

Recommended Books

• 1st Semester

1. Applied Mathematics-1

Text:

- [T1] B. S. Grewal, "Higher Engineering Mathematics" Khanna Publications.
[T2] R. K. Jain and S.R.K. Iyengar, "Advanced Engineering Mathematics" Narosa Publications.

References:

- [R1] E. kresyzig, "Advance Engineering Mathematics", Wiley publications
[R2] G.Hadley, "Linear Algebra" Narosa Publication
[R3] N.M. Kapoor, "A Text Book of Differential Equations", Pitambar publication.
[R4] Wylie R, "Advance Engineering mathematics", McGraw-Hill
[R5] Schaum's Outline on Linear Algebra, Tata McGraw-Hill
[R6] Polking and Arnold, "Ordinary Differential Equation using MatLab" Pearson.

2. Applied Physics-1

You won't find the whole syllabus in one book try to attend the classes and take notes if possible !!

Text Books:

- [T1] Arthur Beiser, 'Concepts of Modern Physics', [McGraw-Hill], 6th Edition 2009
[T2] A. S.Vasudeva, 'Modern Engineering Physics', S. Chand, 6th Edition, 2013.

Reference Books

- [R1] A. Ghatak 'Optics', TMH, 5th Edition, 2013
[R2] G. Aruldas 'Engineering Physics' PHI 1st Edition, 2010.
[R3] Fundamentals of Optics : Jenkins and White , Latest Edition
[R4] C. Kittle, "Mechanics", Berkeley Physics Course, Vol.-I.
[R5] Feynman "The Feynman lectures on Physics Pearson Volume 3 Millennium Edition, 2013
[R6] Uma Mukhrji 'Engineering Physics' Narosa, 3rd Edition, 2010.
[R7] H.K. Malik & A. K. Singh 'Engineering Physics' [McGraw-Hill], 1st Edition, 2009.

3. Manufacturing Processes

Text Books:

- [T1] Manufacturing Process by Raghuvanshi.(Dhanpat Rai and Co.)
[T2] Manufacturing Technology by P.N.Rao (TMH publications)

Reference Books:

- [R1] **Workshop Technology by Hazra-Chowdhary** (Most Recommended)
[R2] Production Engineering by R.K.Jain (Khanna Publishers)
[R3] Workshop Technology by Chapman (Elsevier Butterworth-Heinemann)
[R4] Fundamentals of Modern Manufacturing by Mikell P. Groover (Wiley India Edition)
[R5] Manufacturing Processes for Engineering Materials by Kalpakjian and Schmid (Pearson)

4. Electrical Technology

Text Books:

- [T1] J.B. Gupta (Recommended by seniors)
[T2] S.N Singh, "Basic Electrical Engineering" PHI India Ed 2012
[T3] Chakrabarti, Chanda, Nath "Basic Electrical Engineering" TMH India", Ed 2012.

Reference Books:

- [R1] William Hayt "Engineering Circuit Analysis" TMH India Ed 2012
[R2] Giorgio Rizzoni "Principles and Application of Electrical Engineering" Fifth Edition TMH India.

5. Human Values and Professional Ethics

Text Books:

- [T1] Professional Ethics, R. Subramanian, Oxford University Press.
- [T2] Professional Ethics & Human Values: S.B. Srivasthva, SciTech Publications (India) Pvt. Ltd. New Delhi.
- [T3] Professional Ethics & Human Values: Prof. D.R. Kiran, TATA Mc Graw Hill Education.

References:

- [R1] Success Secrets for Engineering Students: Prof. K.V. SubbaRaju, Ph.D., Published by SMARTstudent. (Do read if you have time!).
- [R2] Ethics in Engineering Mike W. Martin, Department of Philosophy, Chapman University and Roland Schinzinger, School of Engineering, University of California, Irvine.
- [R3] Human Values: A. N. Tripathy (2003, New Age International Publishers)
- [R4] Value Education website, <http://www.universalhumanvalues.info>[16]
- [R5] Fundamentals of Ethics, Edmond G. Seebauer & Robert L. Barry, Oxford University Press.
- [R6] Human Values and Professional Ethics: R. R. Gaur, R. Sangal and G. P. Bagaria, Eecel Books (2010, New Delhi). Also, the Teachers' Manual by the same author.

6. **Fundamentals of Computing**

Text:

- [T1] **Peter Norton, Introduction to computers, Sixth Edition Tata McGraw Hill (2007).**
- [T2] Andrews Jean, A+Guide to Managing & Maintaining Your PC, Cengage Publication 6/e

References:

- [R1] Anita Goel, Computer Fundamentals, Pearson Education.
- [R2] Joiner Associates Staff, Flowcharts: Plain & Simple: Learning & Application Guide , Oriel Inc
- [R3] <http://www.openoffice.org/why/> [R4] <http://www.libreoffice.org/get-help/documentation/>

7. **Applied Chemistry**

Text Books:

- [T1] **P. C. Jain & Monika Jain, Engineering Chemistry, Latest edition, Dhanpat Rai Publishing Co., 2002.(More than enough)**
- [T2] P. Mathew, Advance Chemistry, 1 & 2 Combined Editions, Cambridge University Press, 2003.

Reference Books:

- [R1] P. W. Atkins and J. De Paula, Atkins' Physical Chemistry, Oxford, 2010.
- [R2] T. Engel and P. Reid, Physical Chemistry, Pearson Education, 2013.
- [R3] K. Qanungo, Engineering Chemistry, PHI Learning Private Limited, New Delhi, 2009.
- [R4] O. G. Palanna, Engineering Chemistry, Tata McGraw Hill Education Private Limited, 2012.
- [R5] D. A. Jones, Principles and Prevention of Corrosion, Prentice Hall, 2nd Edition, 1996.
- [R6] H. K. Chopra and A. Parmar, Engineering Chemistry-A Text Book, Narosa Publishing House, 2012.
- [R7] S. Chawla, Engineering Chemistry-All India Edition, Dhanpat Rai & Co., 2003.
- [R8] R. Gadi, S. Rattan and S. Mohapatra, Environmental Studies, S.K. Kataria & Sons, 2nd Edition 2009.

• **2nd Semester**

1. **Applied Mathematics-2**

Text:

- [T1] B.S. Grewal
- [T2] E. kresyzig, "Advance Engineering Mathematics", Wiley publications
- [T3] Michael Greenberg, "Advance Engineering mathematics", Pearson.

References:

- [R1] R.K. Jain and S.R.K. Iyengar, "Advanced Engineering Mathematics "Narosa Publications
- [R2] B. S. Grewal, "Higher Engineering Mathematics" Khanna Publications.

- [R3] S. Ponnusamy, "Foundation of Complex Analysis" Narosa Publication
 [R4] G.B. Thomas and R. N. Finny "Calculus and Analytic Geometry" Addison Wesley/ Narosa
 [R5] Wylie R, "Advance Engineering mathematics", McGraw-Hill
 [R6] M. Spiegel, "Schaum's Outline on Laplace Transform, Tata McGraw-Hill

2. **Applied Physics-2**

Text Books:

- [T1]. Arthur Beiser 'Concepts of Modern Physics', [McGraw-Hill], 6th Edition 2009.
 [T2]. A. S. Vasudeva, 'Modern Engineering Physics', S. Chand, 6th Edition, 2013.

