



Koneru Lakshmaiah Education Foundation

(Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

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Campus: Green Fields, Vaddeswaram - 522 502, Guntur District, Andhra Pradesh, INDIA.

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XXIV Academic Council-Annexure 4

Department of Computer Science & Applications

Minutes of 4th Board Of Studies Meeting

The Department of Computer Science & Applications called for the 4th Board of Studies (BOS) meeting, scheduled to take place on the 27th of July 2018, starting from 11:00 a.m. onwards.

The following members attended the meeting:

1. Dr. C. M. Sheela Rani Professor, HOD-BCA KLEF, BOS Chairman.
2. Dr. Pranvir Singh Satvat, Dean Academics, KLEF BOS Patron.
3. Dr. G. Vijaya Kumar, Assoc Professor, KLEF, BOS Secretary.
4. Dr. M. Babu Reddy, Professor, Krishna University, External Member.
5. Dr. Satya Prasad, Professor, Acharya Nagarjuna University, External Member.
6. Mr. K. Srinivas, Software Engineer, Tech Mahindra External Member.
7. Mr. K. Tarun, CEO, Global Tech, Bangalore, External Member.
8. Mr. Hari Kiran Vega, Assoc. Dean Academics, KLEF, Internal Member.
9. Dr. K. Tirupathi Rao, Assoc. Dean Academics, KLEF, Internal Member.
10. Dr. MVVK Srinivas Prasad, Assoc. Dean Academics, KLEF, Internal Member.
11. Dr. KVVS Satyanarayana, Professor, CSE, KLEF Internal Members.
12. Mr. Abdul Mannan, Asst Professor, I Nurture, Internal Member.
13. Mr. Vishal Raj Asst, Professor, I Nurture, Internal Member.
14. Mr. B. V. Appa Rao, Prof. HOD Mathematics, KLEF, Internal Member.
15. Dr. J V Shanmuk Kumar, Prof, HOD Chemistry, KLEF, Internal Member.
16. Dr. Sabitha Kumari Francis Prof, HOD English KLEF Internal Member.
17. Mrs. Rajarajeshwari, Asst Professor, KLEF, Internal Member.
18. Mr. Bharath, Alumni, KLEF Internal Member.
19. Ms. Chandana, Alumni, KLEF, Internal Member.

Opening Remarks

Dr. C. M. Sheela Rani , Professor, HOD-BCA opened the meeting, welcoming all the attendees.

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Agenda 1:

To review the approvals of previous meeting minutes.

Discussion

- To ensure that action items assigned in the previous meeting have been accurately documented.
- Allow participants to share any additional comments or concerns related to the previous meeting minutes.

Resolutions:

- The minutes of the previous meeting were reviewed and approved unanimously.

Agenda 2:

Proposal to introduce course “Organization Management” for AY:2018-19 admitting batch based on the feedback received from stakeholders.

Discussion

- Faculty member Dr K. Srinivas from the Department of MBA suggested introducing management course “Organization Management”.
- The floor was opened for general discussion on broader curriculum changes.
- Members shared their perspectives on industry trends and academic requirements.

Resolutions:

- Members shared their perspectives on industry trends and academic requirements and a resolution was passed to add the course “**Organization Management**” and recommendation was forwarded to academic council for final approval.
- The detailed syllabus is shown in **ANNEXURE-1**.

Agenda 3:

Proposal to revise the syllabus for the Y18 batch courses admitting batch based on the feedback received from the stakeholders.

Discussion

- Industry expert Mr. K. Tarun suggested revising the course “Fundamental of information and communication technology” for the understanding of MS-office and Networking concepts.
- Industry expert Mr. K. Srinivas suggested restoring the course “Programming in C” which gives the basic programming knowledge for students.

[Signature]
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- Faculty member Mr. K. Rohit Kumar recommended revising the course “Computer Organization” as it is the basic course required for the students of Y18 admitted batch.
- Academic peer Dr. Satya Prasad suggested revising the course “Computer Networks” to meet the industry requirements.
- Faculty member Dr. M. N. V. Kiran Babu recommended revising the course “OOP through Java” considered a cutting-edge technology in industry.
- Industry person Mr. G. Kamalakar, suggested to revise the course “Data Structures Using C” to meet the industry needs.
- Industry person Mr. Sai Satish suggested to revise the course “Cryptography Fundamentals” and add new topics like “AES algorithm” in CTIS Y19 curriculum, it is proposed to offer the course in III semester of Y18 curriculum.
- Academic peer Dr. M. Babu Reddy recommended to add some topics in the course “Principles of Virtualization & Cloud Technology”.

List of Revised Courses:

S.No	Course code	Course Title	Course type	Percentage of Revision	Remarks
1	18CA1101	Fundamental of information Technology	Core	30	Based on feedback of industry expert
2	18CA1102	Programming in C	Core	35	Based on feedback of industry expert
3	18CA1103	Computer Organization	Core	40	Based on feedback of faculty
4	18CA1204	Computer Networks	Core	26	Based on stakeholder feedback
5	18CA1205	OOP through Java	Core	35	Based on feedback of faculty
6	18CA1206	Data Structures Using C	Core	28	Based on feedback of the industry expert
7	18CA2214	Cryptography	Core	10	Minor changes based on stakeholder feedback
8	18CA2107	Principles of Virtualization & Cloud Technology	Core	16	Minor changes based on stakeholder feedback

The detailed comparison of old syllabi and revised syllabi is shown in **Annexure-II**.

[Signature]
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Resolutions:

- A resolution was passed to approve the revision of topics to the Existing courses with minor changes.
- Revised versions of the following courses were accepted with major modifications suggested during the meeting and added as newly introduced courses.
- The Course Coordinator Dr. M. N. V. Kiran Babu has taken responsibility for implementing the proposed revisions to both Programming in C and Data Structures Using C as per Industrial requirements.

Action Taken:

- Dr. G. Vijaya Kumar, Associate Professor will circulate the revised courses for final approval from Academics.
- Dr. Pranvir Singh Satvat and Dr. C. M. Sheela Rani are collaborating to complete the finalization of curriculum changes for new courses introduced.


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BCA Course Structure for 2018-2019 Batch

Program structure (with all Courses) containing the following categorization.

