



Bachelor of Science (Computer Applications & Information Technology)
B.Sc. (CA&IT) Semester-I

Course Code	US01AIIIT51	Title of the Course	Lab-Communication Skills in English-I
Total Credits of the Course	2	Hours per Week	4

Course Objectives:	<ol style="list-style-type: none">1. To process information using a variety of media2. To use appropriate phrases for performing language functions3. To edit, select and present information in a format/ perspective4. To listen and reduce information to a point form5. To read and to expand from points to paragraph6. To predict, comprehend, infer and synthesize information7. To question, probe, and arrive at information through discussions, dialogues and interviews.
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Course Content		
Unit	Description	Weightage* (%)
1.	Reading Skills <ul style="list-style-type: none">- Mechanics of Reading i.e. Eye Movement and Different Reading Styles- Issues of Reading Speed and Comprehension Value- Reading Gears for different reading purposes- Skimming & Scanning Skills- Barrier of Reading	10
2.	Listening & Feedback Skills <ul style="list-style-type: none">- Importance and purpose of Listening.- Barriers to Effective Listening.- Ways of improving Listening Skills.- Giving Feedbacks i.e. Confirmatory and Corrective	10
3.	Writing Skills <ul style="list-style-type: none">- Form words properly using prefixes/suffixes (See the Appendix)- Writing Social letters, Formal Leave Letters- Paragraph Writing i.e. Topics sentence and supporting sentence, attributes of a good paragraph, types of paragraphs	60
4.	Speaking Skills <ul style="list-style-type: none">- Use greeting and formulae in everyday conversation- Notions and Functions of everyday usage- Parts of Speech, Types of Sentences, Tenses, Imperatives, Modals, Voice, Determiners, Concord, Interrogation and Negation, basic prepositions Use of Phrasal Verbs Constructions and Registers.- Connectives and Linkages- Homophones, Homonyms	20





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Teaching-Learning Methodology	Oral-Direct instructions, Audio Video, Structural Approach, Lexical Approach, Inquiry base learning, Dictation, Role play, Language Games and Task-based teaching.
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage (%)
1.	University Examination.	100

Course Outcomes: Having completed this course, the learner will be able to	
1.	To process information using a variety of media.
2.	To use appropriate phrases for performing language functions
3.	To edit, select and present information in a format/perspective
4.	To listen and reduce information to a point form.
5.	To read and expand from points to paragraph.
6.	To predict, comprehend, infer and synthesize information.
7.	To question, probe and arrive at information through discussions, dialogues and interviews.

Suggested References:	
Sr. No.	References
1.	Meenakshi Raman & Sangita Sharma, Technical Communication; Principles and Practice , Oxford University Press.
2.	Chrissie Wright, Communication Skills, Jaico Publication.
3.	Grant Taylor, English Conversation Practice, New Delhi: Tata McGraw Hill.
4.	R P Bhatanagar and R T Bell, Communication in English, Hyderabad, Orient Longman.
5.	D Sasikumar and P V Dhamija, Spoken English, New Delhi: Tata McGraw Hill.
6.	M. Farhathullah, Communication Skills for Technical Students.
7.	Champa Tickoo and Jaya Sasikumar, Writing with a Purpose, Chennai, OUP.
8.	David Jolly, Writing Tasks: Authentic task approach to individual Writing needs, Cambridge University Press.





Bachelor of Science (Computer Applications & Information Technology)
B.Sc. (CA&IT) Semester-I

Course Code	US01CIIT51	Title of the Course	Computer Programming Using C
Total Credits of the Course	4	Hours per Week	4