Reference Books

- [R1]. Richard Wolfson 'Essential University Physics' Pearson, 1st edition, 2009.
 [R2]. H.K. Malik & A. K. Singh 'Engineering Physics' [McGraw-Hill], 1st Edition, 2009.
 [R3]. C. Kittel, 'Mechanics', Berkeley Physics Course, Vol.-I. Latest Edition.
 [R4]. Irving Kaplan 'Nuclear Physics' Latest Edition.
 [R5]. John R. Taylor, Chris D. Zafirator and Michael A. Dubson, 'Modern Physics For Scientists and Engineers', PHI, 2nd Edition.
 [R6]. D.J. Griffith, 'Introduction to Electrodynamics', Prentice Hall, Latest Edition.

3. **Electronic Devices**

TEXT BOOKS

1. S. Salivahanan, N. Suresh Kr. & A. Vallavaraj, "Electronic Devices & Circuit", Tata McGraw Hill, 2008
2. Millman, Halkias and Jit, "Electronic devices and circuits" McGraw Hill
3. Boylestad & Nashelsky, "Electronic Devices & Circuits", Pearson Education, 10TH Edition.

REFERENCE BOOKS

1. Sedra & Smith, "Micro Electronic Circuits" Oxford University Press, VI Edition
2. Robert T. Paynter, "Introducing Electronic Devices & Circuits", Pearson Education, VII Edition, 2006

4. **Introduction to Programming**

Text Books:

- [T1] Herbert Schildt, "C: The Complete Reference", OsbourneMcgraw Hill, 4th Edition, 2002.
 [T2] Forouzan Behrouz A. "Computer Science: A Structured Programming Approach Using C, Cengage Learning 2/e

Reference Books:

- [R1] Kernighan & Ritchie, "C Programming Language", The (Ansi C version), PHI, 2/e
 [R2] K.R Venugopal, "Mastering C", TMH
 [R3] R.S. Salaria "Application Programming in C" Khanna Publishers 4/e
 [R4] Yashwant Kanetkar "Test your C Skills", BPB Publications
 [R5] <http://www.codeblocks.org/> [R6] <http://gcc.gnu.org/>
 [R7] Programming in ANSI C, E. Balagurusamy; Mc Graw Hill, 6th Edition.

5. **Engineering Mechanics**

Text Books:

- T1. Engg Mechanics by A.K. Tayal (Umesh Publications).
 T2. Engg Mechanics by Basudeb Bhattacharya (Oxford university Press)

Reference Books:

- R1. Engg Mechanics by Irving H. Shames (Pearson publications).
 R2. Engg Mechanics by U.C. Jindal (Galgotia Publications).
 R3. Engg Mechanics by Beer & Johnston (TMH).
 R4. Engg Mechanics by K.L. Kumar (TMH).
 R5. Engg Mechanics by Sadhu Singh (Khanna Publishers).

6. Communication Skills

TEXT BOOKS

[T1] Technical Communication: Principles and practice (OUP), (Meenakshi Raman and Sangeeta Sharma) OXFORD UNIVERSITY PRESS

[T2] Communication Skills for Engineers, Murli Krishna, Pearson.

[T3] Wren and Martin: High School English Grammar and Composition; S. Chand

[T4] Exploration of Ideas; An Anthology of Prose: Orient Blackswan.

REFERENCE BOOKS:

[R1] Professional Communication: Aruna Koneru, MCGRAW HILLS EDUCATION PVT. LTD

[R2] Wren and Martin: High School English Grammar and Composition; S. Chand

[R3] Advanced English Grammar and Composition: Gurudas Mukherjee & Inidbar Mukherjee; (ANE BOOKS PVT. LTD.)

7. Environmental Studies

Text Books:

[T1] E. Barucha, Textbook of Environmental Studies for Undergraduate Courses, Universities Press (India) Pvt. Ltd., 2005.

[T2] S. Chawla, A Textbook of Environmental Studies, McGraw Hill Education Private Limited, 2012

References Books:

[R1] G. T. Miller, Environmental Science, Thomas Learning, 2012

[R2] W. Cunningham and M. A. Cunningham, Principles of Environment Science: Enquiry and Applications, Tata McGraw Hill Publication, N. Delhi, 2003.

[R3] R. Rajagopalan, Environmental Studies: From Crisis to Cure, 2nd Edition, Oxford University Press, 2011.

[R4] A.K. De, Environmental Chemistry, New Age Int. Publ. 2012,,

[R5] A. Kaushik and C.P. Kaushik, Perspectives in Environment Studies, 4th Edition, New Age International Publishers, 2013 .

[R6] Environmental Engineering by Gerard Kiely, Tata McGraw-Hill Publishing Company Ltd., New Delhi, 2010.

• 3rd Semester

1. Applied Mathematics-3

Text Books:

[T1] R.K. Jain and S.R.K. Iyengar, "Numerical methods for Scientific and Engineering Computation", New Age Publishing Delhi-2014.

[T2] B. S. Grewal, "Higher Engineering Mathematics" Khanna Publications, 2014 Edition.

Reference Books:

[R1] E. kresyzig, "Advance Engineering Mathematics", Wiley publications

[R2] P. B. Patil and U. P. Verma, "Numerical Computational Methods", Narosa

[R3] Partial Differential Equations" Schaum's Outline Series, McGraw Hill. [R4] Michael Greenberg, "Advance Engineering mathematics", Pearson.

[R5] Schaum's Outline on Fourier Analysis with Applications to Boundary Value Problem, Tata McGrawHill.

2. Analog Electronics-1

Text Books:

[T1] Boylestad & Nashelsky, "Electronic Devices & Circuit Theory" PEARSON PUBLICATION. [T2] Salivahanan, Suresh Kumar, Vallavaraj, "Electronic devices and circuits" TMH, 1999.

[T3] J. Millman and Halkias, “Integrated Electronics, Analog & Digital Circuits & Systems” TMH – 2000.

Reference Books:

[R1] Sedra & Smith, “Micro Electronic Circuits” Oxford University Press, 2000

[R2] B.Kumar & Shail Bala Jain, “Electronic Devices And Circuits” PHI

[R3] David A Bell, “Electronic Devices and Circuits” , Oxford University Press, 2000.

[R4] Albert Malvino, David J.Bates, “Problems and Solutions in Basic Electronics” ,TMH.

3. Switching Theory and Logic Design

Text Book:

[T1] Zyi Kohavi, “Switching & Finite Automata Theory”, TMH, 2nd Edition

[T2] Morris Mano, Digital Logic and Computer Design”, Pearson

[T3] R.P. Jain, “Modern Digital Electronics”, TMH, 2nd Ed,

Reference Books:

[R1] A Anand Kumar, “Fundamentals of Digital Logic Circuits”, PHI

[R2] Taub ,Helbert and Schilling, “Digital Integrated Electronics”, TMH

4. Electronic Instruments and Measurements

Text Books:

[T1] A. K. Shawney - Electrical & Electronic Measurement & Instruments, Dhanpat Rai & Sons Publication

[T2] H.S. Kalsi, “Electronic Instrumentation” Tata McGraw-Hill.

Reference Books:

[R1] W. D. Cooper, “Modern Electronics Instrumentation & Measurement Techniques” PHI, 1998.

[R2] E. W. Gloding and F. C. Widdis - Electrical Measurements and measuring Instruments, Wheeler Publishing, fifth Edition.

