

FALL 2009 FINAL BOOKLIST

- 1574 Gary Bronson, **C++ for Engineers and Scientists**, 2010, Cengage Learning.
Optional: Bjarne Stroustrup, The C++ Programming Language, 3rd edition, Addison-Wesley, ISBN 0-201-88954-4.
- 2004 Charles K. Alexander and Matthew N. O. Sadiku, **Fundamentals of Electric Circuits**, 4th edition, McGraw-Hill, 2007. ISBN 9780077263195..
J. G. Tront, **PSpice for Basic Circuit Analysis**, 2nd edition, McGraw-Hill. Softcover with CDROM, 2007. ISBN 9780073263199.
Bundled together: ISBN 9780073479231.
Recommended: Duane C. Hanselman and Bruce L. Littlefield, Mastering Matlab 7, Prentice-Hall, 2005. ISBN 9780131430181.
- 2014 Fleddermann, Bradshaw and Hart, **Engineering Professionalism**. Custom published. ISBN 9780536421104.
[Writing Guidelines for Engineering and Science Students. Http://www.writing.eng.vt.edu](http://www.writing.eng.vt.edu)
- 2074 J. G. Tront, **PSpice for Basic Circuit Analysis**, 3rd edition, McGraw-Hill. Softcover with CDROM, 2007. ISBN 9780073263199.
Robert W. Hendricks, **Lab-in-a-Box: Introductory Experiments in Electric Circuits**, 3rd edition, John Wiley, 2007 ISBN 978044879.
Recommended: Duane C. Hanselman and Bruce L. Littlefield, Mastering Matlab 7, Prentice-Hall. 2005. ISBN 9780131430181.
- 2204 D. A. Neamen, **Microelectronics Circuit Analysis and Design**, 3rd edition, 2007. McGraw-Hill. ISBN 9780072523621.
J. G. Tront, **PSpice for Basic Circuit Analysis**, McGraw-Hill, 2007. ISBN 9780073263199.
These two should not be bundled together.
- 2274 ECE Department, **ECE 2274 Lab Manual**. Available on-line.
- 2504 Mano, **Computer System Architecture**, 2005. Prentice-Hall/Pearson Custom Publishing. Packaged with **Logicworks 5**. 2nd custom printing.
- 2524 A. Robbins, **Unix in a Nutshell**, 4th edition, O'Reilly & Associates, 2005. ISBN 9780596100292.
R. L. Schwartz and T. Phoenix, **Learning Perl**, 5th edition, O'Reilly & Associates, 2008. ISBN 9780596520106.
- 2534 **No textbook required.**
- 2574 Carrano and Prichard, **Data Abstraction and Problem Solving with C++: Walls and Mirrors**, 5th edition. Addison-Wesley. ISBN 978032143329.
Optional: Robert Sedgewick, Algorithms in C++, parts 1-4, 3rd edition, Addison-Wesley. ISBN 9780201350883.
- 2704 B. P. Lathi, **Linear Systems and Signals**, 2nd edition, 2005, Oxford University Press. ISBN 9780195158335.
Mathworks, **The Student Edition of Matlab**. Distributed in TORG.

- 3004 Charles K. Alexander and Matthew N. O. Sadiku, **Fundamentals of Electric Circuits**, 4th edition, McGraw-Hill, 2007. ISBN 9780077263195.
- J. G. Tront, **PSpice for Basic Circuit Analysis**, 2nd edition, McGraw-Hill. Softcover with CDROM, 2007. ISBN 9780073263199.
- Bundled together: ISBN 9780073479231.
- Recommended:* Duane C. Hanselman and Bruce L. Littlefield, **Mastering Matlab 7**, Prentice-Hall, 2005. ISBN 9780131430181.
- 3054 Hambley, **Electrical Engineering Principles and Applications**, 4th edition, Prentice-Hall. ISBN 9780131989221.
- 3074 J. G. Tront, **PSpice for Basic Circuit Analysis**, 2nd edition, McGraw-Hill. Softcover with CDROM, 2007. ISBN 9780073263199.
- Robert W. Hendricks, **Lab-in-a-Box: Introductory Experiments in Electric Circuits**, 3rd edition, John Wiley, 2007 ISBN 978044879.
- Recommended:* Duane C. Hanselman and Bruce L. Littlefield, **Mastering Matlab 7**, Prentice-Hall. 2005. ISBN 9780131430181.
- 3105 Hayt and Buck, **Engineering Electromagnetics**, 7th edition, McGraw-Hill. ISBN 9780072524956.
- 3106 Hayt and Buck, **Engineering Electromagnetics**, 7th edition, McGraw-Hill. ISBN 9780072524956.
- 3204 D. A. Neamen, **Microelectronics Circuit Analysis and Design**, 3rd edition, 2007. McGraw-Hill. ISBN 9780072523621.
- J. G. Tront, **PSpice for Basic Circuit Analysis**, McGraw-Hill, 2007. ISBN 9780073263199.
- These two should not be bundled together.
- Students should have from taking 2204.
- 3254 Hambley, **Electrical Engineering Principles and Applications**, 4th edition, Prentice-Hall. ISBN 9780131989221.
Students should have from taking 3054.
- ECE Department. **ECE 3254 Lab Manual**. Available on-line.
- 3274 ECE Department, **ECE 3274 Lab Manual**. Available on-line.
- 3304 Stephen J. Chapman, **Electric Machinery and Power System Fundamentals**, McGraw-Hill. ISBN 9780072291353.
- 3354 ECE Department, **ECE 3354 Lab Manual**. Available on-line.
- 3504 Nelson, Victor, Nagle, Troy, Carroll and Irwin, **Digital Logic Circuit Analysis and Design**, 2nd edition, Prentice-Hall. ISBN 9780134638942.
- WinCUPL/WinSIM**. Available to the students.
- 3534 **No textbook required. COURSE CANCELED.**
- 3574 Alan Ezust and Paul Ezust, **An Introduction to Design Patterns in C++ with Qt4**. Prentice-Hall, 1st edition. ISBN 9780131879058.
- 3614 Lathi and Ding, **Modern Digital and Analog Communication Systems**, 4th edition, Oxford University Press, 2009.

