



GULBARGA UNIVERSITY

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ಕ್ರ.ಸಂ.ಗುವಿಕ/ವಿಮವಿ/ಬಿ.ಓ.ಎಸ್./2018-19/ 682

ದಿನಾಂಕ: 3-7-18

ಅಧಿಸೂಚನೆ

ವಿಷಯ: ಬಿ.ಎ ಐಚ್ಛಿಕ Computer Applicatin ಪತ್ರಿಕೆಯ ಕೋರ್ಸಿಗಾಗಿ ಸಿಬಿಸಿಎಸ್ ಪದ್ಧತಿಯನ್ನು ಅಳವಡಿಸಿಕೊಂಡು ಅದಕ್ಕನುಗುಣವಾಗಿ ಪಠ್ಯಕ್ರಮವನ್ನು ಜಾರಿಗೊಳಿಸಿದ ಬಗ್ಗೆ.

- ಉಲ್ಲೇಖ: 1) ಸ್ನಾತಕ ಅಧ್ಯಯನ ಮಂಡಳಿಯ ಸಭೆಯ ದಿನಾಂಕ: 13.06.2018.
2) ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನ ನಿಕಾಯದ ಸಭೆ ದಿನಾಂಕ: 14.06.2018.
3) ವಿದ್ಯಾವಿಷಯಕ ಪರಿಷತ್ ಸಭೆಯ ಗೊತ್ತುವಳಿ ಸಂಖ್ಯೆ 11 ದಿನಾಂಕ.26.06.2018.

ಉಲ್ಲೇಖ (3) ರಲ್ಲಿನ ವಿದ್ಯಾವಿಷಯಕ ಪರಿಷತ್ ಸಭೆಯ ಗೊತ್ತುವಳಿ ಸಂಖ್ಯೆ 11 ನ್ನು ಅನುಷ್ಠಾನಗೊಳಿಸುತ್ತ; ಬಿ.ಎ ಐಚ್ಛಿಕ ಕೋರ್ಸಿನ Computer Applicatin ಪತ್ರಿಕೆಯ I ರಿಂದ VIನೇ ಸೆಮೆಸ್ಟರ ಪಠ್ಯಕ್ರಮವನ್ನು ಅಧ್ಯಯನ ಮಂಡಳಿಯು ಪರಿಷ್ಕರಿಸಿ ಅನುಮೋದಿಸಿರುತ್ತದೆ. ದಿನಾಂಕ 14.06.2018. ರಂದು ಜರುಗಿದ ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನ ನಿಕಾಯದ ಸಭೆಯಲ್ಲಿ ಸದರಿ ಪಠ್ಯಕ್ರಮವನ್ನು 2018-19ನೇ ಸಾಲಿನಿಂದ ಅನ್ವಯವಾಗುವಂತೆ ಜಾರಿಗೊಳಿಸಲು ಶಿಫಾರಸ್ಸು ಮಾಡಲಾಗಿದೆ.

ಅದರಂತೆ, 2018-19ನೇ ಸಾಲಿನಿಂದ ಅನ್ವಯವಾಗುವಂತೆ ಬಿ.ಎ ಐಚ್ಛಿಕ Computer Applicatin ಪತ್ರಿಕೆಯ ಸ್ನಾತಕ ಕೋರ್ಸಿನ I ರಿಂದ VIನೇ ಸೆಮೆಸ್ಟರ ಪಠ್ಯಕ್ರಮವನ್ನು ಪರಿಷ್ಕರಿಸಿ ಜಾರಿಗೊಳಿಸಲಾಗಿದೆ.

ಈ ಮಾಹಿತಿಯನ್ನು ಸಂಬಂಧಪಟ್ಟ ಶಿಕ್ಷಕರ ಹಾಗೂ ವಿದ್ಯಾರ್ಥಿಗಳ ಗಮನಕ್ಕೆ ತರಲು ಸೂಚಿಸಲಾಗಿದೆ. ಪಠ್ಯಕ್ರಮದ ವಿವರವನ್ನು ಗುಲಬರ್ಗಾ ವಿಶ್ವವಿದ್ಯಾಲಯದ ವೆಬ್‌ಸೈಟ್ www.gug.ac.in ದಿಂದ ಪಡೆಯಬಹುದು.

ಕುಲಸಚಿವರು

ಗುಲಬರ್ಗಾ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಕಲಬುರಗಿ

ಗೆ,

1. ಮುಖ್ಯಸ್ಥರು, ಗಣಕ ವಿಜ್ಞಾನ ಅಧ್ಯಯನ ವಿಭಾಗ, ಗು.ವಿ.ಕಲಬುರಗಿ.
2. ಎಲ್ಲಾ ಪದವಿ ಮಹಾವಿದ್ಯಾಲಯಗಳ ಪ್ರಾಂಶುಪಾಲರಿಗೆ.