[R3] Reissland, M. U. “Electrical Measurements: Fundamentals, Concepts, Applications”, New age International (P) Limited, Publishers.

5. Data Structures

Text Books:

[T1] R. F. Gilberg, and B. A. Forouzan, “Data structures: A Pseudocode approach with C”, Thomson Learning.

[T2] A .V. Aho, J . E . Hopcroft, J . D . Ulman “Data Structures and Algorithm”, Pearson Education.

Reference Books:

[R1] S. Sahni and E. Horowitz, “Data Structures”, Galgotia Publications.

[R2] Tanenbaum: “Data Structures using C”, Pearson/PHI.

[R3] T .H . Cormen, C . E . Leiserson, R .L . Rivest “Introduction to Algorithms”, PHI/Pearson.

[R4] A.K.Sharma, “Data Structures”, Pearson

[R5] Ellis Horowitz and Sartaz Sahani “Fundamentals of Computer Algorithms”, Computer Science Press.

6. Signals and Systems

Text Books:

[T1] Alan V.Oppenheim, Alan S.Willsky, S.Hamid Nawab, “Signals & Systems”, 2nd edition, Pearson Education, 1997.

[T2] Simon Haykin and Barry Van Veen, “Signals and Systems”, John Wiley, 1999.

Reference Books:

[R1] M.J.Roberts, “Signals and Systems Analysis using Transform Method and MATLAB”, TMH 2003.

[R2] Tarun kumar rawat “signals and systems “, Oxford University Press, Incorporated, 2010

[R3] A. Anand kumar, “signals and systems” 3rd edition , PHI

- [R4] Ramesh Babu and R.Anandanatrajan ,”Signals and system”, 4th edition Sci Tech ,2013
 [R5] Moman .H. Hays, “Digital Signal Processing”, Schaum’s outlines, Tata McGraw-Hill2004.
 [R6] John G.Proakis and Dimitris G.Manolakis, “Digital Signal Processing, Principles, Algorithms and Applications”, 3rd edition. PHI, 2000.

• **4th Semester**

1. **Applied Mathematics-4**

Text Books:

- [T1]B. S. Grewal, “Higher Engineering Mathematics”, Khanna Publications.
 [T2]N.M. Kapoor, “Fundamentals of Mathematical Statistics”, Pitambar Publications

References Books:

- [R1]E. Kresyzig,” Advance Engineering Mathematics”, Wiley publications
 [R2]Miller and Freund, “Probability and statistics for Engineers” , PHI
 [R3]Gupta and Kapoor, “Fundamentals of Mathematical Statistics” Sultan Chand and Sons [R4] G. Hadley, “Linear Programming”, Narosa.
 [R5] Schaum’s Outline on “Probability and Statistics” Tata McGraw-Hill
 [R6] Gupta and Manmohan, “Problems in Operations Research”, Sultan Chand and Sons.
 [R7] R.K. Jain and S.R.K. Iyengar,”Advanced Engineering Mathematics” Narosa Publications.

2. **Analog Electronics-2**

Text Books:

- [T1] S Salivahanan, V S Kanchana Bhaaskaran, “Linear Integrated Circuits” TMH.
 [T2] Op - Amps And Linear Integrated Circuits, Ramakant A Gayakwad,PHI.

Reference Books:

- [R1] D. Roy Choudhary, Shail B Jain, “Linear Integrated Circuits” New Age Publisher, 1999.
 [R2] M.Rashid , “Microelectronic Circuit”, Cengage Learning Publication.
 [R3] Sedra & Smith, “Micro Electronic Circuits” Oxford University Press, 2000
 [R4] David A Bell, “Operational Amplifiers and Linear IC’s”, PHI.

3. **Network Analysis and Synthesis**

Text Books:

- [T1] W. H. Hayt “Engineering Circuit Analysis” TMH Eighth Edition
 [T2] Valkenburg, “Network analysis” PHI,

Reference Books

- [R1] S Salivahanan, “Circuit Theory”, Vikas Publishing House 1st Edition 2014
 [R2] D. R. Choudhary, “Networks and Systems” New Age International, 1999.
 [R3] Bhise, Chadda, Kulshreshtha, “ Engineering network analysis and filter design” Umesh Publication, 2000.
 [R4] Kuo, “Network analysis and synthesis” John Weily and Sons, 2nd Edition.
 [R5] Allan H Robbins, W.C.Miller “Circuit Analysis theory and Practice”, Cengage Learning Pub 5th Edition 2013
 [R6] Bell “Electric Circuit” Oxford Publications 7th Edition

4. **Communication Systems**

Text Books

- [T1] John G. Proakis & Masoud Salehi, “Communication System Engineering”, Pearson Education.
 [T2] Haykin, S., “Communication Systems”, John Wiley (2009) 4th ed.

Reference Books

- [R1] Taub, H., “Principles of Communication Systems”, McGraw-Hill (2008) 3rd ed.
 [R2] Kennedy, G., “Electronic Communication Systems”, McGraw-Hill (2008) 4th ed.

- [R3] V. Chandra Sekar “Analog Communication”, Oxford University Press, Incorporated, 2010
 [R4] John G Proakis, M.Salehi and G.Bauch “Modern Communication System Using MATLAB” Cengage Learning, 3rd edition, 2013
 [R5] J. C. Hancock, “An Introduction to the Principles of Communication Theory”, TMH, 1998.
 [R6] Peebles, “Probability and Stochastic Process” Prentice Hall; 3 edition

5. Electromagnetic Field Theory

Text Books:-

- [T1] Matthew N. O. Sadiku , “Elements of Electromagnetics”, Oxford University Press
 [T2] E. C. Jordon, K. G. Balman, “Electromagnetic Waves & Radiation System” PHI – 2nd Edition

Reference Books:

- [R1] William H. Hayt, “Engineering Electromagnetics”, TMH
 [R2] J.D. Kraus, “Electromagnetics”, TMH
 [R3] David K. Cheng,” Field and Wave Electromagnetic”, 2nd Edition, Pearson Education Asia,2001
 [R4] John R. Reitz, “Foundations of Electromagnetic Theory”. Pearson

6. Computer Organization and Architecture

Text Books:

- [T1] J. D. Carpinelli, “Computer Systems Organization and Architecture”, Pearson Education, 2006.
 [T2] J. P. Hayes, “Computer Architecture and Organization”, McGraw Hill, 1988.

Reference Books:

- [R1] J. L Hennessy and D.A. Patterson,“Computer Architecture: A quantitative approach”, Morgan Kaufman, 1992.
 [R2] W. Stallings, “Computer organization and Architecture”, PHI, 7th ed, 2005.
 [R3] B.Parhami,“Computer Architecture: From Microprocessors to Supercomputers”, Oxford University Press, 2006.

• 5th Semester

1. Communication Skills for Professionals

Text Books:

- [T1] Anna Dept. Of English. Mindscapes: English for Technologists & Engineers PB. New Delhi: Orient Blackswan.
 [T2] Farhathullah, T. M. Communication Skills for Technical Students. Orient Blackswan, 2002.

