

SPRING 2010 FINAL BOOKLIST

- 1574 Gary Bronson, **C++ for Engineers and Scientists**, 2010, Cengage Learning, 3rd edition. ISBN 13:978-0-324-78643-9.
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 978-0558-27344-6.
[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**, 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 978-0-470-474341.
Recommended: Duane C. Hanselman and Bruce L. Littlefield, Mastering Matlab 7, Prentice-Hall. 2005. ISBN 9780131430181.
- 2204 R. Jaeger and T. Blalock, **Microelectronic Circuit Design**, 3rd edition, McGraw-Hill, 2007. ISBN 0073309486.
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.
- 2500 David A. Patterson and John L. Hennessy, **Computer Organization and Design: The Hardware/Software Interface**, 4th edition, Morgan Kaufmann. ISBN 978-0-12-374493-7..
- 2504 Mano, **Computer System Architecture**, 2005. Prentice-Hall/Pearson Custom Publishing. Packaged with **Logicworks 5**. 2nd custom printing. ISBN: 978-0-536-1-155-6.
- 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.
- 2984 **(Applied Electrical Theory – ME students only)**
Allan R. Hambley, **Electrical Engineering Principles and Applications**, 4th edition, Prentice-Hall. ISBN 9780131989221.
Recommended: J. G. Tront, **PSPice for Basic Circuit Analysis**, 2nd edition, McGraw-Hill. Softcover with CDROM, 2007. ISBN 9780073263199.
- 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 T. L. Floyd, **Electric Circuits Fundamentals**, 8th edition, Prentice Hall. 2009. ISBN 013507293X.
- 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.

- 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. ISBN 978-019-533145-5.
- 3704 B. P. Lathi, **Linear Systems and Signals**, 2nd edition, 2005, Oxford University Press. ISBN 9780195158335. Students should have from taking 2704.
- 4114 Stutzman and Thiele, **Antenna Theory and Design**, 2nd edition, 1998. John Wiley.
- 4124 John S. Seybold, Introduction to RF Propagation, John Wiley, ISBN 13 978-0-471. (VTEL to NOVA, Dahlgren, Lynchburg, Mary Washington)**
- 4144 Ting-Chung Poon, **Optical Scanning Holography with MATLAB**, Springer, 2007. ISBN: 978-0-387-36826-9. <https://www.worldscibooks.com/physics/6166.html> **COURSE CANCELED.**
- 4206 Sergio Franco, **Design with Operational Amplifiers and Analog Integrated Circuits**, McGraw-Hill, 2005. ISBN 9780072320848.
- 4214 Anderson, Betty Lisa and Anderson, Richard L., **Fundamentals of Semiconductor Devices**, McGraw-Hill, 2005. ISBN 0072369779.
- 4244 No textbook required.
- 4284 Laboratory instructions.
- 4304 No textbook required.
- 4354 Stanley H. Horowitz and Arun G. Phadke, Power system Relaying, 3rd edition. John Wiley. ISBN 978-0-470-05712-4. (VTEL to Richmond)**
- 4364 On-line course. No textbook required.**
- 4374 Material provided by instructor.
- 4406 Norman Nise, **Control Systems Engineering**, 5th edition with CD. John Wiley. ISBN 9780471794752.
- 4500 L. Null and J. Lobur, The Essentials of Computer Organization and Architecture, 2nd edition, 2006. ISBN 0763737690. Jones and Bartlett Publishers.**
- 4514 Samir Palnitkar, **Verilog HDL**, 2nd edition, Prentice-Hall. ISBN 9780130449115.
- 4534 **No textbook required.**
- 4550 Giorgio C. Buttzaao, **Hard Real-Time Computing systems: Predictable Scheduling Algorithms and Applications**, 2nd edition, Springer. ISBN 0387231374.
- 4560 Ed Skoudis with Tom Liston, **Counter Hack Reloaded**, 2nd edition, Prentice-Hall. ISBN 0131481045.
- 4570 Supplemental material and tutorials on protocols and technologies, development tools, and performance measurement Tools are provided on a web site.
- 4574 S. Salleh, A. Zomaja, S. Bakar, **Computing for Numerical Methods Using Visual C++**, 2007, John Wiley. **Not ordered through Bookstore; students will download.**

