B. Tech. (SOFTWARE ENGINEERING)

B.Tech. I-Year, I Semester Examination

MA-101 Mathematics – I
1. Calculus and analytic geometry: Thomas/Finney; Narosa.
3. Advanced engineering mathematics: Kreyszig; Wiley.
4. Advanced engineering mathematics; Greenberg; Pearson Education.
5. Advanced engineering mathematics Vol. I & II ; Taneja I.K. International

HU-102 Communication Skills

PH-103 Applied Physics
1. Physics of vibrations and waves by H.J. Pain
2. Concepts of Modern Physics by Authors Beiser
3. Optics by A. Ghatak
4. Berkley Physics Course Vol -- 1

CH-104 Applied Chemistry

EE – 105 Electrical Sciences
4. Relevant Indian Electricity Supply rules & BIS codes.

IT - 106 Fundamentals of Information Technology
2. Introduction to Computers by Peter Norton Tata McGraw-Hill VI Edition
5. Peter Nortans “Introduction to Computers”, TMH.

B.Tech. I year, II Semester Examination

MA- 111 Mathematics-II
1. Advanced engineering mathematics : Jain / Iyenger: Narosa
2. Advanced engineering mathematics : Kreyszig; wiley
3. Advanced engineering mathematics : Greenberg; pearson Education

EN – 112 Environmental Science
5. Bharucha Erach, ‘The Biodiverstiy of India’, Mapin Publishing Pvt. Ltd., Ahmedabad India, mail:mapin@icenet.net.

AS – 113 Engineering Physics
2. Erwin Kaplan, Nuclear Physics.

AS- 114 Engineering Materials
COE–116 Programming Fundamentals

TEXT BOOKS:

REFERENCE BOOKS:

ME–117 Engineering Graphics

BTech. II year, III Semester Examination

SE-201 Object Oriented Programming
Text Books:
1. Patrick Naughton, Herbert Schildt, “The Complete Reference: Java 2”, TMH.
2. C Thomas Wu: “An Introduction to OO programming with Java”, TMH.
Reference Books:
2. Mastering C++ K.R Venugopal Rajkumar, TMH.
4. Maria litvin, Gary litvin, “Programming in C++”, VPH.

SE-202 Analog Electronics
Text Books:
2. Salivahanan, Suresh Kumar, Vallavaraj, “Electronic devices and circuits TMH, 1999
Reference Books:

SE-203: Data structures
Text Books:
3. Tannenbaum, “Data Structures”, PHI

Reference Books
1. R.L. Kruse, B.P. Leary, C.L. Tondo, "Data structure and program design in C", PHI

SE-204 Digital System
Text Books:
1. Digital Fundamentals by Thomas L. Floyd
2. Getting Started in Electronics by Forrest Mims

SE-205 Discrete Mathematics
Text Books:

Reference Books Books:

SE-206 Engineering Economics
B.Tech. II year, IV Semester Examination

SE-211 Database Management System
Text Books:
1. Elmasri, Navathe, “Fundamentals of Database systems”, Addison Wesley
Reference Books:
1. Date C.J., “An Introduction to Database systems”

SE-212 Computer System Organization
Text Books:
2. William Stalling, Computer Organization, PHI
3. Mano, Computer System Architecture, PHI
Reference Books:
1. Vravice, Hamacher & Zaky, Computer Organization, TMH
2. Tannenbaum, Structured Computer Organization, PHI

SE-213-Operating System Design
Text Books:
3. Tannenbaum, “Operating system design and implementation”, PHI.
Reference Books:

SE-214 Algorithm Design and Analysis
Text Books:
Reference Books:
1. Aho ,Ullman “ Principles of Algorithms ”

SE-216 Introduction to Telecommunication
Text Books:
Reference Books:
SE-215-Software Engineering
Text Books:

Reference Books:

B.Tech. III year, V Semester Examination
SE-301 Web Technology
Text Books:
1. Internet and Web Technologies by Raj Kamal, Tata McGraw Hill

Reference Books:
4. PHP and MySQL for Dynamic Web Sites, Ullman, Larry, Peachpit Press.
5. Modeling the Internet and the Web, Pierre Baldi, Paolo Frasconi, Padhraic Smyth, John Wiley and Sons Ltd, ISBN 0470849061