References Books:

- [R1] Masters, Ann and Harold R. Wallace. Personal Development for Life and Work, 10th Edition.Cengage Learning India, 2012.
 [R2] Institute of Electrical and Electronics Engineers. IEEE Editorial Style Manual. IEEE, n.d. Web. 9 Sept. 2009.
 [R3] Sethi and Dhamija. A Course in Phonetics and Spoken English. PHI Learning, 1999.
 [R4] Khera, Shiv. You Can Win. New York: Macmillan, 2003.

2. Digital Communication

Text Books:

- [T1] Simon Haykin, “Communication Systems” John Wiley & Sons, Inc 4th Edition.
 [T2] Taub Schilling, “Principles of Communication Systems” TMH, 2nd Edition

Reference Books:

- [R1] George Kennedy, “Communication System” TMH – 4th Edition
 [R2] B. P. Lathi, “Modern Digital and Analog Communication System” Oxford University Press – 3rd Edition.
 [R3] Digital Communications by John G.Proakis; McGraw Hill.

3. Microprocessors and Microcontrollers

Text Books:

- [T1] Muhammad Ali Mazidi, "Microprocessors and Microcontrollers", Pearson, 2006
- [T2] Douglas V Hall, "Microprocessors and Interfacing, Programming and Hardware" Tata McGraw Hill, 2006.
- [T3] Ramesh Gaonkar, "MicroProcessor Architecture, Programming and Applications with the 8085", PHI

References Books:

- [R1] Muhammad Ali Mazidi, Janice Gillispie Mazidi, Rolin D. MCKinlay "The 8051 Microcontroller and Embedded Systems", 2nd Edition, Pearson Education 2008.
- [R2] Kenneth J. Ayala, "The 8086 Microprocessor: Programming & Interfacing The PC", Delmar Publishers, 2007.
- [R3] A K Ray, K M Bhurchandi, "Advanced Microprocessors and Peripherals", Tata McGraw Hill, 2007.
- [R4] Vaneet Singh, Gurmeet Singh, "Microprocessor and Interfacing", Satya Prakashan, 2007.

4. Control Systems

Text Books:

- [T1] B. C. Kuo, "Automatic control system", Prentice Hall of India, 7th edition 2001.
- [T2] Nagraath Gopal "Control Systems Engineering -Principles and Design" New Age Publishers

Reference Books:

- [R1] Norman S. Nise, "Control systems engineering" John Wiley & Sons (Asia) Singapore.
- [R2] Raymond T. Stefani, Design of Feedback Control System, Oxford University Press.
- [R3] K. Ogata, "Modern control engineering", Pearson 2002.
- [R4] S. P.Eugene Xavier, "Modern control systems", S. Chand & Company.
- [R5] M. Gopal "Control Systems-Principles and Design" TMH 4th Edition 2012

5. Digital System Design

Text Books:

- [T1] Douglas Perry , "VHDL" 4th Edition, TMH
- [T2] Stephen Brown, Zvonko Vranesic, "Fundamentals of Digital Logic with VHDL design", TMH.

Reference Books:

- [R1] Charles. H.Roth , "Digital System Design using VHDL", PWS (1998)
- [R2] John F. Wakerley , "Digital Design Principles And Practices" ,Pearson Education
- [R3] Navabi Z , "VHDL-Analysis & Modelling of Digital Systems", McGraw Hill.
- [R4] William I. Fletcher, "An Engineering Approach To Digital Design", Prentice Hall
- [R5] Bhasker, "A VHDL Primer", Prentice Hall 1995.

6. Industrial Management

Text Books:

- [T1] Sinha, P.R.N., Sinha I.B. and Shekhar S.M.(2013), Industrial Relations, Trade Unions and Labour Legislation. Pearson Education
- [T2] Chary, S.N. (2012), Production and Operations Management. Tata McGraw Hill Education.

Reference Books:

- [R1] Srivastava, S.C. (2012), Industrial Relations and Labour Laws, Vikas Publishing
- [R2] Shankar R (2012), Industrial Engineering and Management. Galgotia Publications
- [R3] Telsang, M. (2006), Industrial Engineering and Production Management. S.Chand
- [R4] Thukaram, Rao (2004), M.E. Industrial Management. Himalaya Publishing House

• 6th Semester

1. Microwave Engineering

Text Books:

- [T1] S.Y Liao, "Microwave devices and Circuits" Pearson publications
 [T2] R.E Collin, "Foundation for Microwave Engineering", Wiley Publications.
 Reference Books: [R1] D.M Pozar, "Microwave Engineering", Wiley Publications.
 [R2] M.L. Sisodia, "Microwave Active Devices", New Age International Publications.
 [R3] G.S Raghuvanshi, "Microwave Engineering" Cengage publications.

2. Information Theory and Coding

Text Books:

- [T1] Simon Haykins, "Communication Systems", 4th edition Wiley, 2001.
 [T2] J G Proakis, "Digital Communications", Mc Graw Hill, 2001.

Reference Books:

- [R1] T M Gover, J M Thomos, "Elements of Information Theory", Wiley, 1999.
 [R2] Arijit Saha, Nilotpal Manna, Surajit Mandal, "Information Theory, Coding and Cryptography", Pearson Education, 2013.
 [R3] Schaum's Outlines, Analog and Digital Communications, Second Edition.
 [R4] Amitabha Bhattacharya, "Digital Communication", TMH 2006.
 [R5] J. H. Van Lint.. "Introduction to Coding Theory", Springer -Verlag.

3. Digital Signal Processing

Text Books:

- [T1] Oppenheim & Schafer, Digital Signal Processing, PHI-latest edition.
 [T2] Proakis and Manolakis, Digital Signal Processing, PHI Publication

Reference Books:

- [R1] S. K. Mitra, Digital Signal Processing, TMH edition 2006
 [R2] Johny. R. Johnson, Introduction to Digital Signal Processing, PHI-latest edition
 [R3] R.Babu ,Digital Signal Processing , Scitech Publication.

4. VLSI Design

Text Books:

- [T1] Basic VLSI Design - Pucknell Douglas A., Eshraghian Kamran, PHI Learning Pvt Limited, 2013.
 [T2] N. Weste and D. Harris, "CMOS VLSI Design: A Circuits and Systems Perspective - 4th Edition", Pearson Education, India.

Reference Book:

- [R1] S. M. Kang, Y. Lebiebici, "CMOS digital integrated circuits analysis & design" Tata McGraw Hill, 3rd Edition.
 [R2] Digital Integrated Circuit Design- Ken Martin, Oxford University Press
 [R3] The MOS Transistor- Yaniiis Tsividis and Colin Mcandrew, Oxford University Press, 2013
 [R4] J. M. Rabaey, "Digital Integrated Circuits" PHI Learning Pvt Limited, India
 [R5] J. P. Uyemura, "Introduction to VLSI Circuits and Systems", John Wiley & Sons, Inc., New York, NY
 [R6] Neelam Sharma, "Digital Logic Design", Ashirwad Publication 2013-14

5. Data Communication and Networks

Text Books:

- [T1] A. S. Tannenbum, D. Wetherall, "Computer Networks", Prentice Hall, Pearson, 5 th Ed
 [T2] Behrouz A. Forouzan, "Data Communications and Networking", Tata McGraw-Hill, 4th Ed

Reference Books:

- [R1] Fred Halsall, "Computer Networks", Addison – Wesley Pub. Co. 1996.
 [R2] Larry L, Peterson and Bruce S. Davie, "Computer Networks: A system Approach", Elsevier, 4 th Ed
 [R3] Tomasi, "Introduction To Data Communications & Networking", Pearson 7th impression 2011
 [R4] William Stallings, "Data and Computer Communications", Prentice Hall, Imprint of Pearson, 9

th Ed.

