

**NANYANG TECHNOLOGICAL UNIVERSITY  
SCHOOL OF BIOLOGICAL SCIENCES**

**BS-BOOK LIST UPDATING - AY2018 SEMESTER-2**

**Contents:**

BS1005	BIOCHEMISTRY I
BS1006	PRINCIPLES OF GENETICS
BS1007	MOLECULAR & CELL BIOLOGY I
BS1009	INTRODUCTION TO COMPUTATIONAL THINKING <b>[NEW COURSE]</b>
BS1100	MOLECULAR & CELL BIOLOGY TECHNIQUES LEVEL 1
BS2004	MOLECULAR & CELL BIOLOGY II
BS2007	IMMUNOLOGY
BS2008	EXPERIMENTAL MOLECULAR & CELL BIOLOGY
BS2010	BIOIMAGING
BS2115	EQUATIONS OF LIFE [Self-paced course]
BS2012	GENETICS & GENOMICS
BS2021	RNA STRUCTURES & RNA BASED DRUG DEVELOPMENT
BS3006	BIOENTREPRENEURSHIP
BS3008	COMPUTATIONAL BIOLOGY & MODELING
BS3010	CURRENT TOPICS IN STEM CELL & DEVELOPMENTAL BIOLOGY
BS3013	DRUG DISCOVERY & DEVELOPMENT, BIOTECHNOLOGY
BS3015	THE RNA WORLD
BS3017	ADVANCED MICROBIAL PATHOGENESIS
BS3019	NEUROPSYCHOLOGY OF STRESS AND RESILIENCE
BS3022	PROTEIN TRAFFICKING
BS3023	REGULATORY CONTROL OF HEALTHCARE PRODUCTS AND MEDICAL DEVICES
BS3025	NMR IN STRUCTURAL BIOLOGY
BS3027	SPECTROSCOPIC METHODS IN BIOMEDICAL STRUCTURAL BIOLOGY
BS3028	CHEMICAL BIOLOGY
BS3030	TELOMERE BIOLOGY: GENOME STABILITY, CANCER AND AGEING
BS3035	ONE HEALTH <b>[NEW COURSE]</b>
BS8001	HUMAN BODY FUNCTION AND DISEASE
BS8101	EXPLORING THE SCIENCE OF GOOD EATING EXPERIENCE
CH9200	FOOD MICROBIOLOGY

**NANYANG TECHNOLOGICAL UNIVERSITY  
SCHOOL OF BIOLOGICAL SCIENCES**

**BS1005BIOCHEMISTRY I**

Subject Coordinator: Assoc Prof Curtis Davey

**Prescribed Textbook**

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

**Other Reference**

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

**BS1006PRINCIPLES OF GENETICS**

Subject Coordinator: Assoc Prof Peter Droge

**Prescribed Textbooks**

D. Peter Snustad, *Genetics*, 6<sup>th</sup> Edition, International student version, Wiley, 2012  
(Call No: QH430.S674 2012a)

Jocelyn E. Krebs, *Lewin's essential genes*, 3<sup>rd</sup> Edition, Jones and Bartlett Learning, 2013  
(Call no: QH430.K92 2013)

Essentials of Genetics (9th Edition) - Standalone book 9th Edition  
by William S. Klug (Author), Michael R. Cummings (Author), Charlotte A. Spencer (Author),  
Michael A. Palladino (Author);  
Publisher: Pearson; 9 edition (October 17, 2015)  
Language: English  
ISBN-10: 0134047796  
ISBN-13: 978-0134047799

**BS1007MOLECULAR & CELL BIOLOGY I**

Subject Coordinator: Assoc Prof Thirumaran Thanabalu

**Prescribed Textbooks**

Bruce Alberts, *Molecular biology of the cell*, 6<sup>th</sup> Edition, Garland Science, 2015  
(Call No: QH581.2.M718 2015)

**NANYANG TECHNOLOGICAL UNIVERSITY  
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Molecular Cell Biology 8th Edition

by Harvey Lodish (Author), Arnold Berk (Author), Chris A. Kaiser (Author), Monty Krieger (Author), Anthony Bretscher (Author), Hidde Ploegh (Author), Angelika Amon (Author), Kelsey C. Martin (Author)