SE-302 Object Oriented Software Engineering
Text Books:

Reference Books:
1 I. Sommerville, “Software Engineering”, Addison Wesley, 2004
SE-303 Theory of Computation

Text Books:
1. Hopcroft, Ullman, “Introduction to Automata Theory, Languages and Computation”, Pearson Education
3. Martin J. C., “Introduction to Languages and Theory of Computations”, TMH

Reference Books:

SE-304 Microprocessor Systems

Text Books:
2. Ray A K , Bhurchandi K M , Advanced Microprocessors and Peripherals, TMH
3. Hall D V , Microprocessor Interfacing, TMH

Reference Books:
1. Liu and Gibson G A , Microcomputer System: The 8086/8088 family, PHI
2. Aditya P Mathur, Introduction to Microprocessor, TMH
3. Brey, Barry B, INTEL Microprocessors, PHI
4. Renu Sigh & B.P. Sigh, Microprocessor, Interfacing and Applications
5. B. Ram, Fundamentals of Microprocessors and Microcomputers

SE-305 Computer Network

Text Books:
2. Data Communications and Networking, 4/e, Behrouz A. Forouzan, McGraw Hill.

Reference Books:
2. 2 William A. Shay, “Understanding Data Communications & Networks”, Vikas

B.Tech. III year, VI Semester Examination

SE-311 Software Validation Verification and Testing

Text Books:

**Reference Books:**

**SE-312 Compiler Design**

**Text Books:**

**SE – 313 Computer Graphics**

**Text Books:**

**Reference Books:**

**SE-314- Artificial Intelligence**

**Text Books:**

**Reference Books:**
3. "Neural Networks in Computer Intelligence" by KM Fu, McGraw Hill
4. "AI: A modern approach" by Russel and Norvig, Pearson Education
5. Introduction to AI and Expert Systems, D.W. Patterson, PHI, 1992

SE-315 Advanced Computer Architecture

Text Books:

Reference Books:

B.Tech. IV year, VII Semester Examination

SE-401 Software Project Management

Text Books:
1. Managing the Software Process, Watts S. Humphrey, Pearson Education
2. Software Project Management, Walker Royce, Pearson Education

Reference Books:
2. Software Project Management in Practice, Pankaj Jalote, Pearson Education.

SE-402 INDUSTRIAL ORGANIZATION AND MANAGERIAL ECONOMICS

Suggested Readings:-

SE-403-1 Software Quality and Metrics

Text Books:

Reference Books:
4. CMMI, Mary Beth Chrissis, Mike Konrad and Sandy Shrum, Pearson Education (Singapore) Pvt Ltd, 2003

SE 403-2 Distributed Computing Systems

Text Books:

SE 403-3: Real Time Systems

Text Books:
2. H. Kopetz, "Real time systems for distributed embedded applications, Kluwer Academic
3. Douglass, Real Time UML: Advances in the UML for Real-Time Systems, 3/e, Addison-Wesley

Reference Books:

SE-403-4 Mobile Computing

Text Books:
1. J. Schiller, Mobile Communications, Addison Wesley.
2. A.K. Talukder and R.R. Yavagal, Mobile Computing, TMH

Reference Books:
2. Charles Perkins, Ad hoc Networks, Addison Wesley.

SE 403-5 - Software Architecture & Design Pattern

Text Books:
1. Design Patterns: Elements of Reusable Object-Oriented Software, by Erich Gamma et al, Addison Wesley.

Reference Books:

SE 403-6 E-business Management

Text Books:
1. e-Business: Roadmap for Success: Dr Ravi Kalakota and Robinson, Marcia Addison-Wesley, 2000

Reference Books:
4. Knowledge Management: Classic and Contemporary Works, edited by Daryl Morey, Mark Maybury and Bhavani Thuraisingham.

SE-403-7 Natural Language Processing
Text Books:
1. Allen, Natural Language Understanding Pearson Education.

Reference Books:

SE-404-1- Digital Image Processing
Text Books:
1. Rafael C. Gonzalez & Richard E. Woods,-Digital Image Processing, AWL.
2. A.K. Jain,-Fundamental of Digital Image Processing, PHI.