[R5] Zheng , “Network for Computer Scientists & Engineers”, Oxford University Press

[R6] Data Communications and Networking: White, Cengage Learning

6. Antenna and Wave Propagation

Text Books:

[T1] A. S. Tannenbum, D. Wetherall, “Computer Networks”, Prentice Hall, Pearson, 5 th Ed

[T2] Behrouz A. Forouzan, “Data Communications and Networking”, Tata McGraw-Hill, 4th Ed

Reference Books:

[R1] Fred Halsall, “Computer Networks”, Addison – Wesley Pub. Co. 1996.

[R2] Larry L, Peterson and Bruce S. Davie, “Computer Networks: A system Approach”, Elsevier, 4 th Ed

[R3] Tomasi, “Introduction To Data Communications & Networking”, Pearson 7th impression 2011

[R4] William Stallings, “Data and Computer Communications”, Prentice Hall, Imprint of Pearson, 9 th Ed.

[R5] Zheng , “Network for Computer Scientists & Engineers”, Oxford University Press [R6] Data Communications and Networking: White, Cengage Learning

• 7th Semester

1. Embedded System

Text Book:

[T1] Design with PIC Microcontrollers, John B. Peatman, Pearson Education Asia, 2002

[T2] ARM System Developer’s Guide: Designing and Optimizing System Software, Andrew N. Sloss, Dominic Symes, Chris Wright, Morgan Kaufman Publication, 2004.

[T3] Computers as components: Principles of Embedded Computing System Design, Wayne Wolf, Morgan Kaufman Publication, 2000

References Books:

[R1] The Design of Small-Scale embedded systems, Tim Wilmshurst, Palgrave2003

[R2] Embedded System Design , Marwedel ,Peter , Kluwer Publishers , 2004.

2. Optoelectronics and Optical Communication

Text Books:

[T1] J. Gowar, “Optical Communication System”, IEEE Press – 2nd Edition.

[T2] R.P.Khare, "Fiber Optics and Opto Electronics" Oxford Publication

Reference Books:

[R1] Optical Information Processing – F. T. S. Yu – Wiley, New York, 1983

[R2] G. P. Agrawal, Fiber optic Communication Systems, John Wiley & sons, New York, 1992

[R3] A. Ghatak, K. Thyagarajan, “An Introduction to Fiber Optics”, Cambridge University Press

[R4] J. H. Franz & V. K. Jain, “Optical Communication Components & Systems”, Narosa Publish, 2013

[R5] John M. Senior, “Optical Fiber Communications”, Pearson, 3rd Edition, 2010.

3. Wireless Communication

Text Books:

[T1] Raj Pandya, “Mobile & Personnel communication Systems and Services”, Prentice Hall India, 2001.

[T2] Theodore S. Rappaport, “Wireless Communication- Principles and practices,” 2nd Ed., Pearson Education Pvt. Ltd, 5th Edition, 2008.

Reference Books:

[R1] T.L.Singhal “Wireless Communication”, Tata McGraw Hill Publication.

[R2] Jochen Schiller, “Mobile communications,” Pearson Education Pvt. Ltd., 2002.

[R3] Yi –Bing Lin & Imrich Chlamatac, “Wireless and Mobile Networks Architecture,” John Wiley & Sons, 2001.

[R4] Lee, W.C.Y., "Mobile Cellular Telecommunication", 2nd Edition, McGraw Hill, 1998.

[R5] Smith & Collins, "3G Wireless Networks," TMH, 2007

[R6] Schiller, Jochen, "Mobile Communications", 2nd Edition, Addison Wesley.

4. Advanced Digital Signal Processing

Textbooks:

[T1] Simon Haykin, Adaptive Filter Theory, 4th Edn. Pearson Education

[T2] John G. Proakis, Dimitris G. Manolakis, Digital Signal Processing Principal Algorithm & Application, 3rd Edition, Pearson Education, 2002

Reference Book:

[R1] Bernard Widrow and Samuel D. Stearns, Adaptive Signal Processing, Pearson Education

[R2] Monson H. Hayes, Statistical Digital Signal processing and Modeling, John Wiley and Sons, Inc., Singapore, 2002.

5. Introduction to MEMS

Text books:

[T1] Vijay K. Varadan K.J. Vinoy and K.A. Jose, "RF MEMS and Their Applications", John Wiley USA

[T2] Mohamed Gad-el-Hak, "MEMS Design and Fabrication Edited", Taylor and Francis.

Reference Books:

[R1] Mohamed Gad-el-Hak, "MEMS Introduction and Fundamentals Edited", Taylor and Francis

[R2] Christian C. Enz and Andreas Kaiser, "MEMS-based Circuits and Systems for Wireless Communication", Springer

[R3] P Rai Choudhury, "MEMS and MOEMS Technology and applications" –PHI Learning Pvt Ltd, India

[R4] Sergey Y.Yurish and Maria Teresa S.R. Gomes, "Smart Sensors and MEMS", Kluwer Academic Publisher

[R5] Mohamed Gad-el-Hak, Taylor and Francis MEMS Applications, The MEMS handbook .

6. Advance VLSI Design

Text books:

[T1] P. R. Gray, P. J. Hurrt, S. H. Lweic, RoG. Meyer, "Analysis and Design of Analog Integrated Circuits" John Wiley and Sons Inc. 2001.

[T2] P. E. Allen, D. R. Holberg, "CMOS Analog Circuit Design" Oxford University Press 2002.

Reference Books:

[R1] B. Razavi, "Design of Analog CMOS Integrated Circuits", TMH – 2002.

[R2] R. J. Baker, H. W. Li and D. E. Boyce, "CMOS Circuit Design, Layout and Simulation", PHI

[R3] Ken Martin, "Digital Integrated Circuit Design", Oxford University Press.

[R4] Yaniiis Tsividis and Colin Mcandrew, "The MOS Transistor", Oxford University Press, 2013

[R5] Geiger, Allen, Strader "VLSI Design Techniques for Analog and Digital Circuits" McGraw Hill, 1990

7. Biomedical Instrumentation

Text Books:

[T1] Joseph J. Carr & John M. Brown, "Introduction to Biomedical Equipment Technology", Pearson.

[T2] Shakti Chatterjee, "Textbook of Biomedical Instrumentation System", Cengage Learning

Reference Books:

[R1] R.S.Khandpur, "Hand book of Biomedical Instrumentation", TMH

[R2] Walter Welko- Witz and Sid Doutsch, "Biomedical Instruments: Theory and Design" Wiley

[R3] Lesile Cromwell, Fred J. Weibell & Erich A. Pfeiffer, "Biomedical Instrumentation & Measurements", PHI

8. PLC & SCADA Systems

Text Books:

[T1] Frank D. Petruzella “Programmable Logic Controllers”, McGraw-Hill Book Company.

[T2] John w. Webb and Ronald A. Reis, “Programmable Logic Controllers”, PHI

Reference Books:

[R1] Stuart A.Boyer “Supervisors Control and Data Acquisition”, ISA

[R2] William I. Fletcher “An Engineering Approach to Digital Design”, PHI.

[R3] Simpson, Colin “Programmable Logic Controllers”, Englewood Cliffs NJ PHI.