- 3704 B. P. Lathi, **Linear Systems and Signals**, 2nd edition, 2005, Oxford University Press. ISBN 9780195158335. Students should have from taking 2704.
- 4104 David M. Pozar, **Microwave Engineering**, John Wiley. **Course canceled.**
- 4134 Joseph C. Palais, **Fiber Optic Communications**, 5th edition, 2004, Prentice Hall.
- 4154 Carlowica and Lopez, **Storms from the Sun – The Emerging Science of Space Weather**, The Joseph Henry Press, Washington, DC.
- 4164 Misra and Enge, **Global Positioning Systems: Signals, Measurements, and Performance**, 2nd edition. Ganga-Jamuna Press.
- 4205 Sergio Franco, **Design with Operational Amplifiers and Analog Integrated Circuits**, McGraw-Hill, 2005. ISBN 9780072320848.
- 4220 Razavi, **Design of Analog CMOS Integrated Circuits**, McGraw-Hill, 2001. ISBN 0072380322.
- 4224 Robert W. Erikson and Dragan Maksimovic, **Fundamentals of Power Electronics**, 2nd edition, 2001, Springer Science & Business Media, Inc. ISBN 0792372700.
- 4234 James D. Plummer, Michael D. Deal and Peter B. Griffin, **Silicon VLSI Technology: Fundamentals, Practice and Modeling**, Prentice-Hall. ISBN 0130850373. Cross-listed with MSE.
- 4304 **No textbook required.**
- 4334 J. D. Glover and M. S. Sarma, **Power System Analysis and Design**, Brook Cole Thomson Learning, 4th edition. ISBN 9780534548841.
- 4405 Norman Nise, **Control Systems Engineering**, 5th edition with CD. John Wiley. ISBN 9780471794752.
Mathworks, **The Student Edition of MatLab**. Latest edition.

Control Systems Toolbox.

- 4500 L. Null and J. Lobur, **The Essentials of Computer Organization and Architecture**, 2nd edition, 2006. ISBN 0763737690. Jones and Bartlett Publishers.
- 4504 John L. Hennessy and David A. Patterson, **Computer Architecture: A Quantitative Approach**, 4th edition, 2007. Morgan Kaufmann.
VTEL from NOVA
- 4514 Samir Palnitkar, **Verilog HDL**, 2nd edition, Prentice-Hall. ISBN 9780130449115.
- 4520 Laung-Terng Wang, Cheng-Wen Wu and Xiaoqing Wen, **VLSI Test Principles and Architectures**, 2006. Morgan Kaufmann, ISBN 0123705975.

Optional:

- Niraj Jha and Sandeep Gupta, **Testing of Digital Systems**, Cambridge University Press, 2003. ISBN 0521773563.
- Miron Abramovici, Melvin A. Greuer, Arthur D. Friedman, **Digital Systems Testing & Testable Design**, IEEE. ISBN 0780310624.
- 4524 Stuart J. Russell and Peter Norvig, **Artificial Intelligence: A Modern Approach**, 2nd edition, Prentice-Hall.

Reference Only:

Alex Martelli, *Python in a Nutshell*, 2003, O'Reilly.

4530 No textbook required. Architecture simulators as specified by the instructor.

4534 **No textbook required.**

4540 Weste and Harris, *CMOS VLSI Design, A Circuits and Systems Perspective*, 3rd edition, 2004. Addison-Wesley. ISBN 0321149017.

4564 David Makofske, Michael J. Donahoo and Kenneth L. Calvert, *TCP/IP Sockets in C#: Practical Guide for Programmers*, 2004, Morgan Kaufmann. ISBN 0124660517.

4605 **Notes** available on-line.

For Reference Only:

Krauss, Bostian and Raab, *Solid State Radio Engineering*, John Wiley, 1990. ISBN 047103018X.