Reference Books:

SE 404-2 SOFT COMPUTING
Text Books:
1. “An Introduction to Neural Networks”, Anderson J.A., PHI.

Reference Books:
1. “An Introduction to Genetic Algorithm”, Melanie Mitchell, PHI.

SE-404-3 Computer Vision
Text Books:
1. Computer Vision: A Modern Approach by D. A. Forsyth and J. Ponce,

SE 404-4 Neural Networks & Fuzzy Logic
Text Books:
3. Fuzzy Logic: Intelligence, Control and Information, John Yen and Reza Langan, Pearson Education.

Reference Books:
1. Neural Networks- A comprehensive foundation, Simon Haykin, Pearson Education.
2. S.N. Sivanandam, S. Sumathi, et al, Introduction to Neural Networks using MATLAB 6.0, TMH.
3. James A Freeman and Davis Skapura, Neural Networks Pearson Education.

SE-412-5 Pattern Recognition
Text Books:
1. Pattern Classification, R.O. Duda, P.E. Hart and D.G. Stork, John Wiley.

Reference Books:

SE 404-6: Optimization techniques
Text Books:

Reference Books:
1. Kanti Swarup, Gupta Pk, Man Mohan, Operations Research, Sultan Chand
SE-404-7  Computer & Professional Ethics
Text Books:
1. Deborah G. Johnson "Computer Ethics", Pearson Education Asia

B.Tech. IV year, VIII Semester Examination
SE-411  Data Mining & Warehousing
Text Books:
1. Data Warehousing Fundamentals, P. Ponnian, John Welley.
2. Data Mining Introductory & Advanced Topics, M.H. Dunham, Pearson Education.
3. Data Mining Concepts & Techniques, Han, Kamber, M. Kaufman.

Reference Books:
1. The Data Warehouse Lifecycle Tool Kit, Ralph Kimball, John Wiley
2. Master in Data Mining, M. Berry, G. Linoff, John Wiley

SE 412-1: Advanced computer Networks
Text Books:

Reference Books

SE 412-2: Advanced Database Management Systems
Text Books:
2. F. Bancilhon, C. Delobel, P. Kannelakis (Eds.), Building an OODB System, the Story of O2, Morgan Kaufmann.

SE-412-3 Advances in Software Engineering
Text Books:

SE-412-4 Grid Computing
Text Books:
2. Introduction to grid computing - Bart Jacob, Michael Brown

Reference Books:
2. Parallel Programming with MPI by Peter Pacheco, Morgan Kaufmann, 1998.

SE 404-5 : BIO INFORMATICS

SE-412-6 Business of IT
TEXT BOOKS:

REFERENCE BOOKS:

SE 412-7 Component Based Technology
Text Books:

Reference Books:

SE-413-1: Network & Information Security
Text Books:

Reference Books:
2. Bruce Schiener, “Applied Cryptography”.

SE-413-2: Multimedia Technology and Applications
Text Books:

Reference Books:
1. Mark Nelson “Data Compression Book” BPB.
2. David Hillman “Multimedia technology and Applications” Galgotia Publications.

SE-413-3 Information Theory & Coding
1. Information Theory by R Ash, Dover Science Publications.
2. Element of Information Theory by Cover and Thomas, John Wiley & Sons.

Reference Books:
2. Communications in the presence of noise – Shannon - 1949

SE 413-4 Fault Tolerant and Reliable System Design
Text Books:
2. Design and Analysis of Fault-Tolerant Digital Systems, B.W. Johnson, Addison-Wesley

Reference Books:

SE 413-5: OPTICAL NETWORK
1. Optical Network Design and Implementation, Vivek Alwayn

SE 413-6 Virtual Reality
Text Books:
3. 3D Modeling and surfacing, Bill Fleming, Elsevier (Morgan Kaufman).

Reference Books:
1. 3D Game Engine Design, David H. Eberly, Elsevier.

SE-413-7 Embedded Systems
Suggested reading:
2. Practical FPGA Programming in C by David Pellerin, Prentice Hall.

Reference Books:
1. Jean-Pierre Deschamps, Gery J. A. Bioul, Gustavo D. Sutter, Wiley.
3. Embedded Software Development with eCos (Bruce Perens’ Open Source Series), Anthony J. Massa.