ಪ್ರತಿಗಳು:

1. ಡೀನ್‌ರು, ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನ ನಿಕಾಯ, ಗು.ವಿ.ಕಲಬುರಗಿ ರವರ ಮಾಹಿತಿಗಾಗಿ.
2. ಕುಲಸಚಿವರು (ಮೌಲ್ಯಮಾಪನ), ಗುಲಬರ್ಗಾ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಕಲಬುರಗಿ ರವರ ಮಾಹಿತಿಗಾಗಿ.
3. ನಿರ್ದೇಶಕರು, ಯೋಜನೆ, ಮೇಲ್ವಿಚಾರಣೆ ಹಾಗೂ ಮೌಲ್ಯಮಾಪನ ಮಂಡಳಿ, ಗು.ವಿ.ಕಲಬುರಗಿ.
4. ಗ್ರಂಥಪಾಲಕರು, ಗು.ವಿ.ಕಲಬುರಗಿ ರವರ ಮಾಹಿತಿಗಾಗಿ.
5. ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನ ನಿಕಾಯದ ಎಲ್ಲಾ ವಿಭಾಗಗಳ ಮುಖ್ಯಸ್ಥರಿಗೆ.
6. ಮುಖ್ಯಸ್ಥರು, ಗಣಕೇಂದ್ರ, ಗು.ವಿ.ಕಲಬುರಗಿ ಇವರಿಗೆ ಸದರಿ ಪಠ್ಯಕ್ರಮವನ್ನು ವಿಶ್ವವಿದ್ಯಾಲಯದ ವೆಬ್‌ಸೈಟ್ ನಲ್ಲಿ ಪ್ರಕಟಿಸಲು ತಿಳಿಸಲಾಗಿದೆ.
7. ಕುಲಪತಿಗಳ ಆಪ್ತ ಕಾರ್ಯದರ್ಶಿ / ಕುಲಸಚಿವರ ಆಪ್ತ ಸಹಾಯಕರ ಮಾಹಿತಿಗಾಗಿ.



GULBARGA UNIVERSITY, KALABURAGI

DEPARTMENT OF COMPUTER SCIENCE

SYLLABUS FOR BACHELOR OF ARTS (B.A.)

B.A. (COMPUTER APPLICATIONS)

(CBCS SCHEME)

(REVISED SYLLABUS WITH EFFECT FROM ACADEMIC YEAR 2018-19 & ONWARDS)

Approved the Syllabus by BOS(UG) on dated 06-06-16 & 07-06-18

GULBARGA UNIVERSITY

B.A. (COMPUTER APPLICATIONS) CBCS SYLLABUS

(CBCS Scheme)

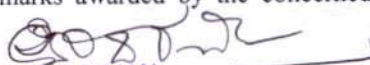
(With effect from the academic year 2018-19 and onwards)

SCHEME OF STUDY AND EXAMINATION FOR B.A IN COMPUTER APPLICATIONS UNDER
CBCS SCHEME W.E.F. ACADEMIC YEAR 2018-19 AND ONWARDS

Paper Code	Title of the Course	Marks			Duration of Theory / Practical Exam. Hrs.	Teaching Hours/Week			Credits
		Semester	IA	Total		L	T	P	
FIRST SEMESTER 2018-19 & ONWARDS									
AECC-1a	Kannada/MIL-1	80	20	100	3 Hrs	3	-	-	3
AECC-1b	English-1	80	20	100	3 Hrs	3	-	-	3
AECC-1c	Environmental Studies	40	10	50	2 Hrs	2	-	-	2
DSC-1A		80	20	100	3 Hrs	5	1	-	6
DSC-2A		80	20	100	3 Hrs	5	1	-	6
DSC-3A	Information Technology	80	20	100	3 Hrs	4	-	-	4
PRACTICALS									
DSC-3A	Practical-I: Information Technology Lab	40	10	50	2 Hrs	-	-	4	2
TOTAL MARKS FOR FIRST SEMESTER				600					26
SECOND SEMESTER 2018-19 & ONWARDS									
AECC-2a	Kannada/MIL-1	80	20	100	3 Hrs	3	-	-	3
AECC-2b	English-1	80	20	100	3 Hrs	3	-	-	3
AECC-2c	Indian Constitution	40	10	50	2 Hrs	2	-	-	2
DSC-1B		80	20	100	3 Hrs	5	1	-	6
DSC-2B		80	20	100	3 Hrs	5	1	-	6
DSC-3B	Office Automation Tools	80	20	100	3 Hrs	4	-	-	4
PRACTICALS									
DSC-3B	Practical-II: Office Automation Tools Lab	40	10	50	2 Hrs	-	-	4	2
TOTAL MARKS FOR SECOND SEMESTER				600					26
THIRD SEMESTER 2019-20 & ONWARDS									
AECC-3a	Kannada/MIL-1	80	20	100	3 Hrs	3	-	-	3
AECC-3b	English-1	80	20	100	3 Hrs	3	-	-	3
GE-1	Computer Fundamentals	40	10	50	2 Hrs	2	-	-	2
DSC-1C		80	20	100	3 Hrs	5	1	-	6
DSC-2C		80	20	100	3 Hrs	5	1	-	6
DSC-3C	Problem Solving using C	80	20	100	3 Hrs	4	-	-	4
PRACTICALS									
DSC-3C	Practical-III: Problem Solving using C Lab	40	10	50	2 Hrs	-	-	4	2
TOTAL MARKS FOR THIRD SEMESTER				600					26