4624 J. G. Proakis and D. G. Manolakis, *Digital Signal Processing: Principles, Algorithms, and Applications*, 4th edition, Prentice-Hall, 2006. ISBN 9780131873742.

4634 Lathi and Ding, *Modern Digital and Analog Communication Systems*, 4th edition, Oxford University Press, 2009.

4664 **Notes and Handouts** provided by professor.

4675 **Radio Engineering Lab**

Quadrille lined (5 sqs/in) spiral bound notebook such as National Brand 3-209. Others would be National Brand 33-688, Boorum 09-9870, Vernon McMillan 09-9870.

5104G (VTEL course from Egypt)

David M. Pozar, *Microwave Engineering*, John Wiley.

5105 R. F. Harrington, *Time-Harmonic Electromagnetic Fields*, IEEE Press.

5144 T.-C. Poon and T. Kim, *Engineering Optics with MATLAB*, World Scientific. ISBN 9812568727.

5200 Jasprit Singh, *Electronic and Optoelectronic Properties of Semiconductor Structures*, Cambridge University Press, 2003. ISBN 052182379X. (Cross-listed with MSE)

5204 **Instructor notes.**

5205 Dieter K. Schroder, *Semiconductor Material and Device Characterization*, 2006, 3rd edition. John Wiley. ISBN 0471739065.

5224 **Instructor notes.**

5254 **No textbook required.**

5334 ????????

5504 David E. Culler & Jaswinder Pal Singh, *Parallel Computer Architecture, A Hardware/Software Approach*, Morgan-Kaufman, 1999.

5505 Laung-Terng Wang, Cheng-Wen Wu and Xiaoqing Wen, *VLSI Test Principles and Architectures*, 2006. Morgan Kaufmann, ISBN 0123705975.

Optional:

- Niraj Jha and Sandeep Gupta, Testing of Digital Systems, Cambridge University Press, 2003. ISBN 0521773563.
- Miron Abramovici, Melvin A. Greuer, Arthur D. Friedman, Digital Systems Testing & Testable Design, IEEE. ISBN 0780310624.
- 5524 **Richard O. Duda, Peter E. Hart and David G. Stork, Pattern Classification, 2nd edition, Wiley-Interscience. ISBN 0471056693.**
- 5530 **Course canceled**
- 5544 Stephen B. Wicker, Error Control Systems for Digital Communication and Storage, Prentice-Hall, 1994. **Out of print.**
- 5546 Christian Piguet (Editor), Low-Power Electronics Design, CRC Press. ISBN 0849319412. **Course canceled.**
- 5550G **MENA Only - Ravindran**
Giorgio C. Buttazzo, Hard Real-Time Computing Systems: Predictable Scheduling Algorithms and Applications, Springer-Verlag. 2nd edition. 2005.
- 5554 L. G. Shapiro, G. C. Stockman, Computer Vision, Prentice Hall, 2001. ISBN 0130307965.
(VTEL – NOVA too)
- 5560 **William Stallings, Cryptography and Network Security – Principles and Practices, 4th edition, Prentice-Hall.**
- 5564 ????????
- 5565 **James F. Kurose and Keith W. Ross, Computer Networking: A Top-Down Approach Featuring the Internet, Addison-Wesley, 5th edition. ISBN 978-0-13-607967-5. CGEP COURSE – Cross-listed with CS.**
- 5604 W. H. Tranter, Shanmugan, Rappaport, Kosbar, Principles of Communication Systems Simulation With Wireless Applications, Prentice-Hall.
- 5605 **Alberto Leon-Garcia, Probability & Random Processes for Electrical Engineering, 3rd edition, 2008, Addison-Wesley.**
- 5655 **Haykin and Moher, Modern Wireless Communication, Prentice Hall, 2005. ISBN 0-13-022472-3. CGEP Course.**
- 5674 Jeffrey H. Reed, Software Radio, A Modern Approach to Radio Design, 2002. Prentice-Hall.
- 5704 W. J. Rugh, Linear Systems Theory, 2nd edition, Prentice-Hall, 1996.
- 5984 **MIT Only. (Information Technology Security and Trust – Randy Marchany)**
Ed Skoudis, CounterHack Reloaded: A Step by Step Guide to Computer Attacks and Effective Defenses, 2nd edition, Prentice Hall. ISBN 0131481045.
- 5984 Multiprocessor Programming – VT MENA only - Ravindran
Maurice Herlihy and Nir Shavit, The Art of Multiprocessor Programming, Morgan Kaufman, 2008. ISBN 978-0123705914.
- 6104 **No textbook required.**
- 6124 **M. N. O. Sadilu, Numerical Techniques in Electromagnetics, 3rd edition, CRC Press, 2009. ISBN 978-1-42006-309-7.**
- 6204 ????????
- 6304 Peter W. Sauer and M. A. Pai, Power System Dynamics and Stability, Prentice-Hall, 1998. ISBN 0-13-678830-0.
VTEL from NOVA