- 4606 Krauss, Bostian and Raab, **Solid State Radio Engineering**, 2nd edition, John Wiley, 1980. ISBN 047103018X.
Course Canceled.
- 4614 Behrouz A. Forouzan, **Data Communications and Networking**, 4th edition, 2007, McGraw-Hill.
ISBN: 13:978-0-07-296775-3 or 10:0-07-296775-7.
- 4624 J. G. Proakis and D. G. Manolakis, **Digital Signal Processing: Principles, Algorithms, and Applications**, 4th edition, Prentice-Hall, 2006. ISBN 9780131873742. **COURSE CANCELED**
- 4644 Pratt, Bostian, Allnutt, **Satellite Communications**, 2nd edition, 2003. John Wiley. ISBN 047137007X.
- 4674 **S-Parameters Lab**
Lab handouts and notes provided by the instructor. **COURSE CANCELED**
- 4676 **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.
- 4704 Spong, Hutchinson and Vidyasagar, **Robot Dynamics and Control**, John Wiley, 1989. ISBN 047161243X.
- 4984 (Digital Image Processing – Jason Xuan – VTEL from NOVA)**
C. Gonzalez & R. E. Woods, Digital Image Processing, Prentice Hall, 2008. ISBN 13:978-0-13-168728-8.
- 4984 (Network Simulation – Dr. T. Hou)**
Sheldon M. Ross, **Simulation**, 4th edition, Elsevier, 2006. ISBN: 978-0-12-598063-0.
- 5106** R. F. Harrington, **Time-Harmonic Electromagnetic Fields**, IEEE Press.
- 5164 Kivelson and Russell, Introduction to Space Physics, Cambridge University Press, 1995.**
- 5220 Thomas H. Lee, **The Design of CMOS Radio-Frequency Integrated Circuits**, 2nd edition, Cambridge University Press.
ISBN 0521835399. **COURSE CANCELED.**
- 5234** ???????
- 5244G (Advanced Semiconductor Lab) Same room as 4244 (Will be added once approved).**
- 5274** ????????
- 5314 A. J. Wood and B. F. Wollenberg, Power Generation, Operation, and Control, John Wiley, 1996, 2nd edition. (VTEL from NOVA)**
- 5504 David E. Culler & Jaswinder Pal Singh, Parallel Computer Architecture, A Hardware/Software Approach, Morgan-Kaufman, 1999. (VT MENA ONLY)**
- 5506 Hatchtel, Gary D., and Somenzi, Fabio, **Logic Synthesis and Verification Algorithms**, 2006. Kluwer Academic Publishers.
ISBN 9780387310046.
- 5514 No book required. Professor will use papers, etc. (VTEL from NOVA to VT Campus, Lynchburg, VT MENA)**
- 5530 ??????
- 5534 No books required. Study materials will be handed out at each lecture.
Optional: G. Demicheli, **Synthesis and Optimization of Digital Circuits**, McGraw-Hill, 1994. ISBN 0070163332.
Book out of print. No book required.
- 5545 Weste & Harris, **CMOS VLSI Design**, 3rd edition, Addison-Wesley, 2005.

- 5550G (Real-Time Systems – same room as 4550)
 Giorgio C. Buttazzo, Hard Real-Time Computing Systems: Predictable Scheduling Algorithms and Applications, Springer-Verlag, 2nd edition. 2005. (VTEL to NOVA, Dahlgren)
- 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. **Cross-listed with CS.**
- 5566 (CGEP Course)
 Jochen Schiller, Mobile Communications, 2nd edition, 2003, Addison-Wesley. ISBN 0321123816.
- 5574 (Large Software DEV Engr – Same room as 4574)
 S. Salleh, A. Zomaja, S. Bakar, Computing for Numerical Methods Using Visual C++, 2007, John Wiley.
 Not ordered through Bookstore; students will download.
- 5604 W. H. Tranter, Shanmugan, Rappaport, Kosbar, Principles of Communication Systems Simulation With Wireless Applications, Prentice-Hall. (VT MENA ONLY)
- 5605 Alberto Leon-Garcia, Probability & Random Processes for Electrical Engineering, 3rd edition, 2008, Addison-Wesley. (VT MENA ONLY)
- 5620 **COURSE CANCELED.**
- 5654 (CGEP Course) *Recommended:*
 John Proakis, Digital Communications, 5th edition, 2008. McGraw-Hill. ISBN 9780071263788.
- 5656 Haykin and Moher, Modern Wireless Communication, Prentice Hall, 2005. ISBN 0-13-022472-3. (VTEL to NOVA, Dahlgren)
- 5664 T. S. Rappaport, Wireless Communications: Theory and Practice, 2nd edition. Prentice-Hall, 2002. ISBN 0130422320.
- 5714 **Professor will distribute notes.**
 (VTEL from NOVA)
- 5724 Madan M. Gupta, Liang Jin and Noriyasu Homma, Static and Dyanmic Neural Networks, Wiley Interscience, 2003. ISBN 0471219487. (Also VT MENA) **COURSE CANCELED HERE ON OUR CAMPUS.**
- 5984 (Secure Hardware Design – Schaumont)
No textbook required. Instructor will provide a collection of relevant conference and journal papers.
- 5984 (Information Technology Security and Trust II – MIT only – on-line)
 William Stallings and Lawrie Brown, Computer Security: Principles and Practice, Prentice-Hall, 2008. ISBN-10:0-13-600424-5.
- 6104 (Nonlinear Optics – Yong Xu)
No textbook required. Lecture notes and published papers provided.
- 6104 (Computational Techniques for Space Plasmas – Wayne Scales)
 C. K. Birdsall and A. B. Langdon, Plasma Physics via Computer Simulation, Taylor and Francis, 2004. ISBN-10: 0750310251.

Reference Texts:

J. Buchner, C. Dum and M. Scholer, Space Plasma Simulation, Springer. ISBN-10: 3540006982.

T. Tajima, **Computational Plasma Physics with Applications to Fusion and Astrophysics**, Westview Press, 2004.
ISBN-10:0813342112.

R. W. Hockney and J. W. Eastwood, **Computer Simulation Using Particles**, Taylor and Francis, 1989.
ISBN-10:0852743920.

6116 **Optional: Stutzman and Thiele, Antenna Theory and Design, 2nd edition, John Wiley.
(VTEL to NOVA, Dahlgren, Lynchburg, VT MENA)**

6314 ???????

6604 **(Advanced Topics in Comm – Detection & Estimation Theory)
H. Vincent Poor, An Introduction to Signal Detection and Estimation, 2nd edition, Springer, 1994.
(VTEL from NOVA)**

6744 P. Dorato, C. T Abdallah, and V. Cerone. **Linear Quadratic Control: An Introduction**, Krieger Publishing,
Melbourne, FL, 1995. **(Course will be added once approved).**

6774 Instructor's notes. MatLAB
(Course will be added once approved).

6984 (Advanced CMOS Devices – Dr. M. Orłowski)
No textbook required. Chapters from books on reserve at the VT Newman Library as well as technical papers from literature will be used.