FOURTH SEMESTER 2019-20 & ONWARDS									
AECC-4a	Kannada/MIL-1	80	20	100	3 Hrs	3	-	-	3
AECC-4b	English-1	80	20	100	3 Hrs	3	-	-	3
GE-2	E-Commerce Technologies	40	10	50	2 Hrs	2	-	-	2
DSC-1D		80	20	100	3 Hrs	5	1	-	6
DSC-2D		80	20	100	3 Hrs	5	1	-	6
DSC-3D	Database Management Systems	80	20	100	3 Hrs	4	-	-	4
PRACTICALS									
DSC-3D	Practical-IV: Database Management Systems Lab	40	10	50	2 Hrs	-	-	4	2
TOTAL MARKS FOR FOURTH SEMESTER				600					26
FIFTH SEMESTER 2020-21 & ONWARDS									
SEC-1	(a) Computer Oriented Statistical Methods (b) System Administration & Maintenance	40	10(Pr)	50	2 Hrs	1	-	2	2
DSE-1		80	20	100	3 Hrs	5	1	-	6
DSE-2		80	20	100	3 Hrs	5	1	-	6
DSE-3	(a) Dot Net Programming (b) Computer Networks and Internet Technologies (c) Multimedia Systems and Application	80	20	100	3 Hrs	4	-	-	4
PRACTICALS									
DSE-3	Practical-V: (a) Dot Net Programming Lab (b) Computer Networks and Internet Technologies Lab (c) Multimedia Systems and Application Lab	40	10	50	2 Hrs	-	-	4	2
TOTAL MARKS FOR FIFTH SEMESTER				400					20
SIXTH SEMESTER 2020-21 & ONWARDS									
SEC-2	(a) Information Security (b) XML Programming	40	10(Pr)	50	2 Hrs	1	-	2	2
DSE-4		80	20	100	3 Hrs	5	1	-	6
DSE-5		80	20	100	3 Hrs	5	1	-	6
DSE-6	(a) Object Oriented Programming in C++ (b) Java Programming (c) Web Technologies	80	20	100	3 Hrs	4	-	-	4
PRACTICALS									
DSE-6	Practical-VI: (a) Object Oriented Programming in C++ Lab (b) JAVA Programming Lab (c) Web Technologies Lab	40	10	50	2 Hrs	-	-	4	2
TOTAL MARKS FOR SIXTH SEMESTER				400					20
TOTAL MARKS & CREDITS FOR THE COURSE				3200					144

Note: Course = Paper, AECC: Ability Enhance Course, DSE: Discipline Specific Core Course, SEC=Skill Enhancement Course, DSE= Discipline Specific Elective, L=Lecture, T=Tutorial, P=Practical Additional 2 credits shall be given for the successful completion of two years of NSS/NCC (144+2=146) AECC-1C and AECC-2C shall be approved by the BOS of Environmental Science and Political Science Tutorial/Batch = 20 Students, Practical/Batch = 10 Students, AECC-a, AECC-b paper cover communicative skills. For SEC theory 40 marks, Practical IA 10 marks awarded by the concerned course teacher based on the Practical.


CHAIRMAN

Dept. of Computer Science

Gulbarga University, Gulbarga

GULBARGA UNIVERSITY, KALABURAGI
DEPARTMENT OF COMPUTER SCIENCE
B.Sc./B.C.A./B.A

Blue print for the DSC paper and DSE paper setting

UNIT	2 Marks Questions	5 marks Questions	10 Marks Questions
I	2	1	2
II	2	1	2
III	3	2	1
IV	3	2	1

Question Papers contains 3 sections:

Section A : 10 Questions of 2 marks, Answer All Questions X 2 = 20 Marks

Section B : 6 Questions of 5 marks, Answer any 4 Questions X 5 = 20 Marks

Section C : 6 Questions of 10 marks, Answer any 4 Questions X 10 = 40 Marks

Total=80 Marks

Distribution of Marks for Practical:

- | | |
|--------------------------------------|-------------------|
| 1. Writing 2 programs X 10 marks | = 20Marks. |
| 2. Execution of single program 1 X10 | = 10 Marks. |
| 3. Record Book | = 05 Marks. |
| 4. Viva-voce | = 05 Marks. |
| Total | = 40 Marks |

Distribution of Marks for Project work for BCA VI Semester Course

- | | |
|-----------------------|--------------------|
| 1. Project Evaluation | = 90 Marks. |
| 2. Viva-voce | = 30 Marks. |
| 3. Internal Marks | = 30 Marks |
| Total | = 150 Marks |

Blue print for SEC paper setting and G.E.(B.A. Course only)

B.Sc./B.C.A./B.A

UNIT	2 Marks Questions	5 marks Questions	10 Marks Questions
I	2	1	2
II	3	2	1

Question Papers contains 3 sections:

Section A: 5 Questions of 2 marks, Answer All Questions X 2= 10 Marks

Section B : 3 Questions of 5 marks, Answer any 2 Questions X 5= 10 Marks

Section C : 3 Questions of 10 marks, Answer any 2 Questions X 10= 20 Marks



Total=40 Marks

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 Gulbarga University, Gulbarga

DSC 3A: Information Technology

Teaching: 4 Hrs./ Week

Credits: 04

Max Marks: 80, Cont. Assessments. 20

Total Teaching Hrs: 60

UNIT I

15 Hrs

Introduction: Introduction to computer system, uses, types.

