

NANYANG TECHNOLOGICAL UNIVERSITY
SCHOOL OF BIOLOGICAL SCIENCES

RECOMMENDED TEXTBOOKS AND REFERENCES
BIOLOGICAL SCIENCES
AY 2017/2018 SEMESTER 1

BS1001 INTRODUCTORY BIOLOGY

References

Sylvia S. Mader, *Biology*, 12th Edition, McGraw-Hill, 2015. (Call no: QH308.2.M181b 2016)

Johnson, George, *Essentials of The Living World*, 4th Edition, McGraw-Hill 2013.
(Call no: QH308.2.J67 2013)

BS1002 BIOPHYSICAL CHEMISTRY

Prescribed Textbook

Nicholas C. Price, *Principles and problems in physical chemistry for biochemists*, 3rd Edition, Oxford University Press, 2001. (Call no: QD415.P957)

Other References

Peter William Atkins, *Elements of physical chemistry*, 7th Edition, Oxford University Press, 2017. (Call no: QD453.2.A874t 2017)

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

BS1003 ORGANIC CHEMISTRY

Prescribed Textbook

Francis A. Carey and Robert M. Giuliano, *Organic chemistry*, 9th Edition, McGraw-Hill, 2014. (Call no: QD251.3.C273 2014)

Other References

Maitland Jones and Steven A. Fleming, *Organic chemistry*, 5th Edition, W.W. Norton, 2014.
(Call no: QD253.2.J78 2014)

Solomons, T. W. Graham, *Organic chemistry*, 12th Edition, Wiley, 2016.
(Call No: QD253.2.S689 2016)

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John McMurry, *Fundamentals of organic chemistry*, 7th International Edition, Brooks/Cole, 2011. (Call no: QD251.2.M168 2011)

Paula Yurkanis Bruice, *Organic chemistry*, 8th International Edition, Pearson, 2016. (Call no: QD251.3.B896 2016)

Introductory Texts

Robert Charles Atkins, *Organic chemistry: a brief course*, 3rd International Edition, McGraw-Hill, 2007. (Call no: QD253.2.A874 2007)

T. W. Graham Solomons, *Fundamentals of organic chemistry*, 5th Edition, Wiley, 1997. (Call no: QD251.2.S689F)

Morris Hein, *Introduction to general, organic, and biochemistry*, 11th Edition, John Wiley, 2014. (Call no: QD31.3.I61 2015)

Douglas Applequist, *Introduction to organic chemistry*, 3rd Edition, Wiley, 1982. (Call no: QD253.A648)

Oxford Chemistry Primers

Michael Hornby, *Foundations of organic chemistry*, Oxford University Press, 1995. (Call no: QD253.H814)

Michael Hornby, *Foundations of organic chemistry: worked examples*, Oxford University Press, 2000. (Call no: QD253.H814F)

Howard Maskill, *Mechanisms of organic reactions*, Oxford University Press, 1996. (Call no: QD476.M397)

Michael J. T. Robinson, *Organic stereochemistry*, Oxford University Press, 2000. (Call no: QD481.R663)

Additional Books

Dieter Hellwinkel, *Systematic nomenclature of organic chemistry: a directory to comprehension and application of its basic principles*, Springer, 2001. (Call no: QD291.H477, E-book)

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BS1005 BIOCHEMISTRY I

Prescribed Textbook

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

Other Reference

Albert L. Lehninger, *Lehninger principles of biochemistry*, 5th Edition, W.H. Freeman, 2008. (Call no: QD415.L523 2008)

BS2001 PHYSIOLOGY

Subject Coordinator: Assoc Prof Valerie Lin

Prescribed Textbook

Sherwood, Lauralee, *Human physiology : from cells to systems*, 9th Edition, Cengage Learning, 2016 (Call no: QP34.5.S554 2016)

Reference

Eric P. Widmaier, *Vander's human physiology: the mechanisms of body function*, 14th Edition, McGraw-Hill, 2016. (Call no: QP34.5.V228 2016)

