

**NANYANG TECHNOLOGICAL UNIVERSITY
SCHOOL OF BIOLOGICAL SCIENCES**

BS-BOOK LIST UPDATING - AY2013 SEMESTER-2

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- BS8003 SCIENCE OR FICTION? - BIOLOGY IN POPULAR MEDIA
- BS8005 BEAUTY AND THE MYTHS

BS1005 BIOCHEMISTRY I

Subject Coordinator: Assoc Prof Yoon Ho Sup, Joe

Prescribed Textbook

Mathews, Christopher K., *Biochemistry*, 4th Edition, Pearson, 2013. (Call no: QD415.M429 2013)

Other Reference

Lehninger, Albert L., *Lehninger principles of biochemistry*, 5th Edition, W.H. Freeman, 2008. (QD415.L523 2008)

BS1006 PRINCIPLES OF GENETICS

Subject Coordinator: Assoc Prof Peter Droge

Prescribed Textbooks

Snustad, D. Peter, *Genetics*, 6th Edition, International student version, Wiley, 2012. (Call no: QH430.S674 2012a)

Krebs, Jocelyn E., *Lewin's essential genes*, 3rd Edition, Jones and Bartlett Learning, 2013. (QH430.K92 2013)

Klug, William S., *Essentials of genetics*, 8th Edition, Pearson, 2013. (QH430.K66 2013)

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BS1007 MOLECULAR & CELL BIOLOGY I

Subject Coordinator: Assoc Prof Thirumaran Thanabalu

Prescribed Textbooks

Alberts, Bruce, *Molecular biology of the cell*, 5th Edition, Garland Science, 2008.
(Call no: QH581.2.M718 2008)

Lodish, Harvey F., *Molecular cell biology*, 7th Edition, W.H. Freeman and Co., 2013. (QH581.2.M718m 2013)

Other Reference

Karp, Gerald, *Cell and molecular biology: concepts and experiments*, 6th Edition, Wiley, 2010.
(QH581.2.K18 2010)

BS1008 BIOINFORMATICS & STATISTICS

Subject Coordinator: Asst Prof Lu Lanyuan

Prescribed Textbooks

Zvelebil, Marketa J., *Understanding bioinformatics*, Garland Science, 2008.
(Call no: QH324.2.Z96)

Lesk, Arthur M., *Introduction to bioinformatics*, 3rd Edition, Oxford University Press, 2008.
(QH507.L629 2008)

Sebesta, Robert W., *A little book on Perl*, Prentice Hall, 2000. (QA76.73.P22S443)

Norman, Geoffrey R., *Biostatistics: the bare essentials*, 3rd Edition, B.C. Decker, 2008.
(QH323.5.N842, E-Book)

BS2007 IMMUNOLOGY

Subject Coordinator: Assoc Prof Christiane Ruedl

Prescribed Textbook

Murphy, Kenneth P., *Janeway's immunobiology*, 8th Edition, Garland Science, 2012.
(Call no: QR181.M978 2012)

Other Reference

Abbas, Abul K., *Cellular and molecular immunology*, 7th Edition, Saunders/Elsevier, 2012.
(QR185.5.A122 2012)

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BS2008 EXPERIMENTAL MOLECULAR & CELL BIOLOGY

Subject Coordinator: Dr Kenneth Yu

Prescribed Textbook

Alberts, Bruce., *Molecular biology of the cell*, 5th Edition, Garland Science, 2008.
(Call no: QH581.2.M718 2008)

Other Reference

Reed, Robert (Robert H.), *Practical skills in biomolecular sciences*, 3rd Edition, Prentice Hall, 2007. (QH506.P895 2007)

BS2009 ADVANCED BIOCHEMISTRY

Subject Coordinator: Assoc Prof Liang Zhao-Xun

References

Donald Voet and Judith G. Voet, *Biochemistry*, 4th Edition, Wiley; 2010. [ISBN: 978-0-470-57095-1]

John Kuriyan, Boyana Konforti and David Wemmer, *The molecules of life – physical and chemical principles*, 1st Edition, Garland Science; 2012. [ISBN: 978-0-8153-4188-8]

Fersht, Alan, *Structure and Mechanism in Protein Science: A Guide to Enzyme Catalysis and Protein Folding*, 3rd Revised Edition, W.H. Freeman & Company; 1998. [ISBN 978-0-716732686]

Stephen J. Lippard and Jeremy M. Berg, *Principles of Bioinorganic Chemistry*, University Science Books. [ISBN: 978-0935702729]

BS2010 BIOIMAGING

Subject Coordinator: Asst Prof Lu Lei

Reference

Murphy, Douglas B., *Fundamentals of light microscopy and electronic imaging*, 2nd Edition, Wiley-Blackwell, 2013.

BS211S EQUATIONS OF LIFE [Self-paced course]

Subject Coordinator: Dr Salil Bose

Reference

A standard mathematics textbook of A-level.