Course Objectives:	<ol style="list-style-type: none">1. To impart knowledge on fundamental concepts of the C Programming language.2. To provide basic understanding of problem solving through development of algorithms and flowcharts.
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Course Content		
Unit	Description	Weightage* (%)
1.	Introduction to C Programming – History of C, Translators – Compiler and Interpreter, Compiling & Linking, Execution of the C Program, Introduction to flowchart and algorithm, Rules for writing algorithm, Symbols used to draw a flowchart, Basic Structure of C Program, Variables, Constants, Data types in a high-level language, main() function, Operators, Precedence of operators, Expression, Type Conversion.	25
2.	Basics of Programming – Console I/O statements, Character I/O using : getchar(), putchar(), getch(), Assignment statements, Control structures, Decision making Statements, goto statement, Loop statements, continue and break statements.	25
3.	Library Functions, Arrays & Strings – Common standard library functions, Concept of Arrays -Concepts of Array, One and Two dimensional arrays, declaration and initialization of arrays, String handling.	25
4.	User-Defined Functions – Concepts of User defined functions, Need for User defined functions, Elements of User Defined Functions – Function Definition, Function call, Function Declaration, Return statement, Categories of Functions, Recursive function. Storage classes, Scope, Visibility and Lifetime of a variable.	25

Teaching-Learning Methodology	Blended learning approach incorporating both traditional classroom teaching as well as usage of ICT tools.
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Written / Practical Examination (As per CBCS R.6.8.3)	15%
2.	Internal Continuous Assessment in the form of Practical, Viva-voce, Quizzes, Seminars, Assignments, Attendance (As per CBCS R.6.8.3)	15%
3.	University Examination	70%

Course Outcomes: Having completed this course, the learner will be able to	
1.	solve problems using algorithms and flowcharts.
2.	develop simple programs using the C Programming language.

Suggested References:	
Sr. No.	References
1.	Kernighan B., Ritchie D.: The C Programming Language, Prentice Hall.
2.	Cooper H & Mullish H: The Sprit of C, Jaico Publication House, NewDelhi.
3.	Balagurusamy: Programming in ANSI C., Tata McGraw Hill Publication.





Bachelor of Science (Computer Applications & Information Technology)
B.Sc. (CA&IT) Semester-I

Course Code	US01CIIT52	Title of the Course	Computer Organization and Digital Electronics
Total Credits of the Course	4	Hours per Week	4

Course Objectives:	<ol style="list-style-type: none">1. To provide basic understanding of logical organization and architecture of a computer.2. To introduce fundamental concepts related to number systems and representation of information.3. To provide basic understanding of digital logic circuits.
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Course Content		
Unit	Description	Weightage* (%)
1.	Introduction to Computer System – What is Computer System?, Block Diagram of Simple Computer with its units, Hardware and Software, Generation of Computer System, Input Devices (Keyboard & Mouse), Output Devices (Monitor & Printer), Memory Unit (Primary & Secondary Memory), Storage Devices (Floppy Disk, CD, DVD, HDD and Pen Drive)	25
2.	Number System – What is Number System?, Binary Number System, Octal Number System – Decimal Number System, Hexadecimal Number System, – Conversion of Number System: – Binary to Octal, Binary to Decimal, Binary to Hexadecimal, – Decimal to Binary, Decimal to Hexadecimal, Decimal to Octal, – Octal to Binary, Octal to Hexadecimal, Octal to Decimal, – Hexadecimal to Binary, Hexadecimal to Octal, Hexadecimal to Decimal. – Binary Addition, Binary Subtraction	25
3.	Basic Digital Logic Circuit - I – Boolean Algebra, Logic Gates, Truth Table, Circuit Equivalent , – De – Morgan’s Theorems, Half Adder and Full Adder	25
4.	Basic Digital Logic Circuit – II – Encoder (8 X 3 line), Decoder (3 X 8 line), Multiplexer (4 X 1, 8 X 1, and 16 X 1 line), De-Multiplexer (1 X 4, 1 X 8, 1 X 16 line), Comparator, Flip Flop , RS Flip Flop , D Flip Flop , Ring Counter , JK Flip Flop, JK Master Slave Flip Flop, Control Buffer Register.	25





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Teaching-Learning Methodology	Blended learning approach incorporating both traditional classroom teaching as well as usage of ICT tools.
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Written / Practical Examination (As per CBCS R.6.8.3)	15%
2.	Internal Continuous Assessment in the form of Practical, Viva-voce, Quizzes, Seminars, Assignments, Attendance (As per CBCS R.6.8.3)	15%
3.	University Examination	70%

Course Outcomes: Having completed this course, the learner will be able to	
1.	understand the fundamental concepts related to organization of a computer system.
2.	describe the fundamental concepts related to number systems and representation of information.
3.	understand the functioning of various digital logic circuits.

