/s	Sem	Title	Version	Compulsory / recommended	Author/s	Publisher	Year	ISBN
Epidemiology (EPI)	UQ (distance) or local (distance or on-campus)	1 & 2	See note: 1, p4		No compulsory text book				
Mathematical Background for Biostatistics (MBB)	Gary Glonek (Adelaide)	1 & 2	<b>Calculus Early Transcendentals</b> See note 2, p 4 for edition advice & Student Companion Site	10 <sup>th</sup> edition	<b>compulsory</b>	Anton H, Bivens I, Davis S	Wiley	2012	9780470647691
			<b>Elementary Linear Algebra</b> See note 2, p 4 for Student Companion Site	10 <sup>nd</sup> edition	<b>compulsory</b>	Anton, Howard	Wiley	2010	9780470458211
Data Management & Statistical Computing (DMC)	Cate D'Este / David Sibbritt (Newcastle)	1 & 2	<b>SAS: Applied Statistics &amp; the SAS Programming Language</b> See note 3.i, p 4	5 <sup>th</sup> edition	<b>compulsory</b> if you have not used SAS previously	Cody R, Smith J	Prentice Hall	2006	9780131465329
			<b>Stata: A short Introduction to Stata for Biostatistics updated for Stata 11</b> See note 3.ii, p 4	2009	<b>compulsory</b> if you have not used Stata previously	Hills M & De Stavola B	978-0-9557076-4-3 Buy from: <a href="http://www.survey-design.com.au/bookshop.html">www.survey-design.com.au/bookshop.html</a> OR <a href="http://www.stata.com/bookstore/sisb.html">www.stata.com/bookstore/sisb.html</a>		
Probability & Distribution Theory (PDT)	Andrew Forbes / Rory Wolfe (Monash)	1 & 2	<b>Mathematical Statistics with Applications (DO NOT BUY THE INTERNATIONAL EDITION)</b> See note 4, p 4	7 <sup>th</sup> edition	<b>compulsory</b>	Wackerly DD, Mendenhall W, Scheaffer RL	Brooks/Cole, Cengage Learning	2007	9780495110811
Health Indicators & Health Surveys (HIS)	Judy Simpson (USyd SPH)	1	<b>Elementary Survey Sampling</b>	7 <sup>th</sup> edition	<b>compulsory</b>	Scheaffer RL, Mendenhall W, Ott RL, Gerow KG	Brooks/Cole, Cengage Learning	2011	9780840053619
Survival Analysis (SVA)	Ken Beath (Macquarie)	1	<b>Applied Survival Analysis</b>	2 <sup>nd</sup> edition	<b>compulsory</b>	Hosmer D.W., Lemeshow S., May S.	Wiley Interscience	2008	9780471754992
			<b>An Introduction to Survival Analysis Using Stata</b>	3rd edition	recommended	Cleves M, Gould W, Gutierrez R, Marchenko Y	<a href="http://www.stata.com/bookstore/bios.html">Stata Press www.stata.com/bookstore/bios.html</a>	2010	9781597180740
Principles of Statistical Inference (PSI)	Rachel O'Connell, Liz Barnes (USyd NHMRC CTC)	1 & 2	See note: 1, p4		No compulsory text book				
Clinical Biostats (CLB)	Annette Dobson, Mark Jones (UQ)	1	See note: 1, p4		No compulsory text book				
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 page 4 for notes on texts. These will help identify correct versions and list companion sites.)									
UNIT of Study	Unit Coordinator/s	Sem	Title	Version	Compulsory / recommended	Author/s	Publisher	Year	ISBN
Epidemiology (EPI)	UQ (distance)	1 & 2	See note: 1, p4		No compulsory text book				
