

## MAJOR COURSES AND TEXT BOOKS

### LEVEL – 4, TERM – 2

Course No	Course Title	Credit Hour	Text Book and Author
CSE409	Computer Graphics	3.00	[1] J. D. Foley, A. v. Dam, S. K. Feiner and J. F. Hughes, <i>Computer Graphics Principles and Practice</i> , 2e, Pearson Education (Singapore) Pte. Ltd., 1995. [2] F. S. Hill, Jr., <i>Computer Graphics Using OpenGL</i> , 2e, Prentice-Hall of India Private Ltd., 2000. [3] D. Shreiner, M. Woo, J. Neider and T. Davis, <i>OpenGL Programming Guide</i> , 4e, Pearson Education (Singapore) Pte. Ltd., 1999.
CSE411	VLSI Design	3.00	[1] L. E. M. Brackenbury, <i>Design of VLSI Systems</i> , McMillan Education Ltd., 1987. [2] J. P. Uyemura, <i>Introduction to VLSI Circuits and Systems</i> , John Wiley & Sons, Inc., 2001.
CSE435	Basic Multimedia Theory	3.00	[1] Z. N. Li and M. S. Drew, <i>Fundamentals of Multimedia</i> , Pearson Education, 2004.

### LEVEL – 4, TERM – 1

Course No	Course Title	Credit Hour	Text Book and Author
CSE401	Computer Networks	3.00	[1] A. S. Tanenbaum, <i>Computer Networks</i> , 4e, Pearson Education (Singapore) Pte. Ltd., 2002. [2] J. F. Kurose and K. W. Ross, <i>Computer Networking - A Top Down Approach Featuring the Internet</i> , 2e, Pearson Education (Singapore) Pte. Ltd., 2003.
CSE403	Digital System Design	3.00	[1] M. Mano, <i>Digital Logic and Computer Design</i> , Prentice-Hall of India Private Limited, 1979. [2] J. P. Hayes, <i>Computer Architecture and Organization</i> , 2e, McGraw-Hill Book Company, 1988.
CSE405	System Analysis and Design	3.00	[1] J. L. Whitten, L. D. Bentley and K. C. Dittman, <i>System Analysis and Design Methods</i> , 6e, Irwin McGraw-Hill, 2004. [2] S. Bennett, S. McRobb and R. Farmer, <i>Object Oriented System Analysis and Design Using UML</i> , 2e, Tata McGraw-Hill Publishing Company Ltd., 2005.

Course No	Course Title	Credit Hour	Text Book and Author
CSE407	Computer Interfacing	3.00	[1] D. V. Hall, <i>Microprocessors and Interfacing Programming and Hardware</i> , 2e, Tata McGraw-Hill Publishing Company Ltd., 1991. [2] B. M. Cook and N. H. White, <i>Computer Peripherals</i> , 3e, Edward Arnold., 1995.
CSE425	Machine Learning	3.00	[1] T. M. Mitchel, <i>Machine Learning</i> , The McGraw-Hill Companies, Inc., 1997.

### LEVEL – 3, TERM – 2

Course No	Course Title	Credit Hour	Text Book and Author
CSE313	Operating System	3.00	[1] A. S. Tanenbaum, <i>Modern Operating Systems</i> , 2e, Prentice-Hall of India Private Ltd., 2001. [2] M. J. Bach, <i>The Design of the Unix Operating System</i> , Prentice-Hall of India., 1986. [3] B. W. Kernighan and R. Pike, <i>The UNIX Programming Environment</i> , Pearson Education (Singapore) Pte. Ltd., 1984. [4] S. Prata, <i>Advanced UNIX - A Programmer's Guide</i> , BPB Publications., 1985.
CSE315	Microprocessors and Micro-controllers	3.00	[1] B. B. Brey, <i>The Intel Microprocessors - Architecture, Programming, and Interfacing</i> , 6e, Pearson Education (Singapore) Pte. Ltd., 2003. [2] M. Rafiqzaman, <i>Microprocessors and Microcomputer-Based System Design</i> , 2e, CRC Press., 1995.
CSE317	Artificial Intelligence	3.00	[1] S. J. Russell and P. Norvig, <i>Artificial Intelligence - A Modern Approach</i> , 2e, Pearson Education (Singapore) Pte. Ltd., 2002. [2] L. Sterling, E. Shapiro, <i>The Art of Prolog - Advanced Programming Techniques</i> , 2e, Prentice-Hall of India Private Ltd., 1994. [3] C. Townsend, <i>Introduction to Turbo Prolog</i> , BPB Publications., 1987.
CSE319	Pattern Recognition	3.00	[1] S. Theodoridis and K. Koutroumbas, <i>Pattern Recognition</i> , 2e, Elsevier Academic Press., 2003.