Data Representation: Number systems and character representation, binary arithmetic.

UNIT II

15 Hrs

Human Computer Interface: Types of software, Operating system as user Interface, utility programs.

Devices: Input and output devices (with connections and practical demo),

Keyboard, mouse, joystick, scanner, OCR, OMR, bar code reader, web camera, monitor, printer, plotter.

UNIT-III

15 Hrs

Memory: Primary, secondary, auxiliary memory, RAM, ROM, cache memory, hard disks, optical disks.

Computer Organization and Architecture: C.P.U., registers, system bus, main memory UNIT, cache memory, Inside a computer, SMPS, Motherboard, Ports and Interfaces, expansion cards, ribbon cables, memory chips, processors.

UNIT-IV

15 Hrs

Overview of Emerging Technologies: Bluetooth, cloud computing, big data, data mining, mobile computing and embedded systems.

Use of Computers in Education and Research: Data analysis, Heterogeneous. Storage, e-Library, Google Scholar, Domain specific packages such as SPSS, Mathematical etc.

References:

1. A. Goel, Computer Fundamentals, Pearson Education, 2010.
2. P. Aksoy, L. DeNardis, Introduction to Information Technology, Cengage Learning, 2006
3. P. K.Sinha, P. Sinha, Fundamentals of Computers, BPB Publishers, 2007

Practical-I: DSC 3A: Information Technology Lab

Practical: 4 Hrs./ Week

Credits: 02

Max Marks: 40

Cont. Assessments. 10

Lab. Assignments shall be carried out to implement the techniques/methods studied in Paper DSC 3A Information Technology.

NOTE: The practical assignment must include connecting parts of a computer and assembling it to an extent, media formatting and installation of some software & Simple exercises Using SPSS.


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DSC 3B: Office Automation tools

Teaching: 4 Hrs./ Week

Credits: 04

Max Marks: 80, Cont. Assessments. 20

Total Teaching Hrs: 60

Unit-I

15 Hrs

MS-Word: Introduction to word processor, Features of word XP, Special features of word processing software, Getting into Microsoft word XP, Creating new document, Editing the document, Opening existing document, Saving the document, Print the document, File operation in word XP, Creation of tables in word, Create the header or footer, Graphics, Introduction to mail merge, Creating and working with web page, Editing equations, Keyboard shortcut keys.

Unit-II

15 Hrs

MS-Excel: Introduction, feature of MS-Excel includes, spreadsheet basics, getting started with Microsoft Excel, Part of MS-Excel window, Cell and Cell address, Components of an excel workbook, Navigate worksheet, Moving through cells, Adding worksheets, Rows and columns, Resize rows and columns, Selecting cells, Moving and copying cell content, Enter and edit data in worksheet, Entering and copying the formula; Inserting cells columns and rows, Functions in excel, Auto sum, Auto fill, Custom list, Alignment, Changing the column width, Changing the height of the row, formatting the values in cells, Database, Charts in excel, Macros in excel.

Unit-III

15 Hrs

MS-Power Point: Introduction, Different uses of power point, creating a presentation slide, Open an existing presentation, Auto layout, Components of power point window, Different views of a slide, Different operations on slide, Adding clip art to a presentation, Slide animation, Slide master, Slide number, Printing a presentation, Charts in power point, List of shortcut keys

Unit-IV

15 Hrs

MS-Access: Introduction to Microsoft access, Blank access database, Access database wizards, Opening an existing database, viewing data, Creating an access database and tables, Creating forms, Entering and updating data using forms, Editing and deleting data in a form, creating and printing reports.

References:

1. C. V. Uppin and Veeru Uppin, Computer Applications.
2. Sushila Madan , Introduction to Essential tools,JBA,2009.
3. Anita Goel, Computer Fundamentals, Pearson, 2012

Practical-II: DSC 3B: Office Automation Tools Lab

Practical: 4 Hrs./ Week

Credits: 02

Max Marks: 40

Cont. Assessments. 10

Lab. Assignments shall be carried out to implement the techniques/methods studied in Paper DSC 3B Office Automation tools.


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Dept. of Computer Science

GE-1: Computer Fundamentals

Teaching: 2 Hrs./ Week

Credits: 02

Max Marks: 40 Cont. Assessments. 10

Total Teaching Hrs: 30

UNIT I

15 Hrs

Introduction: computers, characteristics and limitations of computer, Block diagram of computer, types of computers, uses of computers, computer generations. Number systems: binary, hexa and octal numbering system.