Suggested References:	
Sr. No.	References
1.	Tanenbaum A.S. : Structured Computer Organization, 3rd Edition, Prentice-Hall of India Pvt. Ltd.1993.
2.	Rajaraman V. : Computer Fundamentals, Prentice-Hall of India Pvt. Ltd.
3.	Malvino A. P.: Digital Computer Electronics,2nd Edition, Tata McGraw, Hill Pub. Co. Ltd.,New Delhi, 1990.
4.	Gothmann, William H. : Digital Electronics - An Introduction to Theory and Practice, 2 nd Edition,PHI,1982.
5.	Hall Douglas V. : Microprocessors and Interfacing - Programming and Hardware., McGraw Hill Book Company, 1986.
6.	M.M. Mano : Computer System Architecture, 3rd Edition, Pearson Education, 2000.





Bachelor of Science (Computer Applications & Information Technology)
B.Sc. (CA&IT) Semester-I

Course Code	US01CIIT53	Title of the Course	Web Application Development – I
Total Credits of the Course	4	Hours per Week	4

Course Objectives:	1. To impart the knowledge of the Internet, WWW, HTML, DHTML and advanced CSS. 2. To provide basic understanding of the fundamental concepts related to Web page designing and Web publishing.
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Course Content		
Unit	Description	Weightage* (%)
1.	Web Page Designing – I <ul style="list-style-type: none">– Introduction to Internet & Services provided by the Internet (eMail, HTTP, FTP, Telnet, WWW)– Some basic terminology and concepts (URL, webpage, web site, web servers, web browsers, search engines)– An Introduction to HTML, HTML tags, Structure of an HTML document, Text and paragraph formatting, Ordered and Unordered lists, Hyperlinks, Images	25
2.	Web Page Designing – II <ul style="list-style-type: none">– HTML tables, Frames, Framesets, Designing HTML forms, Multimedia tags– Advance Elements of HTML5: !Doctype, meta, Input Controls (number, date, time, calendar, ranges), Multimedia tags (<audio>, <video>).	25
3.	DHTML & Cascading Style Sheets <ul style="list-style-type: none">– Introduction to DHTML, Applications of DHTML– Components of DHTML, Introduction to Cascading Style Sheets (CSS),– Ways of specifying style – inline, internal, external– Basic Syntaxes, ID and CLASS selectors, SPAN, DIV.	25
4.	Introduction to Web Publishing or Hosting <ul style="list-style-type: none">– Properties: Fonts, Color, Background, Text, Border, Lists, Layers, Margin, Links, Position.	25

Teaching-Learning Methodology	Blended learning approach incorporating both traditional classroom teaching as well as usage of ICT tools.
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Written / Practical Examination (As per CBCS R.6.8.3)	15%
2.	Internal Continuous Assessment in the form of Practical, Viva-voce, Quizzes, Seminars, Assignments, Attendance (As per CBCS R.6.8.3)	15%
3.	University Examination	70%

Course Outcomes: Having completed this course, the learner will be able to	
1.	understanding of the concepts relate to the Internet and WWW.
2.	develop Web pages using HTML5, DHTML and advanced CSS.
3.	understand the fundamental concepts related to Web page designing and Web publishing.