Mathematical Background for Biostatistics (MBB)	Maurizio Manuguerra (Macquarie)	1 & 2	<b>Calculus Early Transcendentals</b> See note 2, p 4 for edition advice & Student Companion Site	10 <sup>th</sup> edition	<b>compulsory</b>	Anton H, Bivens I, Davis S	Wiley	2012	9780470647691
			<b>Elementary Linear Algebra</b> See note 2, p 4 for Student Companion Site	10 <sup>nd</sup> edition	<b>compulsory</b>	Anton, Howard	Wiley	2010	9780470458211
Data Management & Statistical Computing (DMC)	Lyle Gurrin, Kris Jansen (UMelb)	1 & 2	<b>SAS:</b> <b>Applied Statistics &amp; the SAS Programming Language</b> See note 3.i, p 4	5 <sup>th</sup> edition	<b>compulsory</b> if you have not used SAS previously	Cody R, Smith J	Prentice Hall	2006	9780131465329
			<b>Stata:</b> <b>A short Introduction to Stata for Biostatistics updated for Stata 11</b> See note 3.ii, p 4	2009	<b>compulsory</b> if you have not used Stata previously	Hills M & De Stavola B	978-0-9557076-4-3 Buy from: <a href="http://www.survey-design.com.au/bookshop.html">www.survey-design.com.au/bookshop.html</a> OR <a href="http://www.stata.com/bookstore/bios.html">www.stata.com/bookstore/bios.html</a>		
Probability & Distribution Theory (PDT)	Andrew Forbes /Rory Wolfe (Monash)	1 & 2	<b>Mathematical Statistics with Applications (DO NOT BUY THE INTERNATIONAL EDITION)</b> See note 4, p 4	7 <sup>th</sup> edition	<b>compulsory</b>	Wackerly DD, Mendenhall W, Scheaffer RL	Brooks/Cole, Cengage Learning	2007	9780495110811
Principles of Statistical Inference (PSI)	Patrick Kelly (USyd SPH)	1 & 2	See note: 1, p4		No compulsory text book				
Design of Randomised Controlled Trials (DES)	Philip Ryan (Adelaide)	2	<b>Clinical Trials A Methodologic Perspective</b> See note 7, p 4	2 <sup>nd</sup> edition	<b>compulsory</b>	Piantadosi S	Wiley	2005	9780471727811
Categorical Data & GLMs (CDA)	Annette Dobson, Mark Jones (UQ)	2	See note: 1, p4		No compulsory text book				
Linear Models (LMR)	John Carlin (UMelb) / Andrew Forbes (Monash)	2	Applied Linear Statistical Models See note 6, p 4	5 <sup>th</sup> edition	recommended	Kutner MH, Nachtsheim CJ, Neter J, Li W	McGraw-Hill/Irwin	2005	9780073108742
Advanced Clinical Trials (ACT)	Diana Zannino, Val GebSKI (USyd NHMRC CTC)	2	Group Sequential Methods with Applications to Clinical Trials		recommended	Jennison C, Turnbull BW	Chapman & Hall/CRC	1999	9780849303166
			Cross-over trials in clinical research	2 <sup>nd</sup> edition	recommended	Senn S	Wiley	2002	9780471496533
*Bayesian Statistical Methods (BAY)	Lyle Gurrin (UMelb)	2	<b>Bayesian Data Analysis</b> See note 4, p 4	2 <sup>nd</sup> edition	<b>compulsory</b>	Gelman A, Carlin JB, Stern HS, Rubin DB	Chapman and Hall	2003	9781584883883
Bioinformatics (BIF)	Graham Wood (Macquarie)	2	<b>Biological Sequence Analysis: Probabilistic models of proteins and nucleic acids</b>		<b>compulsory</b>	Durbin R, Eddy S, Krogh A, Mitchison G	Cambridge University Press	1998	9780521629713