Input and output devices: Keyboard and mouse, inputting data in other ways, Types of Software: system software, Application software, commercial, open source, domain and free ware Software,

UNIT –II

15 Hrs

Memories: primary, secondary and cache memory. **Windows basics:** desk top, start menu, icons. System Software, Compilers, assemblers, loaders, Operating Systems fundamentals, Introduction to Algorithms, Flowcharting and Programming Languages.

References:

1. Fundamentals Of Computers” by REEMA THAREJA from OXFORD UNIVERSITY

DSC 3C: Problem Solving Using C

Teaching: 4 Hrs./ Week

Credits: 04

Max Marks: 80 Cont. Assessments. 20

Total Teaching Hrs: 60

UNIT I

15 Hrs

Programming Concepts: Algorithm and its characteristics, pseudo code / flow chart, program, identifiers, variables, constants, primitive data types, expressions, structured data types, arrays, compilers and interpreters.

UNIT II

15 Hrs

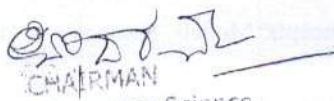
Basics of C: Overview of C, Developing Programs in C, Parts of Simple C Program, Structure of a C Program, Comments, Program Statements, C Tokens, Keywords, Identifiers, Data Types, Variables, Constants, Operators and Expressions, Expression Evaluation–precedence and associativity, Type Conversions. Input-Output: Non-formatted and Formatted Input and Output Functions, Escape Sequences.

Control Statements: Selection Statements – if, if-else, nested if, nested if-else, comma operator, conditional operator, switch; Iterative Statements–while, for, do-while; Special Control Statement–goto, break, continue, return, exit.

UNIT III

15 Hrs

Arrays and Strings: One-dimensional Arrays, Character Arrays, Functions from ctype.h, string.h, Multidimensional Arrays. **Functions:** Concept of Function, Using Functions, Call-by-Value Vs Call-by-reference, Passing Arrays to Functions, Scope of Variables, Storage Classes, Inline Functions, and Recursion. **Pointers:** Introduction, Address of Operator (&), Pointer, Uses of Pointers, Arrays and Pointers, Pointers and Strings, Pointers to Pointers, Array of Pointers, Pointer to Array, Dynamic Memory Allocation.


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Transaction Management: Transaction Support–Properties of Transactions, Database Architecture, Concurrency Control–The Need for Concurrency Control, Serializability and Recoverability, Locking Methods, Deadlock, Time Stamping Methods, Multi-version Timestamp Ordering, Optimistic Techniques, Granularity of Data Items, Database Recovery–The Need for Recovery, Transactions and Recovery, Recovery Facilities, Recovery Techniques, Nested Transaction Model.

Security: Database Security–Threats, Computer-Based Controls–Authorization, Access Controls, Views, Backup and Recovery, Integrity, Encryption, RAID.

References :

1. Thomas M. Connolly, Carolyn E. Begg, Database Systems–A Practical Approach to Design, Implementation, and Management (6e)
2. Sharon Allen, Evan Terry, Beginning Relational Data Modeling
3. Jeffrey A. Hoffer, V. Ramesh, Heikki Topi, Modern Database Management
4. Raghu Ramakrishna, Johannes Gehrke, Database Management Systems
5. Ramez Elmasri, Shamkant B. Navathe, Fundamentals of Database Systems
6. Abraham Silberschatz, Henry F. Korth, S. Sudarshan, Database System Concepts
7. C. Coronel, S. Morris, Peter Rob, Database Systems: Design, Implementation, and Management

Practical-IV: DSC 3D: Database Management Systems Lab

Practical: 4 Hrs./ Week

Credits: 02

Max Marks: 40

Cont. Assessments. 10

Lab. Assignments shall be carried out to implement the techniques/methods studied in Paper DSC 3D Database Management Systems.

SEC- 1(a) : Computer Oriented Statistical Methods

Teaching: 1 Hrs./ Week

Credits: 02

Max Marks: 30 Cont. Assessments.00

Total Teaching Hrs: 15

UNIT I

08 Hrs

Nature and scope of statistical methods and their limitations: Classification, Tabulation - Diagrammatic representation of various types of statistical data -Frequency curves and Lorenz curve.

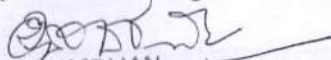
UNIT II

07 Hrs

Measures of Central tendency: Arithmetic means, Median, Mode – Merits and demerits - graphical solution of Median and Mode.

References:

1. Pillai, R.S.N, Bagavathi, V. (2009), Statistics, Theory and Practice, 7th Edition, S.Chand Ltd, New Delhi.
2. Gupta, S.P. (2011), "Applied Statistical Methods", 4th Edition, Sultan Chand Sons, New Delhi.
3. Ken Black, (2013), "Business Statistics for Contemporary Decision Making", 7th Edition, John Wiley


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Publications

4. Gupta S.P. and Kapoor, V.K., Fundamentals of Applied statistics, Sultan Chand & Sons 1996.
5. Gupta S.P. and Kapoor, V.K., Fundamentals of Mathematical statistics, Sultan Chand and Sons, 1995.
6. Graybill, Introduction to Statistics, McGraw.
7. Anderson, Statistical Modelling, McGraw.

