

Medical Informatics

Text Book List

Academic Year 2020-2021

Textbook list is subject to change.

If you have any questions, please contact Lynne Schwabe at schwabel@ohsu.edu or phone 503-418-1566.

BMI 569/669 Hybrid	Data Analytics Hybrid McWeeney/Sikora/Moore/Edinger TEXTBOOKS: Required <ul style="list-style-type: none">• Strome, Trevor L. Healthcare Analytics for Quality and Performance Improvement. Wiley, Hoboken, NJ: 2013. ISBN 978-1-118-5196901.• McNeill, Dwight, ed. Analytics in Healthcare and the Life Sciences. International Institute for Analytics, Upper Saddle River, NJ: 2014. ISBN 978-0-13-340733-4. Optional/Recommended: <ul style="list-style-type: none">• Few, Stephen. Information Dashboard Design: Displaying Data for At-a-Glance Monitoring. Analytics Press: 2013. ISBN: 978-1-938277-00-6• Gensinger, Raymond A, ed. Analytics in Healthcare: An Introduction. HIMSS, Chicago: 2014. ISBN 978-1-938904-64-6.
BMI 510/610	Introduction to Biomedical Informatics Hersh No Required Textbook Optional Textbook: Hoyt RE, Hersh WR, Eds. (2018). Health Informatics: Practical Guide, Seventh Edition, Lulu.com
BMI 512/612	Clinical Information Systems Mohan No Textbook Required
BMI 513/613	Electronic Health Record Laboratory Course Vishnu Mohan Required: Electronic Health Records Author: Byron Hamilton Publisher: McGraw-Hill Science/Engineering/Math; 3 edition (2012) Language: English ISBN-10: 0073402141 ISBN-13: 978-0073402147

<p>BMI 514/614</p>	<p>Information Retrieval & Digital Libraries Hersh</p> <p>Hersh, William R. <i>Information Retrieval: A Health and Biomedical Perspective 3rd Ed.</i></p>
<p>BMI 516/616</p>	<p>Standards and Interoperability Orwoll</p> <p>TEXTBOOK: Tim Benson, Principles of Health Interoperability: HL7 and SNOMED, Second edition. Springer 2012 978-1-4471-2800-7. The e-Book may be available through the OHSU library.</p> <p>Additional reading material will be available on the Sakai course site.</p>
<p>BMI 517/617</p>	<p>Organizational Behavior and Management in Informatics Hoekstra/Ash</p> <p>Required Reading: Organizational Behavior (18th Edition) by Stephen P. Robbins, Timothy A. Judge Additional required readings will be listed in course materials throughout the term.</p> <p>Additional required readings will be listed in course materials throughout the term.</p>
<p>BMI 518/618</p>	<p>Project Management in Informatics Woodcock/Ash (Winter 2020)</p> <p>Textbooks:</p> <p>1. Verzuh, Eric (2015). <u>The Fast Forward MBA in Project Management</u>. Hoboken, New Jersey: John Wiley & Sons, Inc.; 5th edition.</p> <p>Available in electronic and paperback formats: # ISBN-10: 1119086574; # ISBN-13: 978-1119086574.</p> <p>Optional resources:</p> <p>Although this course is not intended to be a “prep course” for the PMI’s PMP Certification Examination (see www.pmi.org), the PMI project framework is integrated into the course material. Students considering sitting for the certification examination may also wish to purchase:</p> <p>1. Project Management Institute (2013) <u>A Guide to the Project Management Body of Knowledge (PMBOK® Guide)</u></p> <p>Available used on Amazon, or from http://www.pmi.org: # ISBN13: 978193558967</p> <p>Project Management Software Students will learn to use a free, open-source project management program called ProjectLibre to plan, execute, and manage projects. ProjectLibre runs on Windows, MacOS, and Linux, and can be downloaded from http://www.projectlibre.org/. Optionally, students with access to Microsoft Project are welcome to use it for all assignments and class deliverables.</p>