Course Code	Course Name	Course Category	L	T	P	S	C	R	Pre-Requisite	New/Revised/Retained	Stakeholder Category	Justification for considering the feedback
18UC1101	Basic English	HSS	0	0	4	0	2		NA	Retained Course	NA	Able to Enhance communication skills.
15MT1105	Fundamentals of Mathematics	HSS	3	0	2	0	4		NA	Retained Course	NA	Able to solve the logical and problem-based solutions for Employability
18SC1105	Logic and Reasoning	BS	0	0	2	0	2		NA	Retained Course	NA	Problem Based learning which helps in gaining Aptitude Skills for employability.
18UC0009	Ecology & Environment	BS	2	0	0	0	2		NA	Retained Course	NA	Enhance Knowledge on Sustainability Development
18CA1101	Fundamentals of Information Technology	PC	2	0	4	0	4		NA	Revised Course	Industry Person	Enhance Knowledge on basic Computer Learning Concepts helps in creating documents, excel sheets for employability
18CA1102	Programming in C	PC	3	0	2	6	5		NA	Revised Course	Industry Person	Enhance Knowledge on Programming Skills for Employability


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18CA1103	Computer Organization	PC	3	0	0	0	3	NA	Revised Course	Faculty	Enhance Knowledge on the memory Organization and micro-operations helps for Employability
18UC1202	English Proficiency	HSS	0	0	4	0	2	NA	Retained Course	NA	Able to Enhance communication skills.
15MT1208	Computer-Oriented Statistical Methods	PC	3	0	2	0	4	NA	Retained Course	NA	Enhance Knowledge on statistical methods used to develop solution for the problem helps in employability.
18MB4055	Organization Management	PC	3	0	0	0	3	NA	Newly Introduced Course	Faculty	Enhance the Knowledge on interpersonal skills and basic deeds of Organization for Entrepreneurship.
18CA1204	Computer Networks	PC	3	0	2	0	4	NA	Revised Course	Academic Peer	Enhance Knowledge for Employability on the basic terminology of networks and layers used for the transmission of data from source to destination
18CA1205	OOP through Java	PC	3	0	2	4	5	NA	Revised Course	Faculty	Enhance Knowledge on Programming Skills for Employability
18CA1206	Data Structures Using C	PC	3	0	2	4	5	NA	Revised Course	Industry Person	Enhance more knowledge on the application Oriented using data structures for Employability

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18UC3206	Campus To Corporate	BSS	0	0	4	0	2	NA	RetainedCourse	NA	Enhance Knowledge on the interpersonal skills, behavioral skills, analytical skills for Employability and Entrepreneurship.
18UC0010	Universal Human Values and Professional Ethics	BSS	1	0	2	0	2	NA	RetainedCourse	NA	Human Values and Ethics are needed for a person to be successful in their career.
18CA2107	Principles of Virtualization& Cloud Technology	PC	3	0	2	4	5	NA	Revised Course	Industry Personnel	Enhance knowledge on cloud-based solutions enable remote access to resources for Employability
18CA2108	Operating Systems	PC	3	0	2	0	4	NA	RetainedCourse	NA	Enhancing knowledge is a fundamental skill that is highly valued in the IT industry.
18CA2109	Data Base Management Systems	PC	2	1	2	0	4	NA	RetainedCourse	NA	Enhance Knowledge on data management, analysis, and application development.
18CA2110	Web Technologies	PC	3	0	2	4	5	NA	RetainedCourse	NA	Enhance Knowledge on in HTML, CSS, JavaScript, and frameworks for Employability and Entrepreneurship
18UC2204	Aptitude Builder – 1	HSS	0	0	4	0	2	NA	RetainedCourse	NA	Problem Based learning which helps in gaining Aptitude Skills for employability.
18CA2211	Software Engineering	PC	2	0	2	0	3	NA	RetainedCourse	NA	Enhance Knowledge on SDLC and Metrics

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18CA2212	Fundamentals of Information Security	PC	2	2	0	0	4	NA	Retained Course	NA	Enhance knowledge on data breaches and cyber threats
18CA2213	Ethical Hacking	PC	2	2	2	0	5	NA	Retained Course	NA	Strengthening cybersecurity defenses and protecting organizations from malicious attacks for employability and Entrepreneurship
18CA2214	Cryptography	PC	3	1	0	0	4	NA	Revised Course	Industry Personnel	Enhance Knowledge on secure communication techniques that protect information for Employability
18CA2215	Fundamentals of Data Centre	PC	2	1	0	0	3	NA	Retained Course	NA	Enhance Knowledge on data centres are the backbone of modern computing infrastructure
18CA2216	Fundamentals of Cloud Storage	PC	3	2	0	0	5	NA	Retained Course	NA	Essential for employability in roles that involve managing, designing, and implementing cloud-based solutions
18UC3105	Aptitude Builder – 2	HSS	0	0	4	0	2	NA	Retained Course	NA	Problem Based learning which helps in gaining Aptitude Skills for employability.

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18CA3223	Introduction to Windows Azure	PC	2	0	2	0	3	NA	RetainedCourse	NA	Enhance knowledge on Azure techniques to store data on cloud for Employability
18CA3224	Big Data	PC	4	0	0	0	4	NA	RetainedCourse	NA	Able to know the Big Data Techniques of Hadoop, Map Reduce and more for Employability
18IE4048	Project	PC	0	0	18	0	9	NA	RetainedCourse	NA	Able to Analyze, Design and Develop Solutions for the problem for Employability and Skill Development

Percentage of Syllabus Revision = 27.12%

Percentage of Courses focusing on Employability= 74.42%

Percentage of Courses focusing on Entrepreneurship= 48.85%

Percentage of Courses focusing on Skill Development = 52.57%


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18CA3117	Computer Forensics	PC	2	2	2	0	5	NA	RetainedCourse	NA	Essential for employability in roles that involve managing, designing, and implementing cloud-based solutions
18CA3118	Virtualization& Cloud Security	PC	3	2	0	0	5	NA	RetainedCourse	NA	Focus on securing cloud environments, managing virtualized infrastructure, and ensuring data protection in cloud-based systems for Employability
18CA3119	IT Governance, Risk & Information Security Management	PC	3	2	0	0	5	NA	RetainedCourse	NA	Focus on Employability and Entrepreneurship ensuring the security, compliance, and effective management of IT systems and data
18CA3120	Server Operating System	PC	2	2	2	0	5	NA	RetainedCourse	NA	Enhance Knowledge with involve managing, configuring, and maintaining server infrastructure for employability
18FL3054	French Language	PC	2	0	0	0	2	NA	RetainedCourse	NA	Enhance Communication skills to manage for Skill Development and Entrepreneurship
18CA3222	Introductionto Wireless & VOIP technologies	PC	2	0	2	0	3	NA	RetainedCourse	NA	Enhance knowledge on Wireless and Voice over Internet Protocol for Employability