Suggested References:	
Sr. No.	References
1.	Ivan Bayross, "Web Enabled Commercial Applications Development using HTML, DHTML, Javascript, Perl CGI", BPB, 2004.
2.	Douglas E Comer: The Internet, PHI, Second Edition, May 2000.
3.	Xavier C: World Wide Web Design with HTML, Tata McGraw Hill Publication, 2000.
4.	Eric Meyer: Cascading Style Sheets – The Definitive Guide, O'Reilly – SPD, First Edition, 2000.
5.	Faithe Wempen "Step by Step HTML5", PHI
6.	Thomas A. Powell, HTML & CSS: The Complete Reference, Fifth Edition, Tata McGraw-Hill
7.	HTML 5 for Web Designers, By Jeremy Keith





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B.Sc. (CA&IT) Semester-I

Course Code	US01CIIT54	Title of the Course	Practicals
Total Credits of the Course	6	Hours per Week	12

Course Objectives:	1. To impart knowledge to design algorithms and flowcharts. 2. To impart skill to solve simple programming problems using C.
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Course Content		
	Description	Weightage* (%)
	Part-1 : Practical based on US01CIIT51	35
	Part-2 : Practical based on US01CIIT52	30
	Part-3 : Practical based on US01CIIT53	35

Teaching-Learning Methodology	Blended learning approach incorporating both traditional classroom teaching as well as usage of ICT tools.
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage (%)
1.	University Examination	100

Course Outcomes: Having completed this course, the learner will be able to	
1.	design algorithms and flowcharts.
2.	solve simple programming problems in C.





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Course Code	US01SIIT51	Title of the Course	Environmental Studies
Total Credits of the Course	2	Hours per Week	2

Course Objectives:	<ol style="list-style-type: none">1. To make younger generation environment conscious.2. To expose the students to the fundamental concepts of environment so that they can appreciate the importance of individual efforts to protect and preserve our environment.3. To encourage them to make judicious use of our resources so that it will not only help present generation but also the future generations in meeting their needs.
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Course Content		
Unit	Description	Weightage* (%)
1.	Introduction to Environmental studies <ul style="list-style-type: none">– Definition, Scope and importance of Environmental Studies– Multidisciplinary nature of environmental studies– Component of Environment: Atmosphere, Hydrosphere, Lithosphere, Biosphere– Biogeochemical cycles : Carbon cycle and Nitrogen cycle– Concept of sustainability and sustainable development.	25
2.	Ecosystems <ul style="list-style-type: none">– Definition, Structure of ecosystem – Abiotic and Biotic components (Producers, Consumers and Decomposers)– Functions of Ecosystem :Energy flow in an ecosystem , Food chains, Food webs with examples– Types of Ecosystem; Forest ecosystem, Lake/Pond ecosystem, Desert ecosystem	25
3.	Natural Resources <ul style="list-style-type: none">– Classification -Renewable & Non-renewable Resources and types– Land resources & Land degradation, Soil erosion & Conservation– Forest Resources - Forest wealth, Deforestation: Causes and impacts– Water Resources- Use and over-exploitation of surface and ground water, floods and droughts– Energy resources- use of alternate energy sources, growing	25





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	energy needs – Conservation of Natural resources	
4.	Biotic Interactions – Positive Interactions with suitable examples – A. Mutualism – B. Commensalism – C. Proto-cooperation – Negative Interactions with suitable examples – A. Exploitation – B. Competition – C. Antibiosis	25

Teaching-Learning Methodology	Blended learning approach incorporating both traditional classroom teaching as well as usage of ICT tools.
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	University Examination.	100%

Course Outcomes: Having completed this course, the learner will be able to	
1.	understand the fundamental concepts of Environment so that they can appreciate the importance of individual efforts to protect and preserve our environment.
2.	make judicious use of our resources that will not only help present generation but also the future generations in meeting their needs.

Suggested References:	
Sr. No.	References
1.	Ecology and Environment by P. D. Sharma.
2.	Fundamentals of Ecology by E. P. Odum.
3.	Ecology by Mohan P. Arora.





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4.	Fundamentals of Ecology by M. C. Dash.
5.	Environmental Science by S. C.Santra.
6.	An Introduction to Environmental Engineering & Science by Gilbert N Master.
7.	Encyclopaedia of Environmental Pollution and Control by R. K. Trivedi.
8.	Ecology and Sustainable development by P.S. Ramkrishana.
9.	Environmental Conservation; Fundamentals of Forestry Vol 5 by S.S. Negi, Bishen Singh, Mahendra Pal Singh.