<p>BMI 519/619</p>	<p>The Business of Health Care Informatics Mohan</p> <p>No Required Textbook</p>
<p>BMI 520/620</p>	<p>Consumer Health Informatics Valerius/Altus</p> <p>Required: Consumer Health Informatics Thomas Wetter Springer ISBN: 978-3-319-19589-6</p>
<p>BMI 521/621</p>	<p>Public Health Informatics Magnuson</p> <p>Required:</p> <p style="padding-left: 40px;">Public Health Informatics and Information Systems Magnuson, J.A., Fu, Jr., Paul C. (Eds.) 2nd ed. 2014, XVIII, 666 p. 114 illus., 35 illus. in color. Available Formats: eBook, Hardcover ISBN 978-1-4471-4236-2</p>
<p>BMI 523/623</p>	<p>Clinical Research Informatics Schuff/Weiskopf</p> <p>Required Textbook and Readings:</p> <ol style="list-style-type: none"> 1. Richesson RL, Andrews JE, editors. Clinical Research Informatics. Springer International Publishing; 2019 Feb 7. (Available through OHSU library as e-book.) 2. Weekly readings will be assigned.
<p>BMI 524/624</p>	<p>Analytics for Healthcare, An Overview Pandit</p> <p>REQUIRED TEXTS OR READINGS</p> <ol style="list-style-type: none"> 1. Book Healthcare Data Analytics (Chapman & Hall/CRC Data Mining and Knowledge Discovery Series Book 36) ISBN-13: 978-1482232110 ISBN-10: 1482232111 2. Book Data Science for Business: What You Need to Know about Data Mining and Data-Analytic Thinking ISBN-13: 978-1449361327

	<p>ISBN-10: 1449361323</p> <p>Additional Weekly reading as assigned, see Sakai for details</p>
BMI 530/630	<p>The Practice of Health Care Chase</p> <p>Required: Eckman, M., Share, D. Pathophysiology Made Incredibly Easy. Fifth Ed. 2013. Lippincott Williams & Wilkins. Paper. 544pp. ISBN-10 145114623X, ISBN-13 978-1451146233</p>
BMI 535/635	<p>Management and Processing of Large Scale Data Mooney/Laderas</p> <p>No text required – Readings from primary literature will be assigned.</p>
BMI 536/636	<p>Evidence-Based Medicine (Odd years Only) Hersh</p> <p>Required : The course textbook is: Guyatt, G, Rennie, D, et al., Eds. (2015). <i>Users' Guides to the Medical Literature: Essentials of Evidence-Based Clinical Practice, Third Edition</i>. New York, NY, McGraw-Hill.</p>

<p>BMI 537/637</p>	<p>Healthcare Quality Lieberman</p> <p>REQUIRED TEXTBOOK Nash, D., Joshi, M., Ransom, E. R., & Ransom, S. B. (2019). The Healthcare Quality Book: Vision, Strategy, and Tools (4th ed.). Chicago: Health Administration Press. ISBN 9781640550537</p> <p>We may also have reading from the previous edition, which is available in electronic format to OHSU students through the OHSU library at no cost:</p> <p>Joshi, M.S. Ransom, E. R., Joshi, M., Nash, D., & Ransom, S. (2014). The Healthcare Quality Book: Vision, Strategy, and Tools (3rd ed.). Chicago: Health Administration Press. ISBN 10 - 1567935907</p>
<p>BMI 538/638</p>	<p>Medical Decision Making Eden</p> <p>REQUIRED TEXTBOOK AND SOFTWARE: Decision Making in Health and Medicine: Integrating Evidence and Values (Paperback) by Myriam Hunink, <u>2nd edition</u>, Cambridge University Press; Book (December 8, 2014) 1978-1107690479. <i>The first edition, while available, lacks some key information contained in the second edition so we ask that you purchase the second edition. The OHSU Library has some access to the digital texts so you may want to check this first if you don't want to own the copy.</i></p> <p>Software: Student version of TreeAge Pro Suite (www.treeage.com/shop) which will cost \$55 to download and is good for 6 months for use with student activities.</p>
<p>BMI 540/640</p>	<p>Computer Science and Java Programming Hribar</p> <p>Required text:</p> <p>To Be Announced.</p>

