

SCHOOL OF BIOLOGICAL SCIENCES

Books to be recommended for purchase 2011/2012

***	Absolutely essential	**	Strongly recommended
*	Recommended further reading	/2	due to cost or usage book may be shared.

Advice on usefulness, etc, of books should be given at the start of the module. If you cannot find the book you require ask one of the Bookshop staff. Books required or out of stock will be ordered immediately on request. Any problems or comments please refer to Dr A Mousley, Room OG.418, Ext. 2118.

LEVEL 1

1ST SEMESTER

- ** JONES, A., REED, R. & WEYERS, J., 2003. Practical Skills in Biology. 3rd ed. Longman. ISBN 0-130-45141-X
- ** REED, R., HOLMES, D., WEYERS, J. & JONES, A., 2003. Practical Skills in Biomolecular Sciences. 2nd ed. Longman. ISBN 0-130-45142-8
- ** JONES, A., DUCK, R., REED, R. & WEYERS, J., 2000. Practical Skills in Environmental Science. Prentice Hall. ISBN 0-582-32873-X

Purchase of one of these books is highly recommended to all Level 1 students taking any School course and is considered essential for BSC1001 and highly recommended for BSC1009

Biological Diversity (BSC1001)

110 students

- *** CAMPBELL, N.A. & REECE, J.B., 2008. Biology. 8th ed. San Francisco, Calif ; London : Pearson Benjamin Cummings. ISBN 9780321544247

Genetics and Molecular Biology (GEN1005)

209 students

- ** KLUG, W.S. & CUMMINGS, M.R. & SPENCER, C.A., 2008. Concepts of Genetics. 9th ed. Prentice Hall. ISBN 0321524047
(This book contains most of the genetics you need for a first class degree and protein synthesis, amino acids biochemistry and protein synthesis, but is expensive. Any other comprehensive genetics textbook will do, there are several in the library. 'Instant Notes in Genetics' is much more compact and cheaper.)

OR for students wanting less total information

- ** Fletcher, H.L., Hickey, I. & Winter, P., 2006. Instant Notes in Genetics 3rd ed. Taylor and Francis. ISBN 978-0415376198
- ** BERG, J.M., TYMOCZKO, J.L. & STRYER, L., 2006. Biochemistry. 6th ed. Freeman. ISBN 0-7167-8724-5
(This book contains NO genetics but has lots of detailed biochemistry and will be useful for the second semester Biochemistry module and beyond....)

Introductory Skills for Biosciences (BSC1009)

224 students

- * JONES, A., DUCK, R., REED, R. & WEYERS, J., 2000. Practical Skills in Environmental Science. Prentice Hall. ISBN 0-582-32873-X
- * HEATH, D., 1995. An Introduction to Experimental Design and Statistics for Biology. UCL Press. ISBN 1-857-28131-4
- * CROFT, A. & Davidson, R., 2003. Foundation Maths. 3rd ed. Harlow: Prentice Hall. ISBN 0-1304-5426-5
- * CROWE, J., BRADSHAW, T. & MONK, P., 2006. Chemistry for the Biosciences: the essential concepts. New York: Oxford University Press. ISBN 0-199-28097-5
- * SADAVA, D., HELLER, H.C., ORIAN, G.H., PURVER, W. & HILLIS, D.M., 2007. LIFE: The science of biology. 8th ed. New York: Basingstoke: W.H. Freeman; Palgrave [distributor] ISBN 0-716-79901-4

2ND SEMESTER

Biochemistry (BCH1002)

201 students

For students on pathways with significant molecular content (Biochemistry, Molecular Biology, Microbiology, Medicinal Chemistry, Biomedical Sciences) and Biological Sciences students intending to take molecular modules in Level 2 and 3:

- ** BERG, J.M., TYMOCZKO, J.L. & STRYER, L., 2011. Biochemistry. 7th ed. Freeman. ISBN 0-7167-8724-5
(Or, alternatively, any other general biochemistry text which covers the material in similar depth. Several of these are available in the libraries. Students would be advised to look at these before committing to a purchase.)