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ANNEXURE-I

NEW SYLLABUS:

18MB4055 - ORGANIZATION MANAGEMENT

Course Code: 18MB4055 **L-T-P-S:** 3-0-0-0 **Credits:** 3 **Pre-requisite:** Nil

Syllabus:

Development of Management thought – Introduction, Various theories; Functional approach, scientific management approach, human relations approach, latest management thoughts, organisation theory-classical organisation, neo-classical organisation theory, modern organisation theory. Organization Structure--Principles of organisation, organizational theories, departmentalism, authority, power, organizing, organizational effectiveness, structuring the organisation, organizational change, organisation charts; types of organisations—line, functional and line and staff relations, Organisational manuals.

Motivation, Morale, and behavioural science—Motivation: Characteristics, importance, Kinds of motivation. Thoughts of motivational philosophy: Gouglass Mc Gregore—X and Y theory; Herzberg's theory. Human needs, Incentive as motivators, Managing dissatisfaction and frustration. Morale, Absenteeism, Behavioural science, Group dynamics, Group behavior. Leadership—Meaning, importance, styles, theories, leaders Vs managers.

Management concept—Management, Administration, Organisation, Difference and Relationship between Management, Administration and Organisation, Importance of Management, Characteristics of management, Managerial Skills, Managerial Objectives, Harmonization of Objectives, Hierarchy of Objectives.

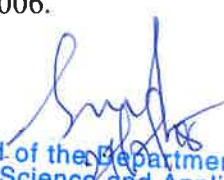
Industrial Relations, Trade Union, and Collective Bargaining—Industrial relations, Industrial Psychology, Industrial disputes, Conflict management, Views about conflict, Labor Policy. Worker's grievances, Suggestion system. Trade Unions. Collective Bargaining, Negotiations, Industrial Safety—working conditions, Accidents, Preventive measures, Safety training.

TEXTBOOKS

1. Stephen P. Robins, Organizational behavior, PHI / Pearson education, 11th edition, 2008.
2. Koontz & Wehrich., Essentials of Management, 12th edition, Tata Mc Grawhill, 2007.

REFERENCES

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2. O.P. Khanna, Industrial engineering management, Khanna publications, 2006.


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ANNEXURE-II

Comparison of Existing & New Syllabus of Revised Courses for AY:2018-19

S.N o	Course Code	Course Title	Existing Syllabus	New Syllabus	Topics added/removed/ replaced	Changes in Course Outcome (s)	Justifica tion for no change in percentag e of change in syllabus	Revision Percent age
1	18CA2214	CRYPTOG RAPHY	Introduction to Cryptography: The Confidentiality, Integrity & Availability (CIA) triad, Cryptographic concepts, methodologies & practices, Symmetric & Asymmetric cryptography, public & private keys, Cryptographic algorithms and uses, Construction & use of Digital signatures. Key Management: The basic functions involved in key management including creation, distribution, verification, revocation and	Introduction to Cryptography: Confidentiality, Integrity & Availability (CIA) Triad, Cryptographic concepts, methodologies & practices, Symmetric & Asymmetric cryptography, public & private keys, Cryptographic algorithms and uses, Construction & use of Digital signatures Types of Algorithms: The basic functionality of hash/cryptographic algorithms (DES, RSA, SHA, MD5, HMAC, DSA) and effects on key length concepts in Elliptical Curve Cryptography & Quantum Cryptography	Types of Algorithms: The basic functionality of hash/cryptographic algorithms (DES, RSA, SHA, MD5, HMAC, DSA) and effects on key length concepts in Elliptical Curve Cryptography & Quantum cryptography.	Added few topics to CO2	Industry person proposed to revise this course	10

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	destruction, storage, recovery, and life span and how these functions affect cryptographic integrity.	Application of Cryptography: Major key distribution methods and algorithms including Kerberos, ISAKMP etc., Vulnerabilities to cryptographic functions, the Use and functions of Certifying Authorities (CAs), Public key Infrastructure (PKI) and System architecture requirements for implementing cryptographic functions	Key Management: The basic functions involved in key management including creation, distribution, verification, revocation and destruction, storage, recovery, and life span and how these functions affect cryptographic integrity		
			Application of Cryptography: Major key distribution methods and algorithms including Kerberos, ISAKMP etc., Vulnerabilities to cryptographic functions, the Use, and functions of Certifying Authorities (CAs), Public Key Infrastructure (PKI) and System architecture requirements for implementing cryptographic functions		

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S.N	CourseCode	CourseTitle	Existing Syllabus	New Syllabus	Topics added/removed/replaced	Changes in Course Outcome(s)	Justification for change in percentage of change in syllabus	Revision Percent age
2	18CA2107	PRINCIPLES OF VIRTUALIZATION & CLOUD TECHNOLOGY	Introduction to cloud computing: Introduction to Cloud Computing, History and Evolution of Cloud Computing, Types of clouds, Private Public and hybrid clouds, Cloud architecture, Cloud computing infrastructure, Merits of Cloud computing, obstacles for cloud technology, Cloud vulnerabilities, Cloud challenges, Practical applications of cloud computing. Cloud Computing Companies and Migrating to Cloud:	Introduction to cloud computing: Introduction to Cloud Computing, History and Evolution of Cloud Computing, Types of clouds, Private Public and hybrid clouds, Cloud Computing architecture, Cloud computing infrastructure, Merits of Cloud computing, obstacles for cloud technology, Cloud vulnerabilities, Cloud challenges, Practical applications of cloud computing. Cloud Computing Companies and Migrating to Cloud :	Cloud computing delivery models and services(IaaS,PaaS,SaaS), Case Studies Development and Test Environment,Helping with Disaster Recovery	Added few topics to CO2 and CO3	Academic peer proposed to revise this course	16