BS2002 MICROBIOLOGY

Subject Coordinator : Assoc Prof Scott Rice / Dr McDougald Diane

Prescribed Textbook

Joanne M. Willey, *Prescott's microbiology*, 10th Edition, McGraw-Hill, 2017.
(Call no: QR41.2.W714 2017)

BS2003 BIOCHEMISTRY II

Prescribed Textbook

Donald Voet, *Biochemistry*, 4th Edition, John Wiley & Sons, 2011.
(Call no: QP514.2.V876 2011)

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Other Reference

Eric R. Kandel, *Principles of neural science*, 5th Edition, McGraw-Hill, 2012.
(Call no: QP355.2.P957 2013, E-book)

Mark Bear, *Neuroscience : exploring the brain*, 4th Edition, Wolters Kluwer, 2015
(Call no: QP355.2.B368 2016)

BS3003 DEVELOPMENTAL BIOLOGY

Prescribed Textbook

Scott F. Gilbert and Michael J. F. Barresi, *Developmental Biology*, 11th Edition, 2016, Sinauer Associates. (Call no: QL955.G466 2016)

Lewis Wolpert, *Principles of development*, 5th Edition, Oxford University Press, 2015.
(Call no: QH491.P957 2015)

J. M. W. Slack, *Essential developmental biology*, 3rd Edition, Blackwell Pub., 2013.
(Call no: QH491.S631 2013)

Other References

Alfonso Martinez Arias, *Molecular principles of animal development*, Oxford University Press, 2002. (Call no: QH506.M385)

BS3004 CANCER BIOLOGY

Prescribed Textbook

Robert Allan Weinberg, *The biology of cancer*, 2nd Edition, Garland Science, 2013.
(Call no.: RC268.4.W423 2014)

BS3005 ADVANCED MOLECULAR GENETICS

Prescribed Textbook

Bruce Alberts, *Molecular biology of the cell*, 6th Edition, Garland Science, 2015.
(Call no.: QH581.2.M718 2015)

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BS3018 PLANT BIOLOGY

Prescribed Textbook

Peter H. Raven and Susan E. Eichhorn, *Biology of Plants*, 8th Edition, W.H. Freeman and Co., 2013. (Call no: QK47.R253 2013)

Bob B. Buchanan, *Biochemistry and Molecular Biology of Plants*, 2nd Edition, American Society of Plant Physiologists, 2015. (Call no: QK861.B615 2015, E-book)

Reference

Lincoln Taiz, *Plant Physiology and Development*, 6th Edition, Sinauer Associates, 2014. (Call no: QK711.2.P713)

BS3021 BIOIMAGING TECHNIQUES IN EM

Prescribed Textbooks

Williams and Carter, *Transmission Electron Microscopy a Textbook for Material Science*, 2nd Edition, Springer, 2009. (Call No.: TA417.23.W716 2009)

Joachim Frank, *Three-Dimensional Electron Microscopy of Macromolecular Assemblies: Visualization of Biological Molecules in their Native State*, 2nd Edition, Oxford, 2006. (Call no: QH324.9.T45F828, E book)

BS3023 REGULATORY CONTROL OF HEALTHCARE PRODUCTS AND MEDICAL DEVICES

References

Jonathan S. Kahan, Hogan Lovells US LLP, *Medical Device Development: Regulation and Law*, 3rd Edition, Parexel Intl Corp, 2014. (Call no: KF3827.M4K12)

Rosemary Hawkins, *Medical Device Approval and Regulation in 16 Countries: Brief Overviews*, Nova Science Publishers. (Call no: K3611.M45M489, E-book)

Carl T. DeMarco, *Medical Device Design and Regulation*, ASQ Quality Press, 2011. (Call no: R856.D372M + 1 CD, E-book)

**NANYANG TECHNOLOGICAL UNIVERSITY
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Mindy J. Allport-Settle, Current Good Manufacturing Practices: Pharmaceutical, Biologics, and Medical Device Regulations and Guidance Documents Concise Reference, PharmaLogika Inc, 2009. (Call No: KF70.A3A441)