Publisher: W. H. Freeman; 8 edition (April 1, 2016)

Language: English

ISBN-10: 1464183392

ISBN-13: 978-1464183393

**Other Reference**

Gerald Karp, *Cell and molecular biology: concepts and experiments*, 7<sup>th</sup> Edition, Wiley, 2013  
(Call no: QH581.2.K18 2013)

**BS1009 INTRODUCTION TO COMPUTATIONAL THINK [NEW COURSE]**

Subject Coordinator: Asst Prof Marek Mutwil

**Prescribed Textbooks**

**NIL**

**BS1100 MOLECULAR & CELL BIOLOGY TECHNIQUES LEVEL 1**

Subject Coordinator: Assoc Prof Tan Suet Mien

**Prescribed Textbooks**

Rob Reed, David Holmes, Jonathan Weyers, Allan Jones, *Practical Skills in Biomolecular Sciences*, 4<sup>th</sup> Edition, Pearson Education, 2013 (Call no: QH506.P895 2013)

**BS2004 MOLECULAR & CELL BIOLOGY II**

Subject Coordinator: Assoc Prof Koh Cheng Gee

**References**

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

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Molecular Cell Biology 8th Edition

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Publisher: W. H. Freeman; 8 edition (April 1, 2016)

Language: English

ISBN-10: 1464183392

ISBN-13: 978-1464183393

Cell and Molecular Biology: Concepts and Experiments 8e Binder Ready Version + WileyPLUS Learning Space Registration Card 8th Edition

by Gerald Karp (Author)

Publisher: Wiley (WileyPLUS Products); 8 edition (May 9, 2016)

Language: English

ISBN-10: 1119231515

ISBN-13: 978-1119231516

**BS2007IMMUNOLOGY**

Subject Coordinator: Assoc Prof Christiane Ruedl

**Prescribed Textbook**

Kenneth P. Murphy, *Janeway's immunobiology*, 9<sup>th</sup> Edition, Garland Science, 2017  
(Call no: QR181.M978 2017)

**Other Reference**

Cellular and Molecular Immunology, 9e 9th Edition

by Abul K. Abbas MBBS (Author), Andrew H. H. Lichtman MD PhD (Author), Shiv Pillai MBBS PhD (Author)

Publisher: Elsevier; 9 edition (May 25, 2017)

Language: English

ISBN-10: 0323479782

ISBN-13: 978-0323479783

**BS2008EXPERIMENTAL MOLECULAR & CELL BIOLOGY**

Subject Coordinator: Dr Kenneth Yu

**Prescribed Textbook**

Bruce Alberts, *Molecular biology of the cell*, 6<sup>th</sup> Edition, Garland Science, 2015

**NANYANG TECHNOLOGICAL UNIVERSITY  
SCHOOL OF BIOLOGICAL SCIENCES**

(Call No: QH581.2.M718 2015)

**Other Reference**

Robert H. Reed, *Practical skills in biomolecular sciences*, 4th Edition, Pearson Education, 2013 (Call no: QH506.P895 2013)

**BS2010BIOIMAGING**

Subject Coordinator: Asst Prof Lu Lei

**Reference**

Douglas B. Murphy, *Fundamentals of light microscopy and electronic imaging*, 2<sup>nd</sup> Edition, Wiley-Blackwell, 2013. (Call no: QH211.M978 2013)

**BS211S          EQUATIONS OF LIFE [Self-paced course]**

Subject Coordinator: Asst Prof Lu Lanyuan

**Reference**

A standard mathematics textbook of A-level.

**BS2012GENETICS & GENOMICS**

Subject Coordinator: Asst Prof Amartya Sanyal

**Prescribed Textbook/References**

L. H. Hartwell, *Genetics, from genes to genomes*, 5<sup>th</sup> Edition, McGraw-Hill Education, 2014  
Robert J Brooker, *Genetics, Analysis and Principles*, 5<sup>th</sup> Edition, McGraw-Hill Education, 2015

**BS2021RNA Structures & RNA based Drug Development**

Subject Coordinator: Asst Prof Wu Bin, Asst Prof Luo Dahai

**Prescribed Textbook**

James Darnell, *RNA: Life's Indispensable Molecule*, Cold Spring Harbor Laboratory Press,