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S.No	Course Code	Course Title	Existing Syllabus	New Syllabus	Topics added/removed/replaced	Changes in Course Outcome(s)	Justification for no change in percentage of change in syllabus	Revision Percentage
			Web-based business services, Delivering Business Processes from the Cloud: Business process examples, Broad Approaches to Migrating into the Cloud, The Seven-Step Model of Migration into a Cloud, Efficient Steps for migrating to cloud. Governance in the Cloud: Industry Standards Organizations and Groups associated with Cloud Computing, Need for IT governance in cloud computing, Cloud Governance Solution: Access	Web-based business services, Delivering Business Processes from the Cloud: Business process examples, Broad Approaches to Migrating into the Cloud, The Seven-Step Model of Migration into a Cloud, Efficient Steps for migrating to cloud. Risks: Measuring and assessment of risks, Complay concerns Risk Mitigation methodology for Cloud computing, Case Studie. Governance in the Cloud : Industry Standards Organizations and Groups associated with Cloud				

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S.No	Course Code	Course Title	Existing Syllabus	New Syllabus	Topics added/removed/replaced	Changes in Course Outcome(s)	Justification for no change in percentage of change in syllabus	Revision Percentage
			Controls, Financial Controls, Key Management and Encryption, Logging and Auditing, API integration. Legal Issues: Data Privacy and Security Issues, Cloud Contracting models, Jurisdictional Issues Raised by Virtualization and Data Location, Legal issues in Commercial Business Considerations	Computing, Need for IT governance in cloud computing, Cloud Governance Solution: Access Controls, Financial Controls, Key Management and Encryption, Logging and Auditing, API integration. Legal Issues: Data Privacy and Security Issues, Cloud Contracting models, Jurisdictional Issues Raised by Virtualization and Data Location, Legal issues in Commercial Business Considerations				

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S.No	Course Code	Course Title	Existing Syllabus	New Syllabus	Topics added/removed/replaced	Changes in Course Outcome(s)	Justification for no change in percentage of change in syllabus	Revision Percentage
			Virtualization Technologies: Server Storage I/O Virtualization, Network Client Virtualization, Client Virtualization, Application virtualization, Desktop virtualization, Understanding Virtualization Uses: Server Studying Consolidation. Deploying and Managing an Enterprise Desktop Virtualization Environment Configure the BIOS to	Virtualization and Virtualization Server Storage I/O Technologies: Server Storage I/O Virtualization, Network Client Virtualization, Client Virtualization, Application virtualization, Desktop virtualization, Understanding Virtualization Uses: Server Studying Consolidation, Development and Test Environments, Helping with Disaster Recovery Deploying and managing				

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S.No	Course Code	Course Title	Existing Syllabus	New Syllabus	Topics added/removed/replaced	Changes in Course Outcome(s)	Justification for no change in percentage of change in syllabus	Revision Percentage
			support hardware virtualization; Install and configure Windows Virtual PC: installing Windows Virtual PC on various platforms (32-bit, 64-bit), creating and managing virtual hard disks, configuring virtual machine resources including network resources, preparing host machines; create, deploy, and maintain images.	an Enterprise Desktop Virtualization Environment Configure the BIOS to support hardware virtualization; Install and configure Windows Virtual PC: installing Windows Virtual PC on various platforms (32-bit, 64-bit), creating and managing virtual hard disks, configuring virtual machine resources including network resources, preparing host machines; create, deploy, and maintain images				

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S.No	Course Code	Course Title	Existing Syllabus	New Syllabus	Topics added/removed/replaced	Changes in Course Outcome (s)	Justification for no change in percentage of change in syllabus	Revision Percentage
3	18CA1101	FUNDAMENTALS OF INFORMATION TECHNOLOGY	Unit I: Introduction to computers- Overview, Computers for Individual users, Computers for organizations, Computers in society; Components of a Computer-Hardware: Processing Devices, Memory Devices, I/O Devices, Storage Devices, Software: System software, Applications Software, Data & users.	Unit I: Introduction to computers- Overview, Computers for Individual users, Computers for organizations, Computers in society; Components of a Computer-Hardware: Processing Devices, Memory Devices, I/O Devices, Storage Devices, Software: System software, Applications Software, Data & users; Introduction to Windows- Creating, saving, deleting, and renaming a file in windows platform.	Windows- Creating, saving, deleting, and renaming a file in windows platform. , Editing Text in Documents, Viewing & Formatting Documents. MS-Excel – worksheets, Cell Referencing, Functions & Formulas, Chart.	Topics added to CO1,CO2,CO3	Industry proposed Revision of this Course	30

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			Introduction to Word Processing: Identifying the components of document window, Standard & Formatting Toolbars, Create, Open, save documents. Unit III: MS-Power Point - Creating & opening presentations, animation slide layout, animation schemes to slides. Unit IV: MS-Access - Creating & Managing Databases: Create tables, Managing Data in Access: Forms - Creating Forms, Data entry on Form; Working with reports;	Unit II: MS-Word - Introduction to Word Processing: Identifying the components of document window, Standard & Formatting Toolbars, Create, Open, save documents, Editing Text in Documents, Viewing & Formatting Documents. Unit III: MS-Power Point - Creating & opening presentations, slide layout, animation schemes to slides; MS-Excel - worksheets, Cell Referencing, Functions & Formulas, Chart. Unit IV: MS-Access - Creating & Managing Databases: Create tables,				

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4	18CA1102	PROGRAMMING IN C	Overview of Programming : Introduction to computer-based problem solving, Program design and implementation issues- Flowcharts & Algorithms, Top-down design & stepwise refinement. Fundamentals of C programming: Overview of C, Data Types, Constants & Variables, Operators & Expressions, Control constructs-if then,	Managing Data in Access: Forms - Creating Forms, Data entry on Form; Working with reports;	Programming environment – Machine language, assembly language, high level languages, Assemblers, Compilers, Interpreters. Advanced features- Typemodifiers and storageclass specifiers for data types, Bit operators, operator, &operator, * operator, Type casting, type conversion.	Few topics added to all CO's	Industry proposed Revision of this course	35