[R4] Gray Dunning, “Introduction to Programmable Logic Controllers”, Delmar Thompson Learning

[R5] Stenerson, John “Fundamentals Logic Controllers Sensors, & Communications”, Englewood Cliffs, NJ, 1993. Prentice Hall.

[R6] Programmable Logic Controllers, W.Bolton, Elsevier

9. Power Electronics

Text Books:

[T1] M.H. Rashid, “Power Electronics: Circuits, Devices and Applications” Pearson Publications.

[T2] Daniel W. Hart, “Power Electronics “Tata McGraw-Hill

[T3] H.C. Rai, “Power Electronics Devices, Circuits, Systems and Application”, Galgotia Publications, 3rd Edition

References Books:

[R1] Singh, Kanchandani, “Power Electronics”, Tata McGraw-Hill.

[R2] Ned Mohan, Tore M. Undeland and Robbins, “Power Electronics: Converters, Applications and Design” Wiley India Publication

[R3] V R Moorthi, “Power Electronics: Devices, Circuits and Industrial Applications”, Oxford Publication.

[R4] Kassakian, Schlecht, Verghese, “Principles of Power Electronics” , Pearson Publications

[R5] M.S. Jamil Asghar, “Power Electronics” PHI Publication

[R6] P. S. Bimbhra “Power Electronics”, Khanna Publishing.

10. RF Devices and Circuits

Text Books:

[T1] S Y Liao, Microwave Devices and Circuits, Pearson Publications.

[T2] R.E. Collin, “Foundation for Microwave Engineering”, Wiley Publications

[T3] Davis, "Radio frequency circuit design", Wiley publication

Reference Books

[R1] Reinhold Ludwig and Gene Bogdanvo, “RF Circuit design Theory and applications”, Pearson Publications.

[R2] D.M Pozar, “Microwave Engineering”, Wiley Publication

11. Database Management Systems

Text Books:

[T1] Abraham Silberschatz, Henry F. Korth, S. Sudharshan, “Database System Concepts”, 5th Edition, Tata McGraw Hill, 2006

[T2] Elmsari and Navathe, “Fundamentals of Database Systems” , 4th Ed., A. Wesley, 2004

References Books:

[R1] C.J.Date, A.Kannan, S.Swamynathan, “An Introduction to Database Systems”, 8th Edition, Pearson Education, 2006.

[R2] J. D. Ullman, “Principles of Database Systems”, 2nd Ed., Galgotia Publications, 1999.

12. Renewable Energy Resources

Text Books:

- [T1] Tiwari and Ghosal, “Renewable Energy Resources: Basic Principle & Application”, Narosa Pub.
 [T2] S N Bhadra ,D, Kastha, 'Wind Electrical Systems" Oxford Publication 2014

References Books:

- [R2] John Twidell, “Renewable Energy Sources”, Taylor and Francis
 [R3] Godfrey Boyle, “Renewable Energy: Power for a Sustainable Future”, Oxford University Press
 [R4] Ewald F. Fuchs, “Power Conversion of Renewable Energy Systems”, Springer
 [R5] B. H. Khan, “Non Conventional Energy”, Tata McGraw Hill
 [R6] D P kothari ,”Wind energy System and applications” Narosa Pub 2014

13. **RADAR and Navigation**

Textbooks:

- [T1] Merrill I. Skolnik, “Introduction to Radar Systems”, Tata McGraw-Hill (3rd Edition) 2003.
 [T2] N.S.Nagaraja, “Elements of Electronic Navigation Systems”, 2nd Edition, TMH, 2000.

Reference books:

- [R1] Gottapu Sasi Bhushana Rao, “Microwave and RADAR Engineering”. Pearson publication.
 [R2] Peyton Z. Peebles, “Radar Principles”, Johnwiley, 2004
 [R3] J.C Toomay, “Principles of Radar”, 2nd Edition –PHI, 2004

14. **Project Management**

Text Books:

- [T1] Shtub, Bard and Globerson, Project Management: Engineering, Technology, and Implementation, Prentice Hall, India
 [T2] P. K. Joy, Total Project Management: The Indian Context, Macmillan India Ltd.

Reference Books:

- [R1] Cleland and King, VNR Project Management Handbook.
 [R2] Lock, Gower, Project Management Handbook.
 [R3] Wiest and Levy, Management guide to PERT/CPM, Prentice Hall. India
 [R4] Horald Kerzner, Project Management: A Systemic Approach to Planning, Scheduling and Controlling, CBS Publishers.
 [R5] S. Choudhury, Project Scheduling and Monitoring in Practice.
 [R6] John M Nicholas, Project Management for Business and Technology: Principles and Practice, Prentice Hall, India.
 [R7] N. J. Smith (Ed), Project Management, Blackwell Publishing.
 [R8] Robert K. Wysocki, Robert Back Jr. and David B. Crane, Effective Project Management, John Wiley.
 [R9] Jack R Meredith and Samuel J Mantel, Project Management: A Managerial Approach, John Wiley.

15. **Economics for Engineers**

Text Books:

- [T1] Sullivan, Wicks, Koelling, “Engineering Economy”, Pearson Education
 [T2] S.C. Sharma and T.R. Banga, “Industrial organization and engineering economics”

References Books:

- [R1] Riggs, Bedworth and Randhwa, “Engineering Economics”, McGraw Hill Education India.
 [R2] C. T. Horngreen, “Cost Accounting”, Pearson Education India.
 [R3] R. R. Paul, “Money banking and International Trade”, Kalyani Publuisher, New-Delhi.
 [R4] Engineering Economics by Tahir Hussain, University Science Press, 2010
 [R5] Engineering Economics by Dr. Rajan Mishra – University Science Press, 2009
 [R6] H.L. Ahuja, “Principle of Economics”, S. Chand
 [R7] Khan, Siddiquee, Kumar, “Engineering Economy” Pearson Education

16. **Grid Computing**

Text Books:

[T1] Maozhen Li, Mark Baker, The Grid Core Technologies, John Wiley & Sons.

[T2] Joshy Joseph & Craig Fellenstein, "Grid Computing", Pearson 2004.

[T3] C.S. R. Prabhu, "Grid and Cluster Computing", PHI 2014

Reference Books:

[R1] Ian Foster & Carl Kesselman, The Grid 2 – Blueprint for a New Computing Infrastructure, Morgan Kaufman – 2004.

[R2] Barry Wilkinson, "Grid Computing", CRC Press.

[R3] Joel M. Crichlow, "Distributed Systems – Computing over Networks", PHI, 2014.

[R4] RajKumar Buyya, "High Performance Cluster Computing – Volume I Architectures and Systems", Pearson, 2013.

17. Parallel Computing

Text Books:

[T1] Introduction to Parallel Computing by Ananth Grama, Anshul Gupta, George Karypis, Vipin Kumar, Pearson Publication.

[T2] Advance computer Architecture by Kai Hwang under Tata McGraw Hill publications.

[T3] Introduction to Parallel Processing: Algorithms and Architectures By Behrooz Parhami in Springer Shop. Reference Books:

[R1] Introduction to Parallel Processing by P. Ravi Prakash, M. Sasikumar, Dinesh Shikhare By PHI

[R2] Fundamentals of Parallel Processing by Jordan Harry, Alaghband Gita, PHI Publication

[R3] Introduction to Parallel Programming by Steven Brawer.