Jean-Pierre Boutrand, Biocompatibility and Performance of Medical Devices, Woodhead Pub Limited, 2012. (Call no: R857.M3B615c, E- book)

Medical devices - Application of risk management to medical devices, Geneva, 2007. (Call no: QC100.I85 ISO14971-2007 (E))

Medical devices - Quality management systems - Requirements for regulatory purposes, 3rd Edition, ISO, 2016. (Call no: QC100.I85 ISO13485-2016 (E))

C. C. W. Schoenmakers, Ce Marking for Medical Devices: A Handbook to the Medical Devices Directives: Medical Devices Directive 93/42/Eec : The Active Implantable Medical Devices Directive 90/396/Eec, IEEE, 1997. (Call no: KJE6229.M42S366)

BS4002 CURRENT TOPICS IN CELL BIOLOGY

References

References information and papers will be given using TEL online system.

Bruce Alberts, Essential Cell Biology, 4th Edition, Garland Science, 2014.
(Call no: QH581.2.E78 2014)

Research Articles will be provided.

BS4004 CURRENT TOPICS IN IMMUNOLOGY

Other References

Kenneth P. Murphy, Janeway's immunobiology, 9th Edition, Garland Science, 2016.
(Call no: QR181.M978 2017)

Tak W. Mak and Mary E. Saunders, The immune response: basic and clinical principles, Elsevier/Academic, 2006. (Call no: QR181.M235 + 1 CD, E-book)

Abul K. Abbas, Andrew H. Lichtman, Shiv Pillai, Cellular and molecular immunology, 8th Edition, Saunders/Elsevier, 2014. (Call no: QR185.5.A122 2015, E-book)

**NANYANG TECHNOLOGICAL UNIVERSITY
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Judith A. Owen, Jenni Punt, Sharon A. Stranford, *Kuby immunology*, 7th Edition, W.H. Freeman, 2013. (Call no: QR181.K51 2013)

BS4006 VIROLOGY

Prescribed Textbooks

N. J. Dimmock, *Introduction to modern virology*, 7th Edition, Blackwell Pub., 2016.
(Call No: QR360.D582 2016, E-book)

Edward K. Wagner, *Basic virology*, 3rd Edition, Blackwell Pub., 2008. (Call no: QR360.W132 2008)

Teri Shors, *Understanding viruses*, 3rd Edition, Jones and Bartlett Learning, 2016.
(Call no: RC114.5.S559 2017)

N. H. Acheson, *Fundamentals of molecular virology*, 2nd Edition, John Wiley & Sons, 2011.
(Call no: QR389.A177 2011)

BS4009 BIOLOGY OF AGING

Prescribed Textbooks

Matt Kaeberlein and George Martin (Editors), *Handbook of the biology of aging*, 8th Edition, Academic Press, 2015. (Call no: QP86.H236 2016, E-book)

Leonard P. Guarente, Linda Partridge, Douglas C. Wallace, *Molecular biology of aging*, 2008. (Call no: QP86.M718, E-book)

BS4010 SYNTHETIC BIOLOGY

Prescribed textbooks:

Zhao Huimin, *Synthetic Biology: Tools and Applications*, Academic Press, 2013. (Call no.: TA164.S993, E-book)

E.R.Hamilton, M. L. Morales, *Synthetic Biology: Prospects and Implications*, Nova Science Pub Inc., 2012. (Call no.: QH585.S993)

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Markus Schmidt, *Synthetic Biology: Industrial and Environmental Applications*, Wiley-Blackwell Press, 2012. (Call no.: TP248.S993, E-book)

Anton Glieder, Christian P. Kubicek, Diethard Mattanovich, Birgit Wiltschi, Michael Sauer, *Synthetic Biology*, 1st Edition, Springer Press, 2016. (Call no: TA164.S993s, E-book)

BS4011 BIOLOGY OF SOCIAL BEHAVIOR

Prescribed Textbooks

Edward O. Wilson, *The Social Conquest of Earth*, 1 Edition, Liveright, April 2013.
(Call no: GN360.W747)