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			Expressions, Control constructs-if then, for, while Arrays- single & multidimensional arrays, Functions-fundamentals – general form, function arguments, return value, Basic I/O-arguments, return value, Basic I/O-formatted and Unformatted I/O, Advanced programming techniques: Control constructs- Do while, Switch statement, break, Functions-parameter passing, call by value and call by reference, calling functions with arrays, argc and argv, recursion- basic concepts, ex-towers of Hanoi	for, while Arrays- single & multidimensional arrays, Functions- fundamentals – general form, function arguments, return value, Basic I/O-formatted and Unformatted I/O, Advanced features- Type modifiers and storage class specifiers for data types, Bit operators, operator, &operator, * operator, Type casting, type conversion. Advanced programming techniques: Control constructs- Do while, Switch statement, break	Scope rules- Local & global variables, scope rules of functions, pointers to functions, function. returning pointers, Conditional compilation directives, C standard library and header files: Header files, string functions, mathematical functions, Date and Time functions			

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S.No	CourseCode	CourseTitle	Existing Syllabus	New Syllabus	Topics added/ removed/replaced	Changes in Course Outcome(s)	Justifica tion for no change in percentage of change in syllabus	Revision Percentage
			Dynamic data structures in C: Pointers- The & and *operators, pointer expression, assignments, arithmetic, comparison, malloc vs calloc, arrays of pointers, pointers to pointers, initializing pointers, Structures- Basics, declaring, structure referencing elements, array of structures, passing structures to functions, structure pointers, arrays and structures within structures, Unions - Declaration, uses, enumerated datatypes, typedef	and continue, exit() function, go to and label, Scope rules- Local & global variables, scope rules of functions, Functions-parameter passing, call by value and call by reference, calling functions with arrays, argc and argv, recursion- basic concepts, ex-towers of Hanoi Dynamic data structures in C: Pointers- The & and * operator, pointer expression, assignments, arithmetic, comparison, malloc vs calloc, arrays of pointers, pointers to pointers, initializing pointers, pointers to functions, function. returning pointers, Structures-Basics, declaring, referencing structure elements, array				

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1. The first step is to identify the problem or question that needs to be answered. This involves understanding the context and the specific information required.

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5	18CA1103	COMPUTER ORGANIZATION	UNIT 1 Introduction to Digital computers, Hardware and software's, Computer types, functional units, Data representation: number systems, decimal to binary, octal and hexadecimal conversion and vice versa, binary coded decimal numbers, hamming code for error detection, alphanumeric codes, arithmetic operations, binary addition and subtraction, addition/subtraction of numbers in 1's and 2's complement notation for binary numbers and 9's and 10's complement notation for decimal numbers, binary multiplication and division, BCD arithmetic, floating point	UNIT 1 Introduction to Digital computers, Hardware and software's, Computertypes, functional units, Data representation: number systems, decimal to binary, octal and hexadecimal conversion and vice versa, binary coded decimal numbers, hamming code for error detection, alphanumeric codes, arithmetic operations, binary addition and subtraction, addition/subtraction of numbers in 1's and 2's complement notation for binary numbers and 9's and 10's complement notation for decimal numbers, binary multiplication and division, BCD arithmetic, floating point addition and subtraction.	Data representation: number systems, decimal to binary, octal and hexadecimal conversion and vice versa, binary coded decimal numbers, transfer (three-stage bus buffers, memory transfer), (Binary Adder, Binary-adder-Subtractor, binary incrementer, arithmetic circuit), (list op logic micro-operations, hardware implementation) (Hardware implementation), (fetch and decode, types of instruction, register-reference instructions),	Major changes done to all CO's	Faculty member proposed to revise this course	40

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			addition and subtraction. UNIT II: Register Transfer Language: Bus and Memory transfer and Memory transfer arithmetic microoperations Logic micro-operation shift micro operations arithmetic logic shift unit. UNIT III: Instruction codes: (stored program	UNIT II Register Language: Register transfer, Bus and Memory transfer (three-stage bus buffers, memory transfer), arithmetic microoperations (Binary Adder, Binary-adder-Subtractor, binary incrementer, arithmetic circuit), Logic micro-operation (list op logic micro-operations, hardware implementations) shift microoperations (hardware implementation), arithmetic logic shift unit. UNIT III: Instruction codes: (stored program organization, indirect address), computer registers(common bus register), computer instructions	(Conditional branching, mapping of instructions, subroutine)			

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			organization, indirect address), computer registers (common bus register), computer instructions (instruction set completeness), timing and control, instruction cycle Micro programmed control, memory, addressing sequencing UNIT IV Memory organization and Central Processing Unit: Introduction, memory organization and its layers, general register organization (control word, examples of micro-operations), stack organization (register stack, memory stack, reverse polish notation, evaluation of arithmetic expressions), instruction formats (three-address	(instruction set completeness), timing and control, instruction cycle (fetch and decode, types of instruction, register-reference instructions), Micro programmed control, control memory, addressing sequencing (conditional branching, mapping of instructions, subroutine) UNIT IV Memory organization and Central Processing Unit: Introduction, memory organization and its layers, general register organization (control word, examples of micro-operations), stack organization (register stack, memory stack, reverse polish notation, evaluation of arithmetic expressions), instruction formats (three-address				

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			(register stack, memory stack, reverse polish notation, evaluation of arithmetic expressions), instruction formats (three-address instructions, two address instructions, one address instructions), addressing modes, data transfer and manipulation (data transfer instructions, data manipulation instructions, arithmetic instructions, logical and bit manipulation instructions, shift instructions), Program control (status bit conditions, conditional branch instructions, program interrupt, types of interrupts).	instructions, two address instructions, one address instructions), addressing modes, data transfer and manipulation (data transfer instructions, data manipulation instructions, arithmetic instructions, logical and bit manipulation instructions, shift instructions), Program control (status bit conditions, conditional branch instructions, program interrupt, types of interrupts).				