[R4] Parallel Computers – Architecture and Programming by V. Rajaraman And C. Siva Ram Murthy.

18. Sociology and Elements of Indian History for Engineers

Text Books:

[T1] Desai, A.R. (2005), Social Background of Indian Nationalism, Popular Prakashan.

[T2] Giddens, A (2009), Sociology, Polity, 6th Edition

Reference Books:

[R1] Guha, Ramachandra (2007), India After Gandhi, Pan Macmillan

[R2] Haralambos M, RM Heald, M Holborn, (2000), Sociology, Collins

19. Selected Topics in ECE

Textbook:

[T1] SystemVerilog for Verification by Ben Cohen, Srinivasan Venkataramanan, Ajeetha Kumari [T2] T.S.Rappaport & J.C.Liberti, Smart Antennas for Wireless Communication, Prentice Hall (PTR), 1999.

Reference Books:

[R1] R.Janaswamy, Radio Wave Propagation and Smart Antennas for Wireless Communication, Kluwer, 2001.

[R2] Verilog HDL: A Guide to Digital Design and Synthesis, by Samir Palnitkar Prentice Hall Professional, 2003

• 8th Semester

1. Human Values and Professional Ethics-2

Text Books:

[T1] Professional Ethics, R. Subramanian, Oxford University Press.

[T2] Professional Ethics & Human Values: Prof. D.R. Kiran, TATA Mc Graw Hill Education.

References Books:

[R1] Human Values and Professional Ethics: R. R. Gaur, R. Sangal and G. P. Bagaria, Eecel Books (2010, New Delhi). Also, the Teachers' Manual by the same author

- [R2] Fundamentals of Ethics, Edmond G. Seebauer & Robert L. Barry, Oxford University Press
- [R3] Values Education: The paradigm shift, by Sri Satya Sai International Center for Human Values, New Delhi.
- [R4] Professional Ethics and Human Values – M.Govindrajan, S.Natarajan and V.S. Senthil Kumar, PHI Learning Pvt. Ltd. Delhi
- [R5] A Textbook on Professional Ethics and Human Values – R.S. Naagarazan – New Age International (P) Limited, Publishers New Delhi.
- [R6] Human Values & Professional Ethics- S B Gogate- Vikas publishing house PVT LTD New Delhi.
- [R7] Mike Martin and Roland Schinzinger, “Ethics in Engineering” McGraw Hill
- [R8] Charles E Harris, Micheal J Rabins, “Engineering Ethics, Cengage Learning
- [R9] PSR Murthy, “Indian Culture Values and Professional Ethics”, BS Publications
- [R10] Caroline Whitback< Ethics in Engineering Practice and Research, Cambridgs University Press
- [R11] Charles D Fleddermann, “Engineering Ethics”, Prentice Hall.
- [R12] George Reynolds, “Ethics in Information Technology”, Cengage Learning
- [R13] C, Sheshadri; The Source book of Value Education, NCERT
- [R14] M. Shery; Bhartiya Sanskriti, Agra (Dayalbagh)

2. Satellite Communication

Text Books:

- [T1] Dennis Roddy, “Satellite Communication”, McGraw Hill International.
- [T2] T. Pratt, “Satellite Communication”, John Willy and Sons (Asia) Pvt. Ltd.

Reference Books:

- [R1] T. Ha, “Digital Satellite Communication”, McGraw Hill.
- [R2] Bruce R. Elbert, “The Satellite Communication Applications Handbook” ,Artech House Boston.
- [R3] Mark R. Chartrend, “Satellite Communication” Cengage Learning
- [R4] Handbook of Satellite Communication, Wiley.

3. Adhoc and Sensor Networks

Text Books:

- [T1] Siva Ram Murthy, C. and Manoj,B. S., Adhoc Wireless Networks Architectures and Protocols, Prentice Hall, PTR, (2004) 2nd ed.
- [T2] Perkins, Charles E., Ad hoc Networking, Addison Wesley, (2000) 3rd ed.

Reference Books

- [R1] Toh, C. K., Ad hoc Mobile Wireless Networks Protocols and Systems, Prentice Hall, PTR, (2001) 3rd Edition.
- [R2] Pahlavan, Kaveh., Krishnamoorthy, Prashant., Principles of Wireless Networks, - A united approach - Pearson Education, (2002) 2nd ed.
- [R3] Wang X. and Poor H.V., Wireless Communication Systems, Pearson education, (2004) 3rd ed.
- [R4] Schiller Jochen., Mobile Communications, Person Education – 2003, 2nd ed.
- [R5] Carlos De Moraes Cordeiro and Dharam P Agrawal, “Adhoc and Sensor Networks- Theory & Applications”, 2nd Ed, Cambridge Univ Press India Ltd

4. Consumer Electronics

Text Books:

- [T1] R. R. Gulati, “Modern Television Practice” New Age International, 2nd Edition.
- [T2] S. P. Bali, “Consumer Electronics” Pearson Education, 1st Edition.

Reference Books:

- [R1] A. Dhake, “Television & Video Engineering” TMH – 2nd Edition.
- [R2] R.R. Gulati, “Monochrome & Colour Television” New age International Publisher, 2nd Edition. [R3] R.G. Gupta, “Audio & Video Systems” TMH – 2nd Edition.

4. Digital Image Processing

Text Books:

- [T1] Rafael C. Gonzalez & Richard E. Woods, "Digital Image Processing", 3Rd edition, Pearson, 2002.
- [T2] A.K. Jain, "Fundamental of Digital Image Processing", PHI, 1989.

Reference Books:

- [R1] Bernd Jahne, "Digital Image Processing", 5th Ed., Springer, 2002.
- [R2] William K Pratt, "Digital Image Processing: Paks Inside", John Wiley & Sons, 2001.

5. ASIC Design

Text Books:

- [T1] Rafael C. Gonzalez & Richard E. Woods, "Digital Image Processing", 3Rd edition, Pearson, 2002.
- [T2] A.K. Jain, "Fundamental of Digital Image Processing", PHI, 1989.

Reference Books:

- [R1] Bernd Jahne, "Digital Image Processing", 5th Ed., Springer, 2002.
- [R2] William K Pratt, "Digital Image Processing: Paks Inside", John Wiley & Sons, 2001.

6. Mobile Computing

Text Books:

- [T1] J. Schiller, "Mobile Communications", 2nd edition, Pearson, 2011.
- [T2] Raj Kamal "Mobile Computing" Oxford Higher Education, Second Edition, 2012.
- [T3] Dharam Prakash Agrawal and Qing-An Zeng, "Introduction to Wireless and Mobile Systems" 3rd Edition, Cengage learning 2013.

References Books:

- [R1] Asoke K Talukder, Hasan Ahmed, Roopa R Yavagal "Mobile Computing", Tata McGraw Hill, Pub, Aug – 2010
- [R2] Pei Zheng, Larry L. Peterson, Bruce S. Davie, Adrian Farrell "Wireless Networking Complete" Morgan Kaufmann Series in Networking , 2009 (introduction, WLAN MAC)
- [R3] Vijay K Garg "Wireless Communications & Networking" Morgan Kaufmann Series, 2010
- [R4]. M. V. D. Heijden, M. Taylor, Understanding WAP, Artech House.
- [R5]. Charles Perkins, Mobile IP, Addison Wesley.
- [R6]. Charles Perkins, Ad hoc Networks, Addison Wesley.
- [R7]. Uwe Hansmann, Lothar Merk, Martin S. Nicklous, Thomas Stober, "Principles of Mobile Computing", Springer.
- [R8] Evangelia Pitoura and George Samarus, "Data Management for Mobile Computing", Kluwer Academic Press, 1998 [R9] V. Jeyasri Arokiamary, "Mobile Computing", Technical Publications.