Students enrolled for Biomedical Sciences, Molecular Medicine and Human Biology might prefer:

- ** DEVLIN, T.M., 2010. Textbook of Biochemistry with Clinical Correlations. 7th ed. Wiley. ISBN 978-0-470-28173-4

For all other students:

- ** HAMES, B.D. & HOOPER, N.M., 2011. Instant Notes in Biochemistry. 4th ed. Garland. ISBN 0-4153-6778-6

OR

- ** ENGEL, P.C., 2009. Pain Free Biochemistry. 1st edition. Wiley-Blackwell. ISBN 978-0-470-06046-9

OR

- ** REECE, J.B., URRY, CAIN, WASSERMAN, MINORSKY, JACKSON 2011. Biology. 9th ed. San Francisco, Calif ; London : Pearson Benjamin Cummings.
(This book is also recommended for Biological Diversity. It should see you safely through the bulk of BCH1002, but you may need to refer to library books for the last few lectures.)

Environmental Biology (EVB1004)

102 students

***2 BEGON, M., TOWNSEND, C.R. & HARPER, J.L., 2006. Ecology: From Individuals to Ecosystems. 4th ed. Oxford: Blackwell Scientific. ISBN 0-632-03801-2

*** FOWLER, J., COHEN, L., JARVIS, P., 1998. Practical Statistics for Field Biology. 2nd ed. Wiley. ISBN: 978-0-471-98296-8

** DYTHAM, C., 1999. Choosing and Using Statistics: a Biologist's Guide. Oxford: Blackwell Science. ISBN 0-8654-2653-8

Microorganisms (MCB1006)

222 students

One of these books is essential – both are very similar in content:

*** PRESCOTT, L.M., et al., 2008. Microbiology. 7th Ed. McGraw-Hill. ISBN 0071102310

OR

** BROCK, T.D., 2008. Biology of Microorganisms. 12th ed. (Ed. Madigan, Martinko, Parker). Pearson/Prentice-Hall. ISBN 0321536150

Skills for Land Use and Environmental Management (ALU1049)

27 students

BRADY, J., 2005. Environmental Management in Organizations. Earthscan. ISBN 1853839760

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LEVEL 2

1st SEMESTER

Applied Ecology (BBC2025) 29 students

- ** GASTON, K.J., SPICER, J.I., 2004. Biodiversity: An introduction. 2nd ed. Oxford: Blackwell Science. ISBN 1-4051-1857-1
- ** BEGON, M., TOWNSEND, C.R. & HARPER, J.L., 2006. Ecology: From Individuals to Ecosystems. 4th ed. Blackwell Science. ISBN 1-4051-1117-8
- * HODGSON, J. & ILLIUS, A.W., 1996. The Ecology and Management of Grazing Systems. Wallingford: CAB International. ISBN 0-8519-9107-6

Biochemical Methods (BBC2015) 25 students

- **** SHEEHAN, D., 2000. Physical Biochemistry: Principles and Applications. Wiley. ISBN 0-471-98663-1
- ** WILSON, K. & WALKER, J., 2005. Principles and Techniques of Biochemistry and Molecular Biology. 6th ed. Cambridge University Press. ISBN 0-521-53581-6
- * FREIFELDER, D., 1982. Physical Biochemistry. 2nd ed. Freeman. ISBN 0-7167-1444-2

Cell Biology (BBC2004) 59 students

- ** LODISH, H.F., et al., 2007. Molecular Cell Biology. 6th ed. Freeman. ISBN 0-7167-7601-4
- ** ALBERTS, B., et al., 2008. The Molecular Biology of the Cell. 5th ed. New York: Garland Pub. Inc. ISBN 9780815341062

Comparative Animal Physiology (BBC2028) 67 students

- ** RANDALL, D., BURGGREN, W. & FRENCH, K., 2002. Eckert Animal Physiology: mechanisms and adaptations. 5th ed. New York: W H Freeman. ISBN 0-716-73863-5

Environmental and Applied Microbiology (BBC2029) 45 students

- *** BROCK, T.D., 2006. Biology of Microorganisms. 11th ed. (Ed. Madigan, Martinko, Parker). Pearson/Prentice-Hall. ISBN 0-1320-1784-9

Environmental Management (ALU2052)

49 students

MILLER, G.T., SPOOLMAN, S., 2011. Sustaining the Earth. 10th ed. Brooks/Cole, Cengage Learning. ISBN 143904984X

Molecular Genetics (BBC2012)

113 students

- *** LEWIN, B., 2007. Genes. 9th ed. Pearson Education, Inc. ISBN 0-7637-52223

OR

- *** LODISH, H.F., et al., 2007. Molecular Cell Biology. 6th ed. WH Freeman & Co Ltd. ISBN 9781429203142

Lewin: A comprehensive book with much information most suitable for those continuing at Level 3. Lodish: Easier reading but less information than Lewin; also recommended for Cell Biology and Mammalian Biochemistry.