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7	18CA1204	COMPUTER NETWORKS	Networking Fundamentals: Basics of Network & Networking, Advantages of Networking, Types of Networks, Network Topologies, Types of Topologies, Logical and physical topologies, selecting the Right Topology, Types of Transmission Media, Communication Modes, Wiring Standards and Cabling- straight	Networking Fundamentals Basics of Network & Networking, Advantages of Networking, Types of Networks, Network Terms-Host, Workstations, Client, Node, Types of Network Architecture- Peer-to-Peer & Client/Server, Workgroup Vs. Domain. Network Topologies, Types of Topologies, Logical and physical topologies, selecting the Right Topology, Types of Transmission Media, Communication Modes, Wiring Standards and Cabling- straight through	Network Terms- Host, Workstations, Server, Client, Node, Types of Network Architecture- Peer-to-Peer & Client/Server, Workgroup Vs. Domain	Few topics added to all CO's	Academic peer proposed to revise this	26

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			through cable, crossover cable, rollover cable, media connectors (Fiber optic, Coaxial, and TP etc.) Introduction of OSI model, Seven layers of OSI model, Functions of the seven layers, Overview of Ethernet Addresses Basics of Network Devices Network Devices- NIC- functions of NIC, installing NIC, Switch, Bridge,	cable, crossover cable, rollover cable, media connectors (Fiber optic, Coaxial, and TP etc.) Introduction of OSI model, Seven layers of OSI model, Functions of the seven layers, Introduction of TCP/IP Model, TCP, UDP, IP, ICMP, ARP/RARP, Comparison between OSI model & TCP/IP model. Overview of Ethernet Addresses Basics of Network Devices Network Devices- NIC- functions of NIC, installing NIC, Hub, Switch, Bridge,	Introduction of TCP/IP Model, TCP, UDP, IP, ICMP, ARP/RARP, Comparison between OSI model & TCP/IP model.			

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S.No	CourseCode	CourseTitle	Existing Syllabus	New Syllabus	Topics added/ removed/replaced	Changes in Course Outcome(s)	Justifica tion for no change in percentage of change in syllabus	Revision Percentage
			Router, Gateways, And Other Networking Devices, Repeater, CSU/DSU, and modem, Data Link Layer: Ethernet standards, Ethernet Components, Point-to-Point Protocol (PPP), PPP standards, Address Resolution Protocol, Message format, Wireless transactions, Wireless Networking: Wireless Technology, Benefits of Wireless Technology, Types of Wireless Networks: Ad-hoc mode, Infrastructure mode, Wireless network	Router, Gateways, And Other Networking Devices, Repeater, CSU/DSU, and modem, Data Link Layer: Ethernet standards, Ethernet Components, Point-to-Point Protocol (PPP), PPP standards, Address Resolution Protocol, Message format, Wireless transactions, Wireless Networking: Wireless Technology, Benefits of Wireless Technology, Types of Wireless Networks: Ad-hoc mode, Infrastructure mode, Wireless network	Ethernet standards, Ethernet Components, Point-to-Point Protocol (PPP), PPP standards,			

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			Components: Wireless Access Points, Wireless NICs, wireless LAN standards: IEEE 802.11a, IEEE 802.11b, IEEE 802.11g, wireless LAN modulation techniques, wireless security Protocols: WEP, WPA, 802.1X, Installing a wireless LAN Basics of Network, Transport and Application Layers Network Layer: Internet Protocol (IP), IP standards, versions, functions, IPv4 addressing, IPv4 address	Components: Wireless Access Points, Wireless NICs, wireless LAN standards: IEEE 802.11a, IEEE 802.11b, IEEE 802.11g, wireless LAN modulation techniques, wireless security Protocols: WEP, WPA, 802.1X, Installing a wireless LAN Basics of Network, Transport and Application Layers Network Layer: Internet Protocol (IP), IP standards, versions, functions, IPv4 addressing, IPv4 address Classes, IPv4 address	Installing a wireless LAN			

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			Classes, IPv4 address types, Subnet Mask, Default Gateway, Public & Private IP Address, methods of assigning IP address, IPv6 address, types, assignment, Data encapsulation, The IPv4 Datagram Format, The IPv6 Datagram Format, The Internet Control Message Protocol (ICMP), Internet Group Management Protocol (IGMP), Introduction to Routing and Switching concepts, Transport Layer: Control Protocol (TCP), User Datagram Protocol (UDP),	types, Subnet Mask, Default Gateway, Public & Private IP Address, methods of assigning IP address, IPv6 address, types, assignment, Data encapsulation, The IPv4 Datagram Format, The IPv6 Datagram Format, Internet Control Message Protocol (ICMP), ICMPv4, Internet Group Management Protocol (IGMP), Introduction to Routing and Switching concepts Transport Layer: Transmission Control Protocol (TCP), User Datagram Protocol				

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			User Datagram Protocol (UDP), Overview of Ports & Sockets, Application Layer: DHCP, DNS, HTTP/HTTPS, FTP, Telnet, SMTP, POP3/IMAP, NTP WAN Technology What Is a WAN? WAN Switching, WAN Switching techniques Circuit Switching, Packet Switching etc., Connecting to the Internet : PSTN, ISDN, DSL, CATV, Satellite-Based Services, Last Mile Fiber, Cellular Technologies, Connecting LANs:	(UDP), Overview of Ports & Sockets, Application Layer: DHCP, DNS, HTTP/HTTPS, FTP, Telnet, SMTP, POP3/IMAP, NTP WAN Technology What Is a WAN? WAN Switching, WAN Switching techniques Circuit Switching, Packet Switching etc., Connecting to the Internet : PSTN, ISDN, DSL, CATV, Satellite-Based Services, Last Mile Fiber, Cellular Technologies, Connecting LANs:	Connecting to the Internet: PSTN, ISDN, DSL, CATV			

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			Connecting LANs : Leased Lines, Packet SONET/SDH, Remote Switching, Remote Access: Dial-up Remote Access, Virtual Private Networking, SSL VPN, Remote Terminal Emulation, Network Operating Systems and Troubleshooting Network Operating Systems: Microsoft Operating Systems,	Leased Lines, Packet SONET/SDH, Remote Switching, Remote Access: Dial-up Remote Access, Virtual Private Networking, SSL VPN, Remote Terminal Emulation, Network security: Authentication and Authorization, Tunneling and Encryption Protocols, IPsec, SSL and TLS, Firewall, Other Security Appliances, Security Threats Network Operating Systems and Troubleshooting Network Network	Networksecurity: Authentication and Authorization, Tunneling and Encryption Protocols, IPsec, SSL andTLS, Firewall, Other Security Appliances, Security Threats			

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			Novell NetWare, UNIX and Linux Operating Systems, Macintosh Networking, Troubleshooting Networks: Command-Line interface Tools, Network and Internet Troubleshooting, Basic Network Troubleshooting Model,	Operating Systems: Microsoft Operating Systems, Novell NetWare, UNIX and Linux Operating Systems, Macintosh Networking, Troubleshooting Networks: Command-Line interface Tools, Network and Internet Troubleshooting, Basic Network Troubleshooting : Troubleshooting Model, identify the affected area, probable cause, implement a solution, test the result, recognize the potential effects of the solution, document the solution, Using Network				