## TEXTBOOKS – notes to the tables on pages 2 and 3

1. **“Not compulsory” textbook listings:** recommended references are listed in the current Program Outline, [www.bca.edu.au/linked%20docs/Student%20resources/BCA\\_program\\_outline\\_2012.pdf](http://www.bca.edu.au/linked%20docs/Student%20resources/BCA_program_outline_2012.pdf) and unit Study Guides provided by unit coordinators.

### SEMESTERS 1 & 2

#### 2. MBB textbooks:

**Calculus Early Transcendentals, 10th Edition**, Anton et al. (**Be sure to cite the ISBN number**, see MBB entry on page 3. There is also a "Calculus, 10th Edition" version which is NOT the right one.) For the correct version, see: <http://au.wiley.com/WileyCDA/WileyTitle/productCd-EHEP002008.html>.

*Student companion site:* <http://bcs.wiley.com/he-bcs/Books?action=index&itemId=0470647698&bcsId=6791>

**Elementary Linear Algebra** *student companion site:* <http://bcs.wiley.com/he-bcs/Books?action=index&itemId=0470458216&bcsId=5558>

Australian distributor for both books: [www.wiley.com/legacy/products/worldwide/jacaranda](http://www.wiley.com/legacy/products/worldwide/jacaranda)

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. Data Management and Statistical Computing (DMC) has a minimum software requirement of SAS version 8.2. There is also a 4<sup>th</sup> edition widely available, ISBN 978-0137436422. This book is OK for use in DMC.
  - 3.ii **Buying Stata (text book and software):** You will need to buy direct from Survey Design and Analysis Pty Ltd, at: [www.survey-design.com.au/bookshop.html](http://www.survey-design.com.au/bookshop.html) or, if not available on this site, see: [www.stata.com/bookstore/bios.html](http://www.stata.com/bookstore/bios.html)
4. **PDT textbook:** **Please do not buy the international version of this book.** Although it may have the same ISBN, an international edition is a textbook that has been published outside of the US. The international edition does not correspond to study note references and there are multiple versions. Page numbers are different in each 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 6<sup>th</sup> edition (2006, ISBN 9780534418052) is also ok to use.

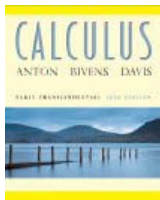
### SEMESTER 2

6. **BAY textbook - Bayesian Data Analysis:** The book to buy is the 2nd edition. The first edition, dated 1995, is NOT the correct version.
7. **LMR textbook:** There are a number of paperback and hardcover versions of this book. The LMR study notes refer to the 5th edition (2005) but a translation back to the 4<sup>th</sup> edition is available. An electronic version is also now available, see <http://mhhe.zinio.com/browse/textbooks/index.jsp?productId=93073777>
8. **DES textbook - Clinical Trials A Methodologic Perspective:** This book is required for the unit. However, not all chapters are referred to. It is recommended that, in the first instance, you seek access to the book through your local or university library, or workplace.

## BUYING TEXTBOOKS

### Compulsory texts

#### MBB



#### DMC:

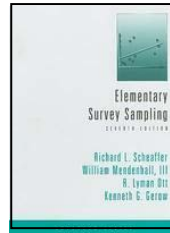
##### SAS



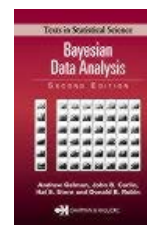
##### Stata



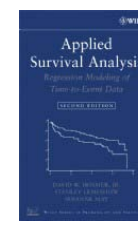
#### HIS



#### BAY



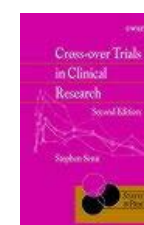
#### SVA



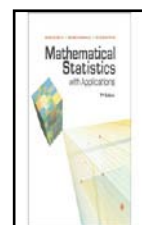
#### DES



#### ACT



#### PDT



**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-bookshop.com.au/bookshop](http://www.coop-bookshop.com.au/bookshop) (Enter the relevant ISBN in the Search bar in the top right hand corner.) A **10% discount** is available to **Coop members** – join via the website.

**Coop Bookshop contact:** Eric von Verstak (Text Buyer) Ph: 02-9351 2807 Email: [evonwerstak@coop-bookshop.com.au](mailto:evonwerstak@coop-bookshop.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](http://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](http://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:** [www.abebooks.com](http://www.abebooks.com) This site has a good international cooperative textbook exchange. It's worth a try.

[www.addall.com](http://www.addall.com) Where you can search for books and compare prices across vendors.

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

#### STATA

Text book: please buy direct from Survey Design and Analysis Pty Ltd, at: <http://survey-design.com.au> or, if not available on this site, see: [www.stata.com/bookstore/bios.html](http://www.stata.com/bookstore/bios.html)

**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.

## SOFTWARE - list 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.

Unit	Software	Notes
Epidemiology (EPI)	none	
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*	<b>DMC students please note:</b> you will need <b>SAS and Stata</b> . Introductory modules on these packages are a compulsory element of the unit. See below for purchasing information.
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 and SAS	
Bayesian Statistical Methods (BAY)	WinBUGS 1.4.3 (at <a href="http://www.mrc-bsu.cam.ac.uk/bugs/welcome.shtml">www.mrc-bsu.cam.ac.uk/bugs/welcome.shtml</a> ) and Excel or Stata	

\* **OPERATING SYSTEMS:** Macintosh systems are not recommended. Some of the listed packages do not support the Macintosh operating system. SAS is not compatible with the Mac OS.