Course No	Course Title	Credit Hour	Text Book and Author
CSE321	Communication Engineering	3.00	[1] W. Stalling, <i>Data and Computer Communication</i> , 7e, Prentice-Hall of India Private Ltd., 2003.

### LEVEL – 3, TERM – 1

Course No	Course Title	Credit Hour	Text Book and Author
CSE301	Mathematical Analysis for Computer Science	3.00	[1] S. M. Ross, <i>Introduction to Probability Models</i> , 8e, Academic Press, An Imprint of Elsevier., 2002. [2] R. L. Graham, D. E. Knuth and O. Patashnik, <i>Concrete Mathematics, A Foundation for Computer Science</i> , 2e, Addison-Wesley, An Imprint of Pearson Education, Inc., 1994.
CSE303	Database	3.00	[1] A. Silberschatz, H. F. Korth and S. Sudarshan, <i>Database System Concepts</i> , 4e, McGraw-Hill Book Company., 2001. [2] K. Loney, G. Koch and the Experts at TUSC, <i>Oracle 9i: The Complete Reference</i> , Tata McGraw-Hill Publishing Company Ltd., 2002.
CSE305	Computer Architecture	3.00	[1] D. A. Patterson and J. L. Hennessy, <i>Computer Organization and Design, the Hardware/Software Interface</i> , 3e, Morgan Kaufmann Publishers, An Imprint of Elsevier., 2007.
CSE307	Software Engineering	3.00	[1] R. S. Pressman, <i>Software Engineering, A Practitioner's Approach</i> , 6e, McGraw-Hill Book Company., 2004. [2] C. Larman, <i>Applying UML and Patterns</i> , 2e, Pearson Education (Singapore) Ltd., 2001.
CSE309	Compiler	3.00	[1] A. V. Aho, R. Sethi and J. D. Ullman, <i>Compilers: Principles, Techniques and Tools</i> , Addison-Wesley, An Imprint of Pearson Education., 1986.
CSE311	Data Communication	3.00	[1] S. Haykin, <i>Communication Systems</i> , 4e, John Wiley & Sons, Inc., 2000.

### LEVEL – 2, TERM – 2

Course No	Course Title	Credit Hour	Text Book and Author
CSE207	Algorithms	3.00	[1] T. H. Cormen, C. E. Leiserson, R. L. Rivest and C. Stein, <i>Introduction to Algorithms</i> , 2e, Prentice-Hall of India Private Ltd., 2001. [2] E. Horowitz, S. Sahni and S. Rajasekaran, <i>Fundamentals of Computer Algorithms</i> , Galgotia Publications Private Ltd., 2007.
CSE209	Digital Electronics & Pulse Techniques	3.00	[1] H. Taub and D. Schilling, <i>Digital Integrated Electronics</i> , McGraw-Hill Book Company, 1977. [2] J. Millman and H. Taub, <i>Pulse, Digital and Switching Waveforms</i> , Tata McGraw, 1965.
CSE211	Theory of Computation	2.00	[1] J. E. Hopcroft, R. Motwani and J. D. Ullman, <i>Introduction to Automata Theory, Languages, and Computation</i> , Pearson Education (Singapore) Pte. Ltd., 1979.
CSE214	Assembly Language Programming	Pro-1.50	[1] Y. Yu and C. Marut, <i>Assembly Language Programming and Organization of IBM PC</i> , Mitchell McGraw-Hill., 1992. [2] K. R. Irvine, <i>Assembly Language for Intel-Based Computers</i> , 3e, Prentice-Hall international., 1998.