<p>BMI 544/644</p>	<p>Databases Lieberman</p> <p>Required Textbook: <i>"Databases Illuminated, Third Edition"</i> Catherine M. Ricardo, PhD Susan D. Urban, PhD Jones & Bartlett Learning 2017 SBN-13: 9781284056945 ISBN-10:1284056945</p>
<p>BMI 546/646</p>	<p>Software Engineering Cohen</p> <p>REQUIRED TEXTBOOK(S): Software Engineering, <u>10th Edition</u>, Sommerville, Addison-Wesley, 2015. ISBN 0133943038. Available on Amazon.com as an ebook as well as hardcover.</p>
<p>BMI 548/648</p>	<p>Human Computer Interaction in Biomedicine Chiang/Hribar</p> <p>Required: We are no longer requiring a textbook for this course, but will instead assign readings from articles and webpages. You may find the recommended textbooks helpful, but they are not required.</p> <p>Recommended:</p> <p>"User Interface Design and Evaluation" by Debbie Stone, Caroline Jarrett, Mark Woodroffe and Shailey Minocha (Morgan Kaufmann, 2005).</p> <p>"Don't Make Me Think Revisited: A Common Sense Approach to Web and Mobile Usability" by Steve Krug. (New Riders, 2014).</p> <p>"The Design of Everyday Things: Revised and Expanded Edition" by Donald Norman. (Basic Books, 2013).</p>
<p>BMI 549/649</p>	<p>Health Information Privacy & Security TBD</p> <p>Required: Information Security in Healthcare: Managing Risk, Terrell W. Herzig, Ed; HIMSS, 2010 ISBN: 978-0-9821070-2-7 Available from http://marketplace.himss.org/acct618b/Default.aspx?tabid=57</p>
<p>BMI 550/650</p>	<p>BCBI: Algorithms Jacobs</p> <p>TEXTBOOKS: Required Compeau, P and Pevzner P. Bioinformatics Algorithms An Active Learning Approach 3rd Edition Note: We will augment this text with papers from primary literature for topics not covered in the text.</p> <p><u>Additional Reading (Not required)</u></p>

	<p>Di Pierro, Massimo. Annotated Algorithms in Python: with Applications in Physics, Biology, and Finance 2013</p> <p>For non-biologists: Brown, TA. Genomes 2nd Edition (available online) http://www.ncbi.nlm.nih.gov/books/bv.fcgi?rid=genomes.TOC&depth=2</p> <p>For non-computer scientists: Jones NC and P Pevzner. An Introduction to Bioinformatics Algorithms (Computational Molecular Biology) 2004</p>
BMI 551/651	<p>BCBII: Statistical Methods Jacobs</p> <p>TEXTBOOKS: Required: Hastie, Tibshirani and Friedman. The Elements of Statistical Learning: Data Mining, Inference, and Prediction (2009) Second Edition</p> <p>**Order online. Book not available at OHSU bookstore.**</p>
BMI 552/652	<p><i>Research in Bioinformatics Ellis Boudreau</i></p> <p>Optional Text: "The Grant Application Writer's Workbook" ("NIH- New Format") by Stephen W. Russell and David C. Morrison which can be purchased at the following site: http://www.grantcentral.com/.</p>
BMI 552A/652A	<p>Research in Bioinformatics & Computational Biomedicine Boudreau</p> <p>Required Text: The Grant Application Writer's Workbook, available at http://www.grantcentral.com/workbook_nih_sf424_shortened.html</p>
BMI 553/653	<p>Readings in Bioinformatics McWeeney</p> <p>Required: Presentation Zen: Simple Ideas on Presentation Design and Delivery by Garr Reynolds (2011). New Riders Press.</p>
BMI 559/659	<p>Computational Genetics McWeeney</p> <p>TEXTBOOK Required: Human Molecular Genetics, Fourth Edition Authors: Tom Strachan and Andrew Read ISBN-10: 0815345893 ISBN-13: 9780815345893 Publisher: Garland Science; 5th edition</p> <p><u>Non-Required Additional Texts for Reference:</u> Bioinformatics for Geneticists: A Bioinformatics Primer for the Analysis of Genetic Data Author: Michael R Barnes; Wiley; 2nd edition</p>