- * LODGE, J., et al, 2006. Gene Cloning – Principles and Applications. Taylor and Francis. ISBN 0-748-76534-4

Psychology of Consumer Behaviour (ALU2028)

26 students

- ** STATT, David, A, 1997. Understanding the consumer: a psychological approach. Palgrave MacMillan. ISBN: 0333660633

2ND SEMESTER

Genetic Systems (BBC2020)

31 students

- *** KLUG, W.S. & CUMMINGS, M.R., 2005. Concepts of Genetics. 9th ed. Prentice Hall International. ISBN 0321524047

AND

- ** DALE, J.W. & PARK, S.F., 2010. Molecular Genetics of Bacteria. 4th ed. Chichester: Wiley-Blackwell. ISBN: 978-0-4707-4184-9

**Invertebrate Biology (BBC2023)
students**

49

- ** PECHENIK, J.A., 2004. Biology of the Invertebrates. 5th ed. McGraw-Hill Higher Education. ISBN 9780071111751
- ** SMYTH, J.D., 1994. Introduction to Animal Parasitology. 3rd ed. Cambridge: Cambridge University Press. ISBN 0-5214-1770-8
- * BARNES, R.S., CALLOW, P. & OLIVE, P.J.W., 2001. The Invertebrates: a synthesis. 3rd ed. Oxford: Blackwell. ISBN 0-632-04761-5
- * RUPPERT, E.E. & BARNES, R.D., 1994. Invertebrate Zoology. 6th ed. Brooks/Cole. ISBN 0-0302-6668-8

- * GULLAN, P.J. & CRANSTON, P.S., 2005. The Insects: an Outline in Entomology. 3rd ed. Oxford: Blackwell Science. ISBN 9781405111133

Mammalian Biochemistry (BBC2008)

54 students

- *** LODISH, H.F., et al., 2000. Molecular Cell Biology. 6th ed. Freeman. ISBN 0-7167-3136-3

Additional reading to support specific lectures may also be set; this will be available online or in the library.

Marine Ecology (BBC2026 & BBC2027)

46 students

- ** SPEIGHT, Martin R. & HENDERSON, P.A., 2010. Marine Ecology: Concepts and Applications. Wiley-Blackwell. ISBN: 1444335456
- ** LITTLE, C., WILLIAMS, G. A., TROWBRIDGE, C. D., 2009. The Biology of Rocky Shores. Oxford University Press. ISBN 978-0-19-856491-1

Microbial Metabolism & Physiology (BBC2010)

36 students

EITHER

- *** BROCK, T.D., 2006. Biology of Microorganisms (Ed. Michael, Madigan, Martinko). 11th ed. Prentice-Hall. ISBN 0-1320-1784-9

OR

- ** PRESCOTT, L.M., et al., 2004. Microbiology. 6th ed. McGraw-Hill. ISBN 0-0711-1217-0

OR

- ** WHITE, D., 2000. The Physiology and Biochemistry of Prokaryotes. 2nd ed. New York: Oxford University Press. ISBN: 0-1951-2579-7 *A comprehensive book with much information, most suitable for those wishing to pursue future studies in microbial metabolism*

OR

- ** GOTTSCHALK, G., 1986. Bacterial Metabolism. 2nd ed. New York: Springer-Verlag. ISBN 0-3879-6153-4

Molecular Ecology & Evolutionary Genetics (BBC2018)

49 students

- *** BEEBEE, T. & ROWE, G., 2008. An Introduction to Molecular Ecology. 2nd ed. Oxford: Oxford University Press. ISBN 9780199292059
- *** FRANKHAM, R., BALLOU, J.D. & BRISCOE, D.A. 2003. Introduction to Conservation Genetics. Cambridge University Press. ISBN 0521639853
- ** FREELAND, J, 2005. Molecular Ecology. John Wiley & Sons. ISBN 9780470090626
- ** PATTERSON, C., 1999. Evolution. 2nd ed. London: Natural History Museum. ISBN 0-5650-9134-4
- ** ALLENDORF, F.W. & LUIKART, G., 2007. Conservation and the genetics of populations. Blackwell Publishing. ISBN 9781405121453
- * RIDLEY, M., 2004. Evolution. 3rd ed. Blackwell. ISBN 1-4051-0345-0

- * KLUG, W.S. & CUMMINGS, M.R., 2003. Concepts of Genetics. 7th ed. Prentice Hall. ISBN 0-1309-2998-0
- * CAMPBELL, N.A. & REECE, J.B., 2005. Biology. 7th ed. San Francisco: Benjamin Cummings. ISBN 0-8053-7146-X