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			identify the affected area, probable cause, implement a solution, test the result, recognize the potential effects of the solution, document the solution, Using Network Utilities: ping, traceroute, arp, nslookup, netstat, nbtstat, Hardware trouble shooting tools, system monitoring tools	Utilities: ping, traceroute, tracert, ipconfig, arp, nslookup, netstat, nbtstat, Hardware trouble shooting tools, system monitoring tools				

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8	18CA1205	OBJECT ORIENTED PROGRA MMING THROUGH H JAVA	Introduction to Java History, Overview of Java, Object Oriented Programming, A simple Program, two control statements - if statement, for loop, Data types: Integers, Floating point, characters, Boolean, A closer look at Literals, Variables, Type conversion and casting, Automatic promotion in Expressions Arrays. Operators: Arithmetic operators, The Bit wise operators, Relational Operators, Boolean operators, Logical	Introduction to Java History, Overview of Java, Object Oriented Programming, A simple Program, two control statements - if statement, for loop, using Blocks of codes, Lexical issues - White space, identifiers, Literals, comments, separators, Java Key words. Data types: Integers, Floating point, characters, Boolean, A closer look at Literals, Variables, Type conversion and casting, Automatic type promotion in Expressions Arrays. Operators: Arithmetic operators, The Bit wise operators, Relational Operators, Boolean operators, Logical Assignment Operator, Operator Precedence.	using Blocks of codes, Lexical issues - White space, identifiers, Literals, comments, separators, Java Key words.	Few topics added to all CO's	Faculty member proposed to revise this course	35

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			Assignment Operator, Operator Precedence. Control Statements: Selection Statements -if, Switch: Iteration Statements - While, Do-while, for Nested loops, Jump statements. Classes and objects Class Fundamentals, Declaring objects, Assigning object reference Assigning object reference variables, Methods, constructors, "this" keyword, finalize () method A stack class, Over loading methods, using objects as parameters, Argument passing, Returning objects, Access	Control Statements: Selection Statements - if, Switch: Iteration Statements - While, Do-while, for Nested loops, Jump statements. Classes and objects Class Fundamentals, Declaring objects, Assigning object reference variables, Methods, constructors, "this" keyword, finalize () method A stack class, Over loading methods, using objects as parameters, Argument passing, Returning objects, Recursion, Access	A stack class			

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			passing, Returning objects, Recursion, Access control, Introducing final, understanding static, Introducing Nested and Inner classes, Using command line arguments. Inheritance: basics, Using super, method overriding, Dynamic method Dispatch, using abstract classes, using final with Inheritance. Java Packages Definition, Access protection packages, Interfaces: Definition implementing interfaces. Exception Handling: Fundamental, Exception types, Using try	control, Introducing final, understanding static, Introducing Nested and Inner classes, Using command line arguments. Inheritance: Inheritance basics, Using super, method overriding, Dynamic method Dispatch, using abstract classes, using final with Inheritance. Java Packages Definition, Access protection packages, Interfaces: Definition implementing interfaces. Exception Handling: Fundamental, Exception types, Using try				

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			interfaces. Exception Handling: Fundamental, Exception types, Using try and catch, Multiple catch clauses, Nested try Statements, throw, throws, finally, Java's Built - in exception, using Exceptions. Multithreaded Programming in Java The Java thread model, The main thread, Creating a thread, Creating multiple threads, Using isalive() and Join(), Thread - Priorities, Synchronization, Inter thread communication,	and catch, Multiple catch clauses, Nested try Statements, throw, throws, finally, Java's Built - in exception, using Exceptions. Multithreaded Programming in Java The Java thread model, The main thread, Creating a thread, Creating multiple threads, Creating multiple threads, Using isalive() and Join(), Thread - Priorities, Synchronization, Inter thread communication,	Using isalive() and Join(),			

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			multiple threads, Thread Priorities, Synchronization, Inter thread communication, suspending, resuming and stopping threads, using multi-threading. 1/0 basics, reading control input, writing control output, Reading and Writing files, Applet Fundamentals, the AWT package, AWT Event handling concepts	suspending, resuming and stopping threads, using multi-threading. 1/0 basics, reading control input, writing control output, Reading and Writing files, Applet Fundamentals, the AWT package, AWT Event handling concepts The transient and volatile modifiers, using instance of using assert. JAVA Database Connectivity (JDBC): Database connectivity: JDBC architecture, JDBC Drivers, the JDBC API: loading a driver,	The transient and volatile modifiers, using instance of using assert. JAVA Database Connectivity (JDBC): Database connectivity: JDBC architecture, JDBC Drivers, the JDBC API: loading a driver,			

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				connecting to a database, Creating and executing JDBC statements,Handling SQL exceptions,Accessing result sets:Types of result sets, Methods of result set interface. An example JDBC application to querya database.	connecting to a database, Creating and executing JDBC statements, Handling SQL exceptions, Accessing result sets: Types of result sets, Methods of result set interface. An example JDBC application to querya database.			


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9	18CA1206	DATA STRUCTU RES USING C	Introduction to Data structures: Definition, Classification of data structures: primitive and non-primitive, data Elementary organization, Time and space complexity of an algorithm (Examples), String processing.	Introduction to Data structures: Definition, Classification of data structures: primitive and non-primitive, Elementary data organization, Time and space complexity of an algorithm (Examples), String processing. Dynamic memory allocation and pointers: Definition of dynamic memory allocation, Accessing the address of a variable, Declaring, and initializing pointers, Memory Allocation functions: malloc(), calloc(), free() and realloc().	Dynamic memory allocation and pointers: Definition of dynamic memory allocation, Accessing the address of a variable, Declaring, and initializing pointers, Memory Allocation functions: malloc(), calloc(), free() and realloc().	Changes in all CO's	Industry Person Proposed to Revise the course to add the topics related to industry needs.	28