Practical IA: SEC -1(a): Computer Oriented Statistical Methods Lab

Practical: 2 Hrs./ Week

Cont. Assessments. 10

Lab. Assignments shall be carried out to implement the techniques/methods studied in Paper SEC 1(a) Computer Oriented Statistical Methods Using C / SPSS .

SEC- 1(b): System Administration and Maintenance

Teaching: 1 Hrs./ Week

Credits: 02

Max Marks: 30 Cont. Assessments. 00

Total Teaching Hrs: 15

UNIT-I

7 Hrs

Linux: Basics of operating system, services. Installation and configuration, maintenance. What is a Linux Operating system, Kernel, API, cli, gui. Difference between Linux/Unix and other operating systems. Features and Architecture Linux features, advantages, disadvantages.

UNIT-II

8 Hrs

Windows: Windows as operating system, history, versions. PC hardware, BIOS, Devices and drivers. Kernal Configuration and building. Application installation, configuration and maintenance, Server services and Client services, Difference between Windows XP/windows7 and windows server 2003/2008.

References:

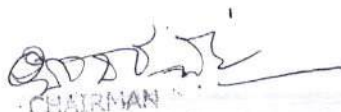
1. Linux Administration: A Beginner's Guide 6th Edition by Wale Soyinka Publisher: Mcgraw Higher Ed
2. Microsoft Windows Operating System Essentials by Tom Carpenter

Practical IA : SEC- 1(b): System Administration and Maintenance Lab

Practical: 2 Hrs./ Week

Cont. Assessments. 10

Lab. Assignments shall be carried out to implement the techniques/methods studied in Paper SEC 1(b) System Administration and Maintenance.


CHAIRMAN

DSE 3(a): Dot Net Programming

Teaching: 4 Hrs./ Week

Credits: 04

Max Marks: 80 Cont. Assessments. 20

Total Teaching Hrs: 60

UNIT I

15 Hrs

Overview of .NET framework, problems with the earlier languages and .NET solution. Overview of .NET binaries and .NET architecture. The role of Microsoft Intermediate Language and Metadata. Understanding Common Language Runtime, Common Type System and Common Language Specification. .NET base classes, overview of .NET Assemblies, .NET memory management.

UNIT II

15 Hrs

Introduction to Visual Studio .NET, Visual Studio .NET IDE. Building Visual Basic .NET application. VB.NET language fundamentals, object oriented Programming with VB.NET, cross language inheritance, Namespaces, accessing the registry. Interfaces and collections – Understanding interface-based Programming, building a custom enumerator, building a clone able object, comparable objects

UNIT III

15 Hrs

Introducing Windows Forms, GDI+ namespaces, Windows Form controls. Data access with ADO.NET – The need for ADO.NET, ADO.NET namespaces, ADO.NET managed providers, OLEDB managed providers, SQL managed providers, Accessing XML through ADO.NET.

UNIT IV

15 Hrs

Web development and ASP.NET – Problems with classic ASP. Benefits of ASP.NET, ASP.NET namespaces, architecture of ASP.NET web application. Building and understanding web services, anatomy of a web service, overview of web service namespaces, building a simple web service, Web Service Description Language (WSDL), generating a proxy with VB.NET. Deployment of a VB.NET application.

References:

1. Visual Basic .NET and the .NET platform – An Advanced Guide – Andrew Troelsen.
2. Programming Visual Basic .NET – Dave Grundgiger.
3. Teach Yourself Visual Basic .NET in 21 days – Duncan Mackenzie and Kent Sharkey
4. Introducing Microsoft .NET – David S. Platt
5. Database Access with Visual Basic .NET – Jeffrey P. McManis, Jackie goldstein and Kevin T. Price.
6. ASP.NET Projects – Building 10 Enterprise Projects – Eric A. Smith

Practical-V(a): DSE 3(a): Dot Net Programming Lab

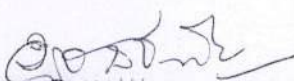
Practical: 4 Hrs./ Week

Credits: 02

Max Marks: 40

Cont. Assessments. 10

Lab. Assignments shall be carried out to implement the techniques/methods studied in Paper DSE 3(a) Dot Net Programming.


CHAIRMAN

DSE 3(b): Computer Networks and Internet Technologies

Teaching: 4 Hrs./ Week

Max Marks: 80 Cont. Assessments. 20

Credits: 04

Total Teaching Hrs: 60

UNIT-I

15 Hrs

Computer Networks: Introduction to computer network, data communication, components of data communication, data transmission mode, data communication measurement, LAN, MAN, WAN, wireless LAN, internet, intranet, extranet.

Network Models: Client/ server network and Peer-to-peer network, OSI, TCP/IP, layers and functionalities.

UNIT-II

15 Hrs

Transmission Media: Introduction, Guided Media: Twisted pair, Coaxial cable, Optical fiber. Unguided media: Microwave, Radio frequency propagation, Satellite. LAN Topologies: Ring, bus, star, mesh and tree topologies.