Virology (VMI2001)

39 students

- ** WAGNER, E.K. & HEWLETT, M., 2004. Basic Virology. 2nd ed. Malden (MA): Blackwell Publishing. ISBN 1-4051-0346-9
- ** CANN, A.J., 2001. Principles of Molecular Virology. 3rd ed. Academic Press. ISBN 0-12-158532-8
- * DIMMOCK, N.J., EASTON, A.J. & LEPPARD, K.N., 2001. Introduction to Modern Virology. 5th ed. Blackwell Science. ISBN 0-632-05509-X

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LEVEL 3

Biomolecular Structure (BBC3034) 11 students

- ** LILJAS, A. et al., 2009. Textbook of Structural Biology. World Scientific Publishing. ISBN 9789812772084

- * LUCKEY, M. 2008. Membrane Structural Biology: With Biochemical and Biophysical Foundations. Cambridge University Press. ISBN 9780521856553

- ** SHEEHAN, D., 2000. Physical Biochemistry: Principles and Applications. Chichester: Wiley. ISBN 0-4719-8663-1

Genetic Manipulation (BBC3037/3046) 27 students

- *** PRIMROSE, S.B., TWYMAN, R.M. 2006. Principles of Gene Manipulation. 7th ed. Oxford: Blackwell Science. ISBN 9781405135443

- ** DALE, J.W. & Von SCHANTZ, M., 2007. From Genes to Genomes. 2nd ed. Chichester: Wiley. ISBN: 978-0-470-01734-0

WITH

Bacterial Genetics (BBC3037) 16 students

- ** DALE, J.W. & PARK, S.R. 2010. Microbial Genetics. 5th ed. John Wiley. ISBN: 978-0470741849

OR

Biotechnology (BBC3046) 11 students

- ** BROCK, T.D., 2006. Biology of Microorganisms (Ed. Michael, Madigan, Martinko). 12th ed. Prentice-Hall. ISBN 0132324601

Marine Zoology (BBC3041) 27 students

- *** BARNES, R.S.K, OLIVE, P.J.W., CALLOW, P., GOLDING, D. & SPICER, J.I., 2001. The invertebrates: a synthesis. 3rd ed. Oxford: Blackwell Science. ISBN 0-6320-4761-5

OR

- *** BARNES, R.S.K, HUGHES, R.N., 1999. An Introduction to Marine Ecology. 3rd ed. Oxford: Blackwell Science. ISBN: 0-8654-2834-4

Microbial and Environmental Biotechnology (BBC3043) 9 students

- ** BROCK, T.D., 2006. Biology of Microorganisms (Ed. Michael, Madigan, Martinko). 12th ed. Prentice-Hall. ISBN 0132324601

A reading list will also be provided

Molecular Evolution and Bioinformatics (BBC3035) 16 students

- ** PAGE, R.D.M. & HOLMES, E.C., 1998. Molecular Evolution: A Phylogenetic Approach. Oxford: Blackwell Science. ISBN 0-8654-2889-1
- ** PATTHY, L., 1999. Protein Evolution. Oxford: Blackwell Science. ISBN 0-6320-4774-7
- ** LESK, A.M., 2002. Introduction to Bioinformatics. Oxford: Oxford University Press. ISBN 0-1992-5196-7

Parasitology (BBC3020) 61 students

- ** ROBERTS, L.S. & JANOBY, J., 2000. Foundations of Parasitology. 6th ed. Boston: McGraw-Hill. ISBN 0-697-42430-8
- ** SMYTH, J.D., 1994. Introduction to Animal Parasitology. 3rd ed. Cambridge: Cambridge University Press. ISBN 0-5214-1770-8
- ** LEE, D.L., 2002. The Biology of Nematodes. CRC Press. ISBN 905823214X
- * COX, F.E.G., 1993. Modern Parasitology. 2nd ed. Oxford: Blackwell Science. ISBN 0-6320-2585-9
- * FRIED, B. & GRACZYK, T., 1997. Advances in Trematode Biology. CRC Press. ISBN 0-8493-2645-1
- * DALTON, J.P., 1999. Fasciolosis. Wallingford: CABI Pub. ISBN 0-8519-9260-9

Policies for Environmental Sustainability (ALU3024) 40 students

BELL, S., MCGILLIVRAY, D., 2008. Environmental Law. 7th ed. Oxford University Press. ISBN 0199211027