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			Accessing a variable through its pointer, Meaning of static and dynamic memory allocation, Recursion in C (advantages), Writing Recursive programs- Binomial coefficient, Fibonacci, GCD. Searching and Sorting: Basic Search Techniques: Sequential search, Binary search.	through its pointer, Meaning of static and dynamic memory allocation, Memory allocation functions: malloc (), calloc(), free() and realloc(). Recursion: Definition, Recursion in C (advantages), Writing Recursive programs – Binomial coefficient, Fibonacci, GCD. Searching and Sorting: Basic Search Techniques: Sequential search: Iterative and Recursive methods, Binary search: Iterative and Recursive methods, Comparison between sequential and	Sequential search: Iterative and Recursive methods, Binary search: Iterative and Recursive methods,			

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			Comparison between sequential and binary search. Sort: General background and definition, Bubble sort, Selection sort, Insertion sort, Merge sort, Quick sort Stack and Queue: Stack - Definition, Array representation of stack, Operations on stack: Infix, prefix and postfix notations, Conversion of an arithmetic expression from Infix to postfix, Applications of stacks. Queue: Definition, Array representation of queue, Types of queue: Simple queue, Circular queue, Double ended queue	binary search. Sort: General background and definition, Bubble sort, Selection sort, Insertion sort, Merge sort, Quick sort Stack and Queue: Stack - Definition, Array representation of stack, Operations on stack: Infix, prefix and postfix notations, Conversion of an arithmetic expression from Infix to postfix, Applications of stacks. Queue: Definition, Array representation of queue, Types of queue: Simple queue, Circular queue, Double ended queue	Conversion of an arithmetic expression from Infix to postfix, Applications of stacks.			


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S.No	Course Code	Course Title	Existing Syllabus	New Syllabus	Topics added/ removed/ replaced	Changes in Course Outcome (s)	Justifica tion for no change in percenta ge of change in syllabus	Revision Percent age
			queue, Types of queue: Simple queue, Circular queue, Double ended queue (deque), Priority queue, Operations on all types of Queues. Linked List: Definition, Components of linked list, Representation of linked list, Advantages and Disadvantages of linked list. Types of linked list: Singly linked list, doubly linked list, Circular linked list, Operations on singly linked list: creation,	(deque), Priority queue, Operations on all types of Queues. Linked List: Definition, Components of linked list, Representation of linked list, Advantages and Disadvantages of linkedlist. Types of linked list: Singly linked list, doubly linked list, Circular linked list, Operations on singly linked list: creation, insertion, deletion, search and display. Tree Graphs and their Applications: Definition :				


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			insertion, deletion, search and display. Tree Graphs and their Applications: Definition: Tree, Binary tree, Complete binary tree, Binary search tree, Heap Binary tree: Array representation of tree, Creation of binary tree. Traversal of Binary Tree: Preorder, Inorder and postorder. Graphs, Application of Graphs, Depth First search, Breadth First search.	Tree, Binary tree, Complete binary tree, Binary search tree, Heap, Tree terminology: Root, Node, Degree of a node and tree, Terminal nodes, non-terminal nodes, Siblings, Level, Edge, Path, depth, Parent node, ancestors of a node. Binary tree: Array representation of tree, Creation of binary tree. Traversal of Binary Tree: Preorder, Inorder and postorder. Graphs, Application of Graphs, Depth First search, Breadth First search.	Tree terminology: Root, Node, Degree of a node and tree, Terminal nodes, non-terminal nodes, Siblings, Level, Edge, Path, depth, Parent node, ancestors of a node.			

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Department of Computer Applications

Minutes of the DAC meeting held on 07-07-2018.

1. Analyzing the feedback from students, course coordinators, parents and academic peers on curriculum.
2. To discuss proposals to bring changes in the curriculum for the academic year 2018-19.

Meeting attended by :

S.No	FULL NAME	DESIGNATION	WORK PLACE	POSITION
1	Dr C M Sheela Rani	Professor	KLEF	CHAIRMAN
2	Mr Hari Kiran Vege	Assoc. Dean Academics	KLEF	Internal Members
3	Dr K Tirupathi Rao	Professor	KELF	Internal Members
4	Dr K V S Satyanarayana	Professor	KELF	Internal Members
5	Dr G Vijaya Kumar	Assoc. Professor	KELF	Internal Members
6	Dr V Siva Rao	Asst Professor	KELF	Internal Members
7	Mr Pradeep	Asst Professor	KELF	Internal Members
8	Dr. Veerabhadra Babu	Assoc. Professor	iNurture	Internal Members
9	Mr Abdul	Asst Professor	iNurture	Internal Members
10	Mr Vishal	Asst Professor	iNurture	Internal Members
11	Mr Akhil	Asst Professor	iNurture	Internal Members
12	Mrs K. Rajarajeswari	Asst Professor	KELF	Internal Members

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Recommendations:

1. Dr K V S Satyanarayana, professor discussed about the need of skill sessions such that L T P structure is be changed to L T P S.
2. To include Skill hours in C Language, Linux Programming, OOPS through java and Data structures.
3. To Merge "Principles of virtualization" and "cloud computing" as single course.
4. "Fundamentals of Storage" Should be in III semester only, "Principles of Vitalization" should be moved to IV semester.
5. To introduce "Technical Proficiency II" as per industry requirements.
6. To Introduce "foreign Language" in V sem.
7. Industry person Mr. Sai Satish suggested to revise the course "Cryptography Fundamentals" and add new topics AES algorithm in CTIS Y19 curriculum, it is proposed to offer the course in III semester of Y18 curriculum.
8. Academic peer Dr. M. Babu Reddy recommended to add some topics in course "Virtualization & Cloud Technology".
9. Industry person Mr. K. Tarun suggested revising the course "Fundamental of information and communication technology" for the understanding of MS-office and Networking concepts.
10. Industry person Mr. K. Srinivas suggested revising the course "Programming in C" which gives the basic programming knowledge for students.
11. Faculty member Mr. K. Rohit Kumar recommended revising the course "Computer Organization" as it is the basic course required for the students of Y18 admitted batch.
12. Academic peer Dr. Satya Prasad suggested revising the course "Computer Networks".

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13. Faculty member Dr. M. N. V. Kiran Babu recommended revising the course "OOD through Java" which is a cutting edge technology in



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industry.

14. Industry person Mr. G. Kamalakur, suggested to introduce to revise the course "Data Structures Using C".

15. Faculty member Dr K. Srinivas from MBA department suggested introducing management elective course "Organization Management".

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