Network Devices: NIC, repeaters, hub, bridge, switch, gateway and router.

UNIT-III

15 Hrs

Internet Terms: Web page, Home page, website, internet browsers, URL, Hypertext, ISP, Web server, download and upload, online and offline

Internet Applications: www, telnet, ftp, e-mail, social networks, search engines, Video Conferencing, e-Commerce, m-Commerce, VOIP, blogs.

UNIT-IV

15 Hrs

Introduction to Web Design: Introduction to hypertext markup language (html) Document type definition, creating web pages, lists, hyperlinks, tables, web forms, Inserting images, frames, hosting options and domain name registration. Customized Features: Cascading style sheet (css) for text formatting and other manipulations.

References:

1. Andrew S. Tanenbaum, David J. Wetherall Computer Networks (5th Edition), PHI, 2010
2. B. A. Forouzan, Data Communication and Networking, TMH, 2003.
3. D.R. Brooks, An Introduction to HTML and Javascript for Scientists and Engineers, Springer
4. HTML A Beginner's Guide, Tata McGraw-Hill Education, 2009.
5. J. A. Ramalho, Learn Advanced HTML 4.0 with DHTML, BPB Publications, 2007

Practical-V(b): DSE 3(b): Computer Networks and Internet Technologies Lab

Practical: 4 Hrs./ Week

Max Marks: 40

Credits: 02

Cont. Assessments. 10

Lab. Assignments shall be carried out to implement the techniques/methods studied in Paper DSE 3(b) Computer Networks and Internet Technologies.

Note: Networking exercises in a trial lab, where effects of different connectors, topologies in practical could be demonstrated & Practical exercises based on concepts listed in theory using HTML.


CHAIRMAN

DSE 3(c): Multimedia Systems and Applications

Teaching: 4 Hrs./ Week

Credits: 04

Max Marks: 80 Cont. Assessments. 20

Total Teaching Hrs: 60

UNIT-I

15 Hrs

Multimedia: Introduction to multimedia, components, uses of multimedia, Multimedia applications, virtual reality.

Text: Fonts & Faces, Using Text in Multimedia, Font Editing & Design Tools, Hypermedia & Hypertext.

UNIT-II

15 Hrs

Images: Still Images – bitmaps, vector drawing, 3D drawing & rendering, natural light & colors, computerized colors, color palettes, image file formats.

Sound: Digital Audio, MIDI Audio, MIDI vs Digital Audio, Audio File Formats.

UNIT-III

15 Hrs

Video: How video works, analog video, digital video, video file formats, video Shooting and editing.

Animation: Principle of animations, animation techniques, animation file formats. Internet and Multimedia: www and HTML, multimedia on the web – web servers, Web browsers, web page makers and site builders.

UNIT-IV

15 Hrs

Making Multimedia: Stages of a multimedia project, Requirements to make good Multimedia, Multimedia Hardware - Macintosh and Windows production Platforms, Hardware peripherals - Connections, Memory and storage devices, Multimedia Software and Authoring tools.

References:

1. Tay Vaughan, "Multimedia: Making it work", TMH, Eighth edition, 2011
2. Ralf Steinmetz and Klara Naharstedt, "Multimedia: Computing, Communications Applications", Pearson, 1996.
3. Keyes, "Multimedia Handbook", TMH. 2000
4. K. Andleigh and K. Thakkar, "Multimedia System Design", PHI. 2000

Practical-V(c): DSE 3(c): Multimedia Systems and Applications Lab

Practical: 4 Hrs./ Week

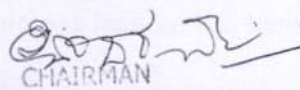
Credits: 02

Max Marks: 40

Cont. Assessments. 10

Lab. Assignments shall be carried out to implement the techniques/methods studied in Paper DSE 3(c) Multimedia Systems and Applications.

Note: Practical exercises based on concepts listed in theory using Presentation tools in office automation tool/ GIMP/Blender / Audacity/ Animation Tools/ Image Editors/ Video Editors.



CHAIRMAN

Dept. of Computer Science

SEC- 2(a): Information Security

Teaching: 1 Hrs./ Week

Credits: 02

Max Marks: 30 Cont. Assessments. 00

Total Teaching Hrs: 15

UNIT I

8 Hrs

Overview of Security: Protection versus security; aspects of security—data integrity, data availability, privacy; security problems, user authentication.

Security Threats: Program threats, worms, viruses, Trojan horse, trap door, stack and buffer overflow; system threats- intruders; communication threats- tapping and piracy.

UNIT II

7 Hrs

Cryptography: Substitution, transposition ciphers, symmetric-key algorithms Data Encryption Standard, advanced encryption standards, public key encryption -RSA; Diffie-Hellman key exchange, Message Authentication MAC, hash functions.