The Immune System (BBC3013) 49 students

- ** ROITT, I., BROSTOFF, J. & MALE, D.K., 2006. Immunology. 7th ed. Edinburgh: Elsevier Mosby. ISBN 0-3230-3399-7

2ND SEMESTER

Behavioural Ecology and Sociobiology (BBC3044) 55 students

- *** KREBS, J.R. & DAVIES, N.B., 1993. An Introduction to Behavioural Ecology. 3rd ed. Blackwell Science. ISBN 978-0632035465

Biochemical Basis of Disease (BBC3045) 16 students

No text recommended for purchase; a reading list is provided

Cell Signalling (BBC3031)

11 students

*** NELSON, J., 2008. Structure and Function in Cell Signalling John Wiley & Sons Inc. ISBN 0-470-02550-6

** BERRIDGE, M.J., et al, 2006. Cell Signalling Biology Web resource:-
<http://www.cellsignallingbiology.org/default.htm>

Infections (VMI3005)

87 students

No text recommended for purchase; a reading list is provided

Marine Processes (BBC3033)

35 students

** SPEIGHT, Martin R. & HENDERSON, P.A., 2010. Marine Ecology: Concepts and Applications. Wiley-Blackwell. ISBN: 1444335456

The Human Genome (BBC3042)

11 students

No text recommended for purchase; a reading list is provided

Virology (BBC3028)

12 students

No text recommended for purchase; a reading list is provided.

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MSc COURSES

Advanced Skills in the Molecular Biosciences (BBC8043) **15 students**

No text recommended for purchase; a reading list is provided

Animal Behaviour and Welfare (BBC8031) **17 students**

*** ENGEL, C., 2002. Wild Health: How animals keep themselves well and what we can learn from them. Pheoix. ISBN: 0-75381-676-8

A reading list is also provided

Bio-entrepreneurship (BBC8044) **7 students**

No text recommended for purchase; a reading list is provided

Biomolecular Function (BBC8045) **15 students**

No text recommended for purchase; a reading list is provided

Biotechnology (BBC8038) **8 students**

No text recommended for purchase; a reading list is provided

Ecological Management and Conservation Biology (BBC8034) **21 students**

** VAN DYKE, F., 2003. Conservation Biology: Foundations, Concepts, Applications. Boston: McGraw. ISBN 0-0711-9906-3

** HUNTER, M.L., 2002. Fundamentals of Conservation Biology. 2nd ed. Oxford: Blackwell Science. ISBN 0-8654-2029-7

* GASTON, K. & SPICER, J., 2004. Biodiversity: An Introduction. 2nd ed. Oxford: Blackwell Science. ISBN 1-4051-1857-1

* MAGURRAN, A.E., 2004. Measuring Biological Diversity. Oxford: Blackwell Science. ISBN 0-6320-5633-9

Nucleic Acid Structure & Function (BBC8046)**23 students**

- */*** CROWE, J., BRADSHAW, T. & MONK, P., 2006. Chemistry for the Biosciences. Oxford University Press. ISBN 0-19-928097-5 (*Recommended at *** level for those with limited chemistry/biochemistry background*)
- ** REECE, R., 2004. Analysis of Genes & Genomes. Chichester: Wiley. ISBN 0-4708-4379-9
- * BLACKBURN, M.G. & GAIT, M., 1996. Nucleic Acids in Chemistry & Biology. 2nd ed. Oxford: Oxford University Press. ISBN 0-1996-3534-X

Additional reading will be set to support elements of the module

Protein Structure & Function (BBC8039)**28 students**

- */*** CROWE, J., BRADSHAW, T. & MONK, P., 2006. Chemistry for the Biosciences. Oxford University Press. ISBN 0-19-928097-5 (*Recommended at *** level for those with limited chemistry/biochemistry background*)
- ** WHITFORD, D., 2005. Proteins - Structure & Function. Chichester: Wiley. ISBN 0-4714-9894-7
- * FERSHT, A., 1999. Structure and Mechanism in Protein Science: Guide to Enzyme Catalysis and Protein Folding. New York: Freeman. ISBN 0-7167-3268-8
- ** Students may also wish to obtain a detailed biochemistry textbook. There are many of these available, and they can often be obtained at a good price second hand. Check the SU bookshop, eBay etc.

Additional reading will be set to support elements of the module

Sustainable Aquaculture and Inshore Fisheries (BBC8037)**5 students**

No text recommended for purchase; a reading list is provided