**NANYANG TECHNOLOGICAL UNIVERSITY  
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2011. (Call no: QP623.D223)

Molecular Biology of RNA 2nd Edition

by David Elliott (Author), Michael Lodomery (Author)

Publisher: Oxford University Press; 2 edition (January 2, 2016)

Language: English

ISBN-10: 0199671397

ISBN-13: 978-0199671397

David S. Goodsell, *The Machinery of Life*, 2<sup>nd</sup> Edition, Harvard University Press, Cambridge, MA, USA, 2009. (E-Book)

**BS3006 Bioentrepreneurship**

Subject Coordinator: Dr Hong Yan

**Prescribed Textbooks**

1. Shimasaki, C. D. (2014). *Biotechnology entrepreneurship : starting, managing, and leading biotech companies*, Oxford : Academic Press
2. Patzelt, H. and T. Brenner (2008). *Handbook of bioentrepreneurship*, New York ; London : Springer
3. Teng, P. (2008). *Bioscience Entrepreneurship in Asia: Creating Value with Biology Singapore*, World Scientific Publishing Company.
4. Leach, J. C. and R. W. Melicher (2015). *Entrepreneurial finance*, Australia ; Singapore : South-Western Cengage Learning, 5th edition.

**References**

C. Shimasaki, *Biotechnology entrepreneurship : starting, managing, and leading biotech companies*, 1<sup>st</sup> Edition, Academic Press, 2014. (E-book)

H.Patzelt and T. Brenner, *Handbook of Bioentrepreneurship (International Handbook Series on Entrepreneurship)*, Springer New York, 2008. (E-book)

**BS3008 COMPUTATIONAL BIOLOGY AND MODELING**

Subject Coordinator: Assoc Prof Mu Yuguang

**Prescribed Textbooks**

Schlick, Tamar, *Molecular modeling and simulation: an interdisciplinary guide*, 2<sup>nd</sup> Edition, Springer, 2010. (Call no: QD480.S344 2010, E-Book)

Hinchliffe, Alan., *Molecular modelling for beginners*, 2<sup>nd</sup> Edition, Wiley, 2008. (QD480.H659M 2008)

**NANYANG TECHNOLOGICAL UNIVERSITY  
SCHOOL OF BIOLOGICAL SCIENCES**

Höltje, Hans-Dieter, *Molecular modeling: basic principles and applications*, 3<sup>rd</sup> revised and expanded Edition, Wiley-VCH, 2008. (Call no: QH506.M718MMB 2008)

**BS3010CURRENT TOPICS IN STEM CELL AND DEVELOPMENTAL BIOLOGY**

Subject Coordinator: Prof Klaus Karjalainen

Textbook: Nil

**BS3013DRUG DISCOVERY & DEVELOPMENT, BIOTECHNOLOGY**

Subject Coordinator: Assoc Prof Liu Chuan Fa

**References**

Silverman, Holladay, *The organic chemistry of drug design and drug action*, 3<sup>rd</sup> Edition, Elsevier Academic Press, 2014. (Call no: RS403.S587 2014, E-copy)

Wilson, Charles Owens, *Wilson and Gisvold's textbook of organic medicinal and pharmaceutical chemistry*, 12<sup>th</sup> Edition, Lippincott Williams & Wilkins, 2011. (Call no: RS403.W746 2011)

An Introduction to Medicinal Chemistry 6th Edition  
by Graham Patrick (Author)  
Publisher: Oxford University Press; 6 edition (June 20, 2017)  
Language: English  
ISBN-10: 0198749694 and ISBN-13: 978-0198749691

Foye, William O., *Foye's principles of medicinal chemistry*, 7<sup>th</sup> Edition, Lippincott Williams & Wilkins, 2013. (Call no: RS403.W722 2013)

**BS3015The RNA World**

Subject Coordinator: Asst Prof Francesc Xavier Roca Castella

**Prescribed Textbooks**

Bruce Alberts, *Molecular biology of the cell*, 6<sup>th</sup> Edition, Garland Science, 2015  
(Call No: QH581.2.M718 2015)

John F. Atkins, *RNA worlds: from life's origins to diversity in gene regulation*, Cold Spring Harbor Laboratory Press, 2011 (Call no: QH450.R627rw)