References:

1. W. Stallings, Cryptography and Network Security Principles and Practices, 4th Ed., Prentice-Hall of India, 2006.
2. C. Pfleeger and SL. Pfleeger, Security in Computing, 3rd Ed., Prentice-Hall of India, 2007.
3. D. Gollmann, Computer Security, John Wiley and Sons, NY, 2002.
4. J. Piwprzyk, T. Hardjono and J. Seberry, Fundamentals of Computer Security, Springer-Verlag Berlin, 2003.
5. J.M. Kizza, Computer Network Security, Springer, 2007.
6. M. Merkow and J. Breithaupt, Information Security: Principles and Practices, Pearson Education, 2006.

Practical IA : SEC -2(a): Information Security

Practical: 2 Hrs./ Week

Cont. Assessments.10

Lab. Assignments shall be carried out to implement the techniques/methods studied in Paper SEC 2(a) Information Security.

SEC- 2(b): XML Programming

Teaching: 1 Hrs./ Week

Credits: 02

Max Marks: 40 Cont. Assessments. 00

Total Teaching Hrs: 15

UNIT-I

07 Hrs

XML Programming introduction: Understanding Mark-up Languages, Introduction to XML and its Goals.

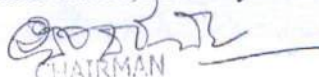
XML Basics: XML Structure and Syntax, Document classes and Rules.

UNIT-II

08 Hrs

Other XML Concepts: Scripting XML, XML as Data, Linking with XML.

XML with Style: XSL –Style Sheet Basics, XSL basics, XSL style sheets.


CHAIRMAN

DSE 6(b): Java Programming

Teaching: 4 Hrs./ Week

Credits: 04

Max Marks: 80 Cont. Assessments. 20

Total Teaching Hrs: 60

UNIT I

15 Hrs

Introduction to Java - Features of Java - Object Oriented Concepts - Data Types - Variables - Arrays - Operators - Control Statements-Input and output-Scanner and System class-print(),println(), and printf() methods.

UNIT II

15 Hrs

Classes - Objects - Constructors - Overloading method - Access Control - Static and fixed methods -Inner Classes - String Class - Inheritance - Overriding methods - Using super- Abstract class - Type Wrapper classes for primitive types - Auto boxing and auto Unboxing --Recursion.

UNIT III

15 Hrs

GUI components - Common GUI Event types and Listener Interfaces- JoptionPane - JLabel,Jtextfield, JButton,JCheckBox,JTextarea, JComboBox, JList, JPanel. - Mouse Event Handling -Adapter Classes- Key Event Handling.

Mouse Event Handling - Adapter Classes- Key Event Handling. Layout Managers - FlowLayout,BorderLayout, GridLayout.- Graphics contexts and graphics objects - color control - font control -Drawing lines, rectangles and ovals -jslider-using menus with frames.

UNIT IV

15 Hrs

Packages - Access Protection - Importing Packages - Interfaces - Exception Handling - Throw and Throws - Thread - Synchronization - Runnable Interface - Inter thread Communication - Multithreading.- file streams-Sequential file , Random file.

References:

1. Object Oriented Programming with JAVA, By Dr.M,T.Somashekara, PHI Learning 2017.
2. Programming in Java - 2nd Edition by C.Muthu, TMH Publication.
3. Java How to Program by Deitel & Deitel - 6 th Edition- PHI Publication 2005..

Practical-VI(b): DSE 6(b): Java Programming Lab

Practical: 4 Hrs./ Week

Credits: 02

Max Marks: 40

Cont. Assessments. 10

Lab. Assignments shall be carried out to implement the techniques/methods studied in Paper DSE 6(b) Java Programming.


CHAIRMAN
Dept. of Computer Science
Gulbarga University, Gulbarga

DSE 6(c): Web Technologies

Teaching: 4 Hrs./ Week

Credits: 04

Max Marks: 80 Cont. Assessments. 20

Total Teaching Hrs: 60

UNIT I

15 Hrs

Introduction to Web Design: Introduction to hypertext markup language (HTML) document type definition, creating web pages, graphical elements, lists, hyperlinks, tables, web forms, inserting images, Divisions, Sections.

UNIT II

15 Hrs

Customized Features: Cascading style sheets, (CSS) for text formatting and other manipulations, Types, Introduction to DHTML.

UNIT III

15 Hrs

JavaScript: Data types, operators, functions, control structures, events and event handling.
Query: Introduction, Basics, Selectors, Attributes.

UNIT – IV

15 Hrs

Bootstrap: Introduction, Environment, a simple web page using bootstrap template, Designing tables, forms, buttons.

References:

1. Ivan Bayross, "Web Enabled Commercial Application Development Using Html, Dhtml, javascript", Perl CGI, BPB Publications, 2009.
2. Ivan Bayross, "Web Enabled Commercial Application Development Using Html, Dhtml, javascript", Perl CGI, BPB Publications, 2009.
3. "BIG Java Cay Horstmann", Wiley Publication, 3rd Edition., 2009.

Practical-VI(c): DSE 6(c): Web Technologies Lab

Practical: 4 Hrs./ Week

Credits: 02

Max Marks: 40

Cont. Assessments. 10

Lab. Assignments shall be carried out to implement the techniques/methods studied in Paper DSE 6(c) Web Technologies.



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