7. Introduction to Nanotechnology

Text Books:

- [T1] C. P. Poole and F. J. Owens, "Introduction to NanoTechnology", John Wiley & Sons, 2003.
- [T2] M. A. Ratner and D. Ratner, "Nanotechnology: A gentle introduction to the next big Idea", PHI, 2003.

Reference Books:

- [R1] Rainer Waser, "Nanoelectronics and INformation Technology: Advanced Electronic Materials and Novel Devices", John Wiley & sons, 2005.
- [R2] Jurgen Schulte, "Nanotechnology: Global Strategies, Industry Trends and Applications", John Wiley, 2004.
- [R3] M.A Shah, Tokeer Ahmad, "Principle of Nanoscience and nanotechnology, Narosa Publishing House, India.
- [R4] S.E. Lyshevski, "Nano and Micro Electromechanical Systems Fundamentals of Nano and MicroENGINEERING", 2nd Edition, CRC Press, 2004.

[R5] K.K Chattopadhyay A.N. Banerjee, “Nanoscience and Nanotechnology” PHI learning Pvt limited, Delhi, 2012.

8. GPS and GIS

Text Books:

Note: There is no single textbook for this course.

Suggested Readings:

[T1] Burrough, P.A. and R.A. McDonnell, Principles of Geographic Information System, Oxford University Press, Oxford.

[T2] Chang, K.T., Introduction to Geographic Information System, Tata Mc Graw-Hill, New Delhi.

[T3] Heywood, I. et. al., An Introduction to Geographic Information Systems, Pearson Education, Delhi.

[T4] Clarke, K., Analytical and Computer Cartography. 2nd Ed., Upper Saddle River.

[T5] Garmin Corporation., GPS Guide for Beginners available at: <http://www.garmin.com/manuals/gps4beg.pdf>.

[T6] Lillif, J.C., Datum and Map Projections for remote Sensing, GIS and Surveying. New York : CRC Press.

[T7] Curran, Paul J., Principles of Remote Sensing, Longman, London & New York.

[T8] Lillesand, T. and R. Kiefer, Remote Sensing and Image Interpretation, Wiley, New York.

9. Adaptive Signal Processing

Text Books:

[T1] Adaptive Filter Theory - Simon Haykin, 4th Ed., 2002, Pearson Asia.

[T2] Adaptive Filter – Ali H. Sayeed, Wiley-Blackwell, 2008

Reference Books:

[R1] Adaptive Signal Processing - Bernard Widrow, Samuel D. Stearns, 2005, PE.

[R2] Optimum signal processing: An introduction - Sophocles. J. Orfanidis, 2nd Ed., 1988, McGraw-Hill,

[R3] Adaptive signal processing-Theory and Applications - S. Thomas Alexander, 1986, Springer –Verlag.

[R4] Adaptive Filters – Theory and Applications - B. Farhang-Boroujeny, John Wiley and Sons, 1999.

10. Robotics

Text Books:

[T1] R.K. Mittal, I.J. Nagrath, “Robotics & Control”, Tata McGraw & Hills, 2005.

[T2] Mikell P Groover , Mitchell Weiss “Industrial Robotics :Technology, Programming and Application” Tata McGraw & Hills, 2009.

[T3] Saha, S.K., Introduction to Robotics, 2nd Edition, McGraw-Hill Education, New Delhi, 2014

Reference Books:

[R1] John J. Craig; “Introduction to Robotics Mechanics & Control”, Pearson Education, 2004.

[R2] Robert J. Schilling, “Fundamentals of Robotics, analysis & Control”, Prentice Hall (I) P. Ltd., 2002

[R3] Mark W. Spong, Seth Hutchinson, M. Vidyasagar “Robot Modeling and Control” John Wiley 2nd Ed

[R4] J Srinivasan, R.V. Dukkupati, K. Ramji, “Robotics control & programming”, Narosa.

[R5] Ghosal, Ashitava, “Robotics: Fundamental Concepts and Analysis,” Oxford University Press, 2006

[R6] M. Murray, M., Li, Zexiang, Sastry, S.S., “A Mathematical Introduction to Robotic Manipulation,” CRC Press, 1994

[R7] Tsai, L.W., “Robot Analysis: The Mechanics of Serial & Parallel Manipulators,” Wiley 1999

[R8] Niku, S. B., “Introduction to Robotics: Analysis, Systems, Applications”, Prentice Hall, 2001

11. Computer Graphics and Multimedia

Text Books:

[T1] Donald Hearn and M. Pauline Baker, “Computer Graphics C version”, Second Edition, Pearson

[T2] Ralf Steinmetz & Klara Nahrstedt, "Multimedia Computing Communication & Applications", Pearson

Reference Books:

[R1] C. Foley, VanDam, Feiner and Hughes, "Computer Graphics Principles & Practice", Second Edition

[R2] R. Plastock and G. Kalley, "Theory and Problems of Computer Graphics", Schaum's Series, McGraw Hill, 2nd edition.

[R3] Fred Halsall, "Multimedia Communications Applications, Networks, Protocols & Standards", Pearson

[R4] David F. Rogers, "Procedural elements for computer graphics", McGraw- Hill

12. Next Generation Networks

Text Books:

[T1] Neill Wilkinson, "Next Generation Networks Services, Technologies and Strategies", Wiley.

[T2] Robet Wood, "Next Generation Network Services", Pearson

Reference Books

[R1] Next Generation Telecommunications Network, Parliament office of Science and Technology (Postnote). Dec 2007, No. 296, Ref. <http://www.parliament.uk/briefing-papers/POST-PN-296.pdf>

[R2] Huber, J.F.' " Mobile Next Generation Networks", IEEE Multimedia Vol. 11, Issue I Jan- March 2004.

[R3] J.C. Crimi, "Next Generation Network (NGN) Service", A Telecoolia Technologies white paper; refer www.telecodia.com

[R4] International Conference on Next Generation Networks & Basestations Tackles LTE, WiMAX, Femtocells, Backhaul, Spectrum Re-farming and Also Goes. 'Green'.<http://www.thefreelibrary.com/International+Conference+on+Next+Generation+Networks+%26+Basestations...-a0176872977>

[R5] Carugi, M.; Hirschman, B.; Narita, A., "Introduction to the ITU-T NGN focus group release 1: target environment, services, and capabilities," Communications Magazine, IEEE , vol.43, no.10, pp. 42-48, Oct. 2005 doi: 10.1109/MCOM.2005.1522123 URL:<http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=1522123&isnumber=32552><http://encyclopedia2.thefreedictionary.com/LTE>

[R6] Iti Saha Misra, "Wireless Communication and Networks 3G and beyond", McGraw Hill Edu. (India)

[R7] International Journal of Next - Generation Network (IJNGN), ISSN: 0975-7023 (Online); 0975-7252 (Print); <http://www.airccse.org/journal/ijngn/ijngn>