**Other Reference**

**NANYANG TECHNOLOGICAL UNIVERSITY  
SCHOOL OF BIOLOGICAL SCIENCES**

James E. Darnell, *RNA: life's indispensable molecule*, Cold Spring Harbor Laboratory Press, 2011. (Call no: QP623.D223)

**BS3017ADVANCED MICROBIAL PATHOGENESIS**

Subject Coordinator: Asst Prof Kimberly Kline

**Prescribed Textbook**

Wilson B.A., *Bacterial pathogenesis: a molecular approach*, 3<sup>rd</sup> Edition, ASM Press, 2011. (Call no: QR201.B34S186 2011)

**Reference**

Walsh C., *Antibiotics: actions, origins, resistance*, ASM Press, 2003. (Call no: RM267.W223)

**BS3019NEUROPSYCHOLOGY OF STRESS AND RESILIENCE**

Subject Coordinator: Asst Prof Rupshi Mitra

**Prescribed Textbook**

Robert M. Sapolsky, *Why Zebras don't get ulcers*, 3<sup>rd</sup> Edition, Holt Paperbacks, 2004. (Call no: QP82.2.S8S241)

**BS3022PROTEIN TRAFFICKING**

Subject Coordinator: Asst Prof Guillaume Thibault

**Prescribed Textbook**

Bruce Alberts, Alexander Johnson, Julian Lewis, Martin Raff, *Molecular Biology of the Cell*, 6<sup>th</sup> Edition, Garland Science, 2014. (Call no: QH581.2.M718 2015)

Lukas K. Buehler, *Cell Membranes*, Garland Science, 2016, ISBN: 9780815341963 (Call no: QH601.B928)

**BS3023 REGULATORY CONTROL OF HEALTHCARE PRODUCTS AND MEDICAL DEVICES**

Subject Coordinator: Prof Yoon Ho Sup, Joe / Dr Nealda Yusof

**References**



**NANYANG TECHNOLOGICAL UNIVERSITY  
SCHOOL OF BIOLOGICAL SCIENCES**

Jonathan S. Kahan, Hogan Lovells US LLP, *Medical Device Development: Regulation and Law*, 3<sup>rd</sup> Edition, Barnett International, 2014. (Call no: KF3827.M4K12)

Rosemary Hawkins, *Medical Device Approval and Regulation in 16 Countries: Brief Overviews*, Nova Science Publishers, 2016. (Call no: K3611.M45M489, E-copy)

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

Mindy J. Allport-Settle, *Current Good Manufacturing Practices: Pharmaceutical, Biologics, and Medical Device Regulations and Guidance Documents*, PharmaLogika, 2009. (Call no: KF70.A3A441)

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

*Medical devices – Application of risk management to medical devices*, 2<sup>nd</sup> Edition, Geneva, 2007. (Call No. QC100.I85 ISO14971-2007 (E))

*Medical devices - Quality management systems – Requirements for regulatory purposes*, 3<sup>rd</sup> Edition, ISO, 2016. (Call No. QC100.I85 ISO13485-2016 (E))

Shayne Cox Gad, Samantha Gad-McDonald, *Biomaterials, Medical Devices, and Combination Products: Biocompatibility Testing and Safety Assessment*, CRC Press Taylor & Francis, 2016. ISBN-13: 978-1482248371 and ISBN-10: 1482248379

Daniel Shoukier, *MDR Compendium – The New European Medical Device Regulation*, BellingsBooks Publishing House, 2017. ISBN: 978-3-9523794-1-7

BS3025NMR in Structural Biology

Subject Coordinator: Assoc Prof Konstantin Pervushin

Textbook: Nil

BS3027Spectroscopic Methods in Biomedical Structural Biology

Subject Coordinator: Assoc Prof Jaume Torres

### References

Creighton, Thomas E., 1940-, *The physical and chemical basis of molecular biology*, [S.l.] : Helvetian Press ; Eastbourne, East Sussex, U.K. : Distributed by Gardners Books, c2010. 2010 Helvetian Press (Firm). Accession Number: ntu.750369

**NANYANG TECHNOLOGICAL UNIVERSITY  
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Biophysical chemistry (Part II)/ Charles R. Cantor, Paul R. Schimmel.  
Cantor, Charles R.. San Francisco : W. H. Freeman, c1980. v. : ill. ; 24 cm. Language: English,  
Database: NTU Library Catalogue