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BS2012 GENETICS & GENOMICS [New Course]

Subject Coordinator: Assoc Prof Zbynek Bozdech

Prescribed Textbook/References

L. H. Hartwell, *Genetics, from genes to genomes*, 4th Edition, McGraw Hill, 2011.

Ricki Lewis, *Human Genetics, Concepts and Applications*, 10th Edition, McGraw Hill, 2012.

BS0002 ENVIRONMENTAL MICROBIOLOGY [New Course]

Subject Coordinator: Asst Prof Scott Rice & Asst Prof McDougald Diane

Textbook:

Nil

BS3010 CURRENT TOPICS IN STEM CELL AND DEVELOPMENTAL BIOLOGY

Subject Coordinator: Prof Klaus Karjalainen

Textbook: Nil

BS3011 PROTEIN FOLDING AND BIOMOLECULAR NMR

Subject Coordinator: Assoc Prof Surajit Bhattacharyya

Prescribed Textbooks

Pain, Roger H., *Mechanisms of protein folding*, 2nd Edition, Oxford University Press, 2000. (Call no: QP551.M486)

Evans, Jeremy N. S., *Biomolecular NMR spectroscopy*, Oxford University Press, 1995. (QP519.9.N83E92)

Other References

Creighton, Thomas E., *Protein folding*, W.H. Freeman and Co., 1992. (QP551.P967F)

Fersht, Alan, *Structure and mechanism in protein science: a guide to enzyme catalysis and protein folding*, W.H. Freeman, 1999. (QD431.25.S85F399)

Wüthrich, Kurt., *NMR of proteins and nucleic acids*, Wiley, 1986. (QP519.9.N83W973)

Derome, Andrew E., *Modern NMR techniques for chemistry research*, 1st Edition, Pergamon Press, 1987. (QD96.N8D437)

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BS3013 DRUG DISCOVERY & DEVELOPMENT, BIOTECHNOLOGY

Subject Coordinator: Assoc Prof Liu Chuan Fa

References

Silverman, Richard B., *The organic chemistry of drug design and drug action*, 2nd Edition, Elsevier Academic Press, 2004. (Call no: RS403.S587)

Wilson, Charles Owens, *Wilson and Gisvold's textbook of organic medicinal and pharmaceutical chemistry*, 12th Edition, Lippincott Williams & Wilkins, 2011. (RS403.W746 2011)

Patrick, Graham L., *An introduction to medicinal chemistry*, 4th Edition, Oxford University Press, 2009. (RS403.P314 2009)

Foye, William O., *Foye's principles of medicinal chemistry*, 6th Edition, Lippincott Williams & Wilkins, 2008. (RS403.W722 2008)

BS3014 BIOLOGICAL FOUNDATIONS OF BEHAVIOR

Subject Coordinator: Asst Prof Ajai Vyas

Prescribed Textbook

Michael Breed and Janice Moore Alcock, John, *Animal behavior*, 1st Edition, Academic Press, 2011. [ISBN-10: 012372581X and ISBN-13: 978-0123725813]

BS3015 The RNA World

Subject Coordinator: Asst Prof Francesc Xavier Roca Castella

Prescribed Textbooks

Alberts, Bruce, *Molecular biology of the cell*, 5th Edition, Garland Science, 2008. (Call no: QH581.2.M718 2008)

Atkins, John F., *RNA worlds: from life's origins to diversity in gene regulation*, Cold Spring Harbor Laboratory Press, 2011. (QH450.R627rw)

Other Reference

Darnell, James E., *RNA: life's indispensable molecule*, Cold Spring Harbor Laboratory Press, 2011. (QP623.D223)

BS3017 ADVANCED MICROBIAL PATHOGENESIS [New Course]

Subject Coordinator: Asst Prof Kimberly Kline & Assoc Prof Julien Lescar

Prescribed Textbook

Wilson B.A., Salyers A.A., Whitt D.D. and Winkler M. E., *Bacterial pathogenesis*, 3rd Edition, ASM Press, 2011. [ISBN 978-1-55581-418-2]

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Reference

Walsh C., *Antibiotics*, ASM Press, 2003. [ISBN 1-55581-254-6]

ELECTIVES

BS8003 SCIENCE OR FICTION? – BIOLOGY IN POPULAR MEDIA

Subject Coordinator: Dr Sze Chun Chau

Textbook

Mader, Sylvia S., *Biology*, 11th Edition, McGraw-Hill Higher Education, 2012. [ISBN: 9780071317580]

Mader, Sylvia S., *Inquiry into life*, 14th Edition, McGraw-Hill, 2013. [ISBN: 9781259080746]

Reference

Campbell, Neil A., *FE1004 life sciences*, Pearson Education South Asia Pte Ltd., 2006. (QH308.2.F288)

BS8005 BEAUTY AND THE MYTHS

Subject Coordinator: Asst Prof Tan Nguan Soon, Andrew

Textbook:

Nil