

Reading list for MST/VST Part IA MIMS (2022-23)

(Course Organiser – Daniel Nietlispach)

Most of these books should be available in your College library, but to give as many students as possible an opportunity to use them on a regular basis, the Department of Biochemistry also keeps copies of them in the Part I book collection of the Colman library (in the Biochemistry building on the Downing Site, opposite Pembroke College Founders' Court) close to the Library office. Selected books may be borrowed overnight from this library collection; others may be consulted during the hours that the Biochemistry Department is open (08.30-17.00, Monday – Thursday, 08.30–16.00 Friday). The Assistant Librarian can help to locate the books. There is limited seating in the library for Part I students and we have to give priority to Biochemistry students on the Part II and Part III courses. The Genetics Department Library also has reserved copies available for consultation but not for loan.

Books Recommended for Use in the MIMS Course

The two titles listed will feature in lectures and handouts when links to textbooks are made.

- Voet, D., Voet, J. G. & Pratt, C. W. **Principles of Biochemistry**. 4th edition, Wiley, 2012

This excellent text is superbly illustrated. It includes much medically relevant material within a clear and straightforward account of mainline Biochemistry.

See: <https://goo.gl/3eP1pT>

- Alberts, B. *et al.* **Essential Cell Biology**, 5th edition, Norton & Company, 2019

This strictly is a **Cell Biology** text but it covers many aspects of modern biochemistry and molecular cell biology, although without so much on the "structural" side. It helps set the information in the MIMS course in a wider biological context and should be particularly useful for those who have not studied Biology to GCE 'A' level, or an equivalent. Recommended for purchase, but give priority to Voet *et al.*

See: <https://goo.gl/Gv4A8x>

Other Good Texts

There is no shortage of good Biochemistry texts. One of the most widely used and also recently updated is:

- Berg, J. M., Tymoczko, J. L., Gatto, G.J., and Stryer, L. **Biochemistry**. (9th edition, Freeman, 2019)

See: <https://goo.gl/MKqh9e>

A quite recent edition of another standard text is:

- Nelson, D., Cox, M. Lehninger ***Principles of Biochemistry***, W. H. Freeman, 7th edition, 2017

See: <https://goo.gl/Sm4RGg>

A well-written and clear introduction to methods of gene cloning and manipulation that does not assume previous experience is:

- Howe, Christopher. ***Gene Cloning and manipulation***. CUP 2nd edition 2007 (£34.99)
See: <https://goo.gl/AuWvzT>

Genetic Lectures:

- Nicholas, F. W. ***An Introduction to Veterinary Genetics***. 3rd edition, Blackwell's Science, 2009
- Strachan, T., Goodship, J., and Chinnery, P. – ***Genetics and Genomics in Medicine*** (1st edition, Garland, 2014).
- Tobias, C. & Ferguson-Smith, A. – ***Essential Medical Genetics*** (6th edition, Wiley and Blackwell, 2011)
- Read, A. and Donnai, D. ***New Clinical Genetics***. (3rd edition, Scion publishing, 2015)

A more elementary medical genetics book with clinical relevance

- Turnpenny, P. and Ellard, S. ***Emery's Elements of Medical Genetics***, with student consult online access (15th edition, Churchill Saunders Ltd, 2017)

Integrates basic science and clinical elements of genetics, recently updated and includes access to full text on-line.

And a general introductory textbook of Medical Biochemistry:

- Baynes, John W and Dominiczak, Marek, H. ***Medical Biochemistry*** (4th edition, Elsevier, 2014)

For a quick overview of factual material – useful for revision:

- Hames, B. D. *et al.* ***Instant Notes in Biochemistry***. Bios (4th edition, 2011)
- Turner, P. C. *et al.* ***Instant Notes in Molecular Biology***. Bios (4th edition, 2012)

Other Sources of Information

Specialist Texts

Since MIMS is an introductory course dealing with core material, we have not specifically listed more advanced and specialised texts. However, perusal of catalogues and shelves in College and departmental libraries will give you an idea of what else is available. Also, the recommended textbooks all contain suggestions for further reading. Lecturers and supervisors can also guide you if you find particular topics fascinating and wish to know more. While we are keen to encourage further independent reading, we are also aware that too much information in first year courses can be indigestible.

Review Journals

Research-oriented summaries (2-4 pages) of important topics are contained in monthly journals of the "Trends" family – Trends in Biochemical Sciences (usually known as TIBS), Trends in Cell Biology and Trends in Genetics. The Scientific American usually contains at least one molecular bioscience article per issue, and is well worth a glance. Copies of these journals are held in the Biochemistry Library. We suggest that you explore these occasionally, as you get into the course, to get a taste of the frontier. Go for the gist, rather than the detail.

Web Sites

Ever more useful source of information. A useful address, which has many forward links is Online Mendelian Inheritance in Man (OMIM).

<https://www.omim.org/>

For veterinary interest, there is also Online Mendelian Inheritance in Animals (OMIA), maintained by F. W. Nicholas, author of the veterinary genetics textbook noted above.

(<http://omia.angis.org.au/home/>)