Infrared Spectroscopy: Fundamentals and Applications  
2004 John Wiley & Sons, Ltd  
Barbara H. Stuart  
DOI: 10.1002/0470011149  
Book Series: Analytical Techniques in the Sciences  
Series Editor(s): David J. Ando

2005 Fluorescence spectroscopy in biology : advanced methods and their applications to  
membranes, proteins, DNA, and cells / volume editors, M. Hof, R. Hutterer, V. Fidler.  
Berlin ; New York : Springer, c2005.  
Springer series on fluorescence; 3  
Accession Number: ntu.385596  
Database: NTU Library Catalogue

[2006 Principles of Fluorescence Spectroscopy](#)

doi: 10.1007/978-0-387-46312-4  
Editors: Joseph R. Lakowicz  
ISBN: 978-0-387-31278-1 (Print) 978-0-387-46312-4 (Online)  
1989 Practical Raman Spectroscopy  
Dr. Derek J. Gardiner, Dr. Pierre R. Graves  
ISBN: 978-3-540-50254-8 (Print) 978-3-642-74040-4 (Online)

**BS3028Chemical Biology**

Subject Coordinator: Assoc Prof Liang Zhao-Xun

Textbook:

Natural Product Biosynthesis: Chemical Logic and Enzymatic Machinery  
Christopher T Walsh, Yi Tang  
<https://pubs-rsc-org.ezlibproxy1.ntu.edu.sg/en/content/ebook/978-1-78801-076-4>

**BS3030Telomere Biology: Genome Stability, Cancer and Ageing**

Subject Coordinator: Asst Prof Sara Sandin

Textbook: Nil

**NANYANG TECHNOLOGICAL UNIVERSITY  
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**BS3035 ONE HEALTH [NEW COURSE]**

Subject Coordinator: Dr Hong Yan

**References :**

Maloy, S. R. and R. M. Atlas (2014). *One Health: People, Animals, and the Environment*. Washington DC, ASM Press.

Mackenzie, J. S., M. Jeggo, P. Daszak and J. A. Richt (2013). *One Health: The Human-Animal-Environment Interfaces in Emerging Infectious Diseases. The Concept and Examples of a One Health Approach*, Berlin, Heidelberg: Springer Berlin Heidelberg

Mackenzie, J. S., M. Jeggo, P. Daszak and J. A. Richt (2013). *One Health: The Human-Animal-Environment Interfaces in Emerging Infectious Diseases. Food Safety and Security, and International and National Plans for Implementation of One Health Activities*, Berlin, Heidelberg: Springer Berlin Heidelberg

**ELECTIVES**

**BS8001 Human Body Function and Disease**

Course Coordinator: Dr Peter Cheung

**Prescribed Text**

Jane B Reece, Martha Taylor, *Campbell Biology Concepts and Connections*, 8<sup>th</sup> Edition, Pearson. ISBN 10: 1-292-05780-7.

**Other References**

Michael D Johnson, *Human Biology Concepts and Current Issues*, 8<sup>th</sup> Edition, Pearson. ISBN 10: 1-292-16627-4.

**BS8101 Exploring the Science of Good Eating Experience**

Subject Coordinator: Dr Goh Wen Bin Wilson

**Prescribed Textbook**

McWilliams, *Foods: Experimental Perspectives*, 8<sup>th</sup> Edition, Pearson, 2016.

Introductory Foods (14th Edition) 14th Edition  
by Barbara Scheule Ph.D. RD (Author), Marion Bennion (Author)

**NANYANG TECHNOLOGICAL UNIVERSITY  
SCHOOL OF BIOLOGICAL SCIENCES**

Publisher: Pearson; 14 edition (January 31, 2014)

Language: English

ISBN-10: 0132739275

ISBN-13: 978-0132739276

CH9200      FOOD MICROBIOLOGY

Subject Coordinator: Dr Sze Chun Chau

**Prescribed Textbook**

Adams, M. R., *Food Microbiology*, 4<sup>th</sup> Edition, Royal Society of Chemistry, 2016  
(Call No: QR115.A215 2016)