### LEVEL – 2, TERM – 1

Course No	Course Title	Credit Hour	Text Book and Author
CSE201	Numerical Methods	3.00	[1] S. C. Chapra and R. P. Canale, <i>Numerical Methods for Engineers</i> , 4e, Tata McGraw-Hill Publishing Company Ltd. Oxford & IBH Publishing Co. Pvt. Ltd., 2001. [2] J. B. Scarborough, <i>Numerical Mathematical Analysis</i> , 1e., 1966. [3] S. B. Rao and C. K. Shantha, <i>Numerical Methods - with Programs in Basic, Fortran and Pascal</i> , Universities Press (India) Ltd., 1993.
CSE203	Data Structures	3.00	[1] E. M. Reingold and W. J. Hansen, <i>Data Structures</i> , Little, Brown & Company Ltd., 1983. [2] M. T. Goodrich and R. Tamassia, <i>Data Structures and Algorithms in Java</i> , 2e, John Wiley & Sons, Inc., 2000

Course No	Course Title	Credit Hour	Text Book and Author
CSE205	Digital Logic Design	3.00	[1] M. Mano, <i>Digital Design</i> , 3e, Pearson Education (Singapore) Pte. Ltd., 2001. [2] T. L. Floyd, <i>Digital Fundamentals</i> , 8 Pearson Education, Inc., 2002. [3] E. L. Johnson and M. A. Karim, <i>Digital Design – A Pragmatic Approach</i> , PWS-KENT Publishing Company. 1987.

### LEVEL – 1, TERM – 2

Course No	Course Title	Credit Hour	Text Book and Author
CSE103	Discrete Mathematics	3.00	[1] D. F. Stanat and D. F. McAllister, <i>Discrete Mathematics in Computer Science</i> , 1e, Prentice-Hall International, Inc., 1977. [2] K. H. Rosen, <i>Discrete Mathematics and Its Application</i> , 4e, WCB McGraw-Hill., 1998.
CSE105	Object Oriented Programming Language	2.00	[1] H. Schildt , <i>Teach Yourself C++</i> , 3e, Tata McGraw-Hill Publishing Company Ltd., 1997. [2] H. Schildt, <i>Java 2: The Complete Reference</i> , 5e, Tata McGraw-Hill Publishing Company Ltd., 2002. [3] H.M. Deitel and P.J. Deitel, <i>Java How to Program</i> , 3e, Pearson Education, Inc., 1999.

### LEVEL – 1, TERM – 1

Course No	Course Title	Credit Hour	Text Book and Author
CSE101	Programming Languages-I	3.00	[1] B. W. Kernighan and D. M. Ritchie, <i>The C Programming Language</i> , 2e, Prentice-Hall of India Private Ltd., 1988. [2] H. Schildt, <i>Teach Yourself C</i> , 3e, Osborne McGraw-Hill., 1997.

## MATHEMATICAL COURSES

Course No	Course Title	Credit Hour	Text Book and Author
MATH141	Mathematics 1: Diff. Calculus & Co-ordinate Geometry	3.00	[1] Ashraf, <i>Differential Calculus</i> . [2] Rahman, <i>Co-ordinate Geometry</i>
MATH143	Mathematics 2: Integral Cal. & Ordinary Partial Diff. Eqn.	4.00	[1] Hazra, <i>Integral Calculus</i> [2] Piazzio, <i>Differential Equation</i>
MATH243	Mathematics IV: Matrices, Vec. And Fourier Analysis	3.00	[1] Hazra, <i>Matrix</i> [2] Hazra, <i>Vector</i>
MATH241	Complex Variable, Laplace trans & Stat.	4.00	[1] Churchill, <i>Operational Mathematics</i> , 3e, McGraw-Hill Companies, 1971. [2] Churchill, <i>Complex Variables</i> [3] Gupta, <i>Statistics</i>

### OTHER COURSES

Course No	Course Title	Credit Hour	Text Book and Author
EEE163	Introduction to Electrical Engineering	3.00	Cochran, Boylestead, Johnson
EEE263	Electrical Devices and Circuits	3.00	Theraza, Boylestead, Millman
EEE269	Electrical Drives & Instrumentation	3.00	Misc
ME160	Mechanical Engineering Drawing - I	1.50	Misc
ME165	Basic Mechanical Engineering	3.00	Vasandani, Khurmi
PHY109	Heat & Therm. Struc. Of Mat. Waves & Osc.	4.00	Resnick and Halliday
CHEM101	Chemistry - I: Inorganic Quantitative Analysis	3.00	Voegl Misc
IPE493	Industrial Management	3.00	Misc
HUM175	English	3.00	Misc
HUM275	Economics	3.00	Misc
HUM371	Financial and Managerial Accounting	3.00	Gupta
HUM211	Sociology	3.00	Misc

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