**SUPPORT FOR SOFTWARE:** 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.



## BUYING STATA FOR BCA UNITS OF STUDY

You will need to buy Stata directly from the suppliers. You can place your order via the Survey Design website at: [www.survey-design.com.au](http://www.survey-design.com.au)

### Prices

- ✓ Advanced GradPlan Stata/IC **Stata 12** with *perpetual licence* (consisting of CD for Windows, Mac or Linux) = AU\$198 (+ postage)
- ✓ Basic GradPlan Stata/IC **Stata 12** - as above but with a *one year licence* = AU\$116 (+ postage)
- ✗ There is also a Small Stata option; however, this is limited to around 1,000 observations which may not be sufficient for BCA units. It is NOT recommended.

### Please note:

- All 8,500 pages of documentation (in PDF format) come with each Stata purchase. This includes the Getting Started Manual.
- The listed prices were last updated in December 2009. The information should be up to date for 2010 but the BCA can't guarantee this, so when purchasing, please check the **GradPlan** prices on the Survey Design website.

### Arrangements

Go to [www.survey-design.com.au/gradplan.html](http://www.survey-design.com.au/gradplan.html) and download a copy of the Order Form (LH column 'Order form' link). You should order a **GRADPLAN STATA/IC** package.

The BCA courses are authorised for GradPlan, so you do not have to supply permission from the course lecturer. On the order form you should note that you are enrolled in a BCA course, your student ID number, the university in which you are enrolled, and the operating system of the computer that you'll be using.

## BUYING SAS FOR BCA UNITS OF STUDY

### Minimum requirement

SAS version **9.3**

Please note:

- SAS is a large statistics program. It will run on 32 and 64 bit systems, and it will run on XP, Vista and Windows 7. It will not however run on the 'Home' version of most operating systems. It will run on Home Premium versions of Windows 7 (under the newer Education Analytical Suite license). 9.3 will work on Home Premium versions but not on Home Basic versions.
- If you are running Windows XP Home or lower, you will need to upgrade your operating system to Windows XP Professional or above so that you can run SAS versions 9.2 or 9.3.
- SAS is not compatible with the Mac OS, for installs on Mac OS please see the SAS note at <http://support.sas.com/kb/18/131.html>
- Supported operating environments for Windows are detailed at: <http://support.sas.com/resources/sysreq/hosts/pc>

### Obtaining SAS from your 'home' university

You may be able to obtain the SAS disks from your home university, see page 7 of this Guide for details. This is likely to be the most straightforward arrangement. Note, your university may charge a small fee for the disks.

### Buying SAS from the supplier

*If you are unable to obtain SAS at your home university, you can buy it directly from SAS Australia and New Zealand.*

**Cost:** \$99 for installation disks if obtained from SAS.

To order your disks and user licence, fax or scan and email the **Purchase Order form** and **Home Use Agreement form** (found at the webpage below) to the SAS Academic Program.

**Note** that the disks are shipped from the US and may take up to 10 working days for you to receive them, possibly longer, depending on your location, Please order your disks as early as possible.

**Forms found at:** [www.bca.edu.au/currentstudents.html#SASforms](http://www.bca.edu.au/currentstudents.html#SASforms)

**Fax or email scanned forms to:** SAS Academic Programs

Fax: (02) 9428 4759

email: [academic@oz.sas.com](mailto:academic@oz.sas.com)

You will be receiving access to the full version of SAS through the Home Use Agreement.

- You may only use the software for the purpose of completing BCA coursework.
- You may not use the software for any commercial use.

**Once SAS has supplied your license, you can install SAS Foundation and Related Software. See step-by-step download instructions here:** <http://support.sas.com/kb/35/631.html>

**Please note** that **SID** (SAS Installation Data) **files must be updated annually;** an email must be sent to [academic@oz.sas.com](mailto:academic@oz.sas.com) to request the latest SID file. (The supplier may call the files SIDs. This stands for SAS Installation Data, not student ID.)

**Standard SAS software licence renewal process:** from 1st January 2010, the Product Authorisation Code notice period will cease 30 days after the licence renewal date.

**Products Base:** SAS, SAS/ACCESS, SAS/STAT, SAS/GRAPH, SAS/CONNECT, SAS/SHARE, SAS/ETS, SAS/FSP, SAS/IML, SAS/INSIGHT, SAS Enterprise Guide, SAS/AF, SAS/ASSIST, SAS/QC, SAS Bridge for ESRI, SAS/EIS, SAS/Integration Technologies, SAS/LAB, SAS/OR, SAS/SECURE

### Further information

[www.sas.com/australia/academic](http://www.sas.com/australia/academic)

The SAS Academic Club has been established for Academics, Students, University staff and other interested parties.

### Free Online Tutorials

<http://support.sas.com/training/elearn/tutorials>