Edward O. Wilson, *The Meaning of Human Existence*, 1 Edition, Liveright, October 2014.
(Call no: BD450.W747)

BS4013 PHYSIOLOGICAL SYSTEMS: ANIMAL MODELS FOR DRUG DEVELOPMENT

Prescribed Text

National Research Council, *Guide for the Care and Use of Laboratory Animals*, 8th Edition, National Academies Press, 2011. (Call no: SF406.N277)

P. Michael Conn, *Animal Models for the Study of Human Diseases*, 1st Edition, Academic Press, 2013. (Call no: RB125.A598a, E-book)

Chaoyong Ma, *Animal Models of Disease*, Modern Drug Discovery, Volume 7, Issue 6, pp. 30-36, ACS Publications, June 2004 (E-journal)

BS4014 MOLECULAR BASIS OF DISEASES

Subject Coordinator : Assoc Prof Surajit Bhattacharyya

Prescribed Text

John Mendelsohn, *The molecular basis of cancer*, 4th Edition, Elsevier Saunders, 2015.
(Call no: RC268.5.M718 2015, E-book)

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Patrick G. Guilfoile, *Antibiotic resistant bacteria*, Chelsea House, 2007. (Call no: QR177.G956, E-book)

Reference

Thomas E. Creighton, Protein folding, W.H. Freeman and Co., *Biochemical Education* <[http://onlinelibrary.wiley.com/journal/10.1002/\(ISSN\)1879-1468](http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1879-1468)>, Volume 21, Issue 1 <<http://onlinelibrary.wiley.com/doi/10.1002/bmb.569.v21:1/issuetoc>>, Article first published online: 30 JUN 2010, ISBN 0-7167-7027-X

BS4015 PLANT BIOTECHNOLOGY

References

Arie Altman and Paul Michael Hasegawa, *Plant Biotechnology and Agriculture: Prospects for the 21st Century*, 1st Edition, Academic Press, (Call no.: TP248.27.P55P713pba, E-book)

C. Neal Stewart Jr., *Plant Biotechnology and Genetics: Principles, Techniques and Applications*, 2nd edition, Wiley-Interscience, 2016 (Call no.: TP248.27.P55P713 2016)

Maynard Smith, John, *The Major Transitions in Evolution*, Oxford University Press, 1995 (Call no: QH366.2.M471m)

ELECTIVES

BS0001 BIOLOGY AND SOCIETY

Prescribed Text

Eli C. Minkoff, *Biology today: an issues approach*, 3rd Edition, Garland Pub., 2004. (Call no: QH315.M665 2004)

BS8004 TRADITIONAL CHINESE MEDICINE: A PRIMER COURSE 中医入门

References

Sun, Guangren. *Zhong yi ji chu li lun*, 2nd Edition, Zhongguo Zhong yi yao chu ban she, 2007 (Call no: R601.Z63J 2007)

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Gao, Xuemin. Zhong yao xue, 2nd Edition, Zhongguo Zhong yi yao chu ban she, 2007
(Call no: RS180.C5Z63X 2007)

Shi, Xuemin. Zhen jiu xue, 2nd Edition, Zhongguo Zhong yi yao chu ban she, 2007
(Call no: RM184.Z63E 2007A)

BS8101 EXPLORING THE SCIENCE OF GOOD EATING EXPERIENCE

Prescribed Textbook

McWilliams, Foods: Experimental Perspectives, 8th Edition, Pearson, 2016.
(Call number: TX531.M177)

Barbara Scheule and Marion Bennion, Introductory Foods, 14th Edition, Pearson, 2014.
(Call number: TX354.B472)

SP0056 WORKINGS OF THE HUMAN BODY

Prescribed Textbook

Jane B Reece, Martha Taylor, Campbell Biology Concepts and Connections, 9th Edition,
Pearson, 2017 (Call no: QH308.2.C187 2018)

Other References

Michael D Johnson, Human Biology: Concepts and Current Issues, 8th Edition, Pearson,
2016, (Call no: QP34.5.J68 2017)