	Journal articles will also be assigned in class each week.
BMI 560/660	<p>Design and Evaluation in Biomedical Informatics Mohan</p> <p>Required: Practical Research: Planning and Design (12th Edition) Authors: Paul D Leedy and Jeanne Ellis Ormrod Paperback: 408 pages Publisher: Pearson; 12th edition (February 19, 2018) Language: English ISBN-10: 9780134775654 ISBN-13: 978-0134775654 **subject to change, check with instructor prior to purchasing text</p>
BMI 561/661	<p>Qualitative Research Methods Ash</p> <p>Required Reading: Berg, Bruce L and Lune, Howard. Qualitative Research Methods for the Social Sciences, 8th edition. Pearson Education, 2012. ISBN-13: 978-0-205-80938-7 ISBN-10: 0-205-80938-3</p> <p>Crabtree, Benjamin F. and William L. Miller. Doing Qualitative Research, 2nd ed. Sage, 1999. ISBN 0761914986.</p> <p>Ash et al. chapter draft from Friedman and Wyatt's Evaluation Methods in Medical Informatics, 2nd ed. (distributed)</p>
BMI 562/662	<p>Quantitative Research Methods TBD</p> <p>Required: To be announced</p>
BMI 565/665	<p>Bioinformatics Programming and Scripting Mooney No Required Text</p> <p>Suggested Text for Reference: <u>Python for Bioinformatics</u> by Sebastian Bassi. 2nd Edition. CRC Press, 2017. ISBN: 978-1138035263</p>
BMI 567/667	<p>Network Science and Biology Guanming</p> <p>TEXTBOOK:</p>

	<p><u>Required:</u></p> <p>Mark Newman: Networks: An Introduction. Oxford University Press: 2 edition (September 19, 2018). ISBN-10: 0198805098, ISBN-13: 978-0198805090</p>
<p>BMI 569/669 Summer Hybrid</p>	<p>Data Analytics Sikora, Moore, Laderas</p> <p>TEXTBOOKS:</p> <p><u>Required</u></p> <ul style="list-style-type: none"> • Strome, Trevor L. <i>Healthcare Analytics for Quality and Performance Improvement</i>. Wiley, Hoboken, NJ: 2013. ISBN 978-1-118-5196901. • McNeill, Dwight, ed. <i>Analytics in Healthcare and the Life Sciences</i>. International Institute for Analytics, Upper Saddle River, NJ: 2014. ISBN 978-0-13-340733-4. • Few, Stephen. <i>Information Dashboard Design: Displaying Data for At-a-Glance Monitoring</i>. Analytics Press: 2013. ISBN: 978-1-938277-00-6 <p><u>Optional/Recommended:</u></p> <ul style="list-style-type: none"> • Gensinger, Raymond A, ed. <i>Analytics in Healthcare: An Introduction</i>. HIMSS, Chicago: 2014. ISBN 978-1-938904-64-6.
<p>BMI 570/670</p>	<p>Scientific Writing and Communication for Informatics Students Pyle</p> <p>REQUIRED TEXTBOOK(S)</p> <p>1. Alley, Michael. <i>The Craft of Scientific Writing</i>, fourth edition. New York: Springer, 2018. ISBN: 978-1-4419-8287-2</p> <p>2. Alley, Michael. <i>The Craft of Scientific Presentations</i>, second edition. New York: Springer, 2013. ISBN: 1441982787 ISBN-13: 9781441982780</p>
<p>BMI 576/676</p>	<p>Managing Ethics in Bioinformatics Valerius</p> <p>No Textbook required.</p>

BSTA 525

PHPM 524 Introduction to Biostatistics

Required: Pagano M, Gauvreau K. *Principles of Biostatistics*, 2nd Edition, Duxbury Press, Pacific Grove, CA, 2000.

Optional Text: Glantz, SA. *Primer of Biostatistics*, 7th Edition, McGraw-Hill Companies Inc., New York, 2012