

School of Engineering and Technology
Department of Computer Science and Engineering
Curriculum Feedback Analysis 2022-23

The Department of Computer Science and Engineering revises its curriculum for the programs offered every year based on the relevant trends in industry and emerging technologies by considering the feedback provided by all its stakeholders on the curriculum. This report is an analysis of the feedback collected from the various stakeholders like students, alumni, faculty members, parents and industry experts. This report shall be forwarded to the Department Curriculum Design and Development Cell (CDC) for consideration while revising the curriculum.

This academic year feedback was collected from a total of 153 students, 23 faculty members, 47 alumni, 10 employers and 17 parents. This feedback was analyzed and this report contains the analysis and recommendations to CDC based on the analysis carried out.

Student Feedback on Curriculum

A total of 153 students took the curriculum feedback survey. The questionnaire and the number of responses for each year of study was as follows

All Years of Study (UG & PG)					
Total Number of Students Participated in the Survey : 612 students					
Questions	Excellent	Very Good	Good	Average	Needs Improvement
Does the content of the curriculum satisfy the stated objectives and learning outcomes?	124	298	148	26	16
Does the curriculum cover advanced topics?	107	263	163	60	19
Is the curriculum effective in developing critical/analytical thinking?	113	298	139	45	17
Whether the curriculum enhances your knowledge and skills in the relevant domain?	116	288	146	47	15
Are the textbooks and reference materials relevant to the content of the curriculum?	116	268	157	53	18
Does the curriculum orient towards higher education?	105	301	140	50	16
Does the curriculum enable the students to apply their knowledge in real-life situations?	114	256	165	54	23
Is employability given weightage in the design and development of curriculum?	103	269	160	59	21
Does the curriculum promote self-study and attitude of research?	117	292	144	44	15
Does the curriculum meet your overall expectations?	104	277	161	50	20

The above table is a representation of the feedback responses given by the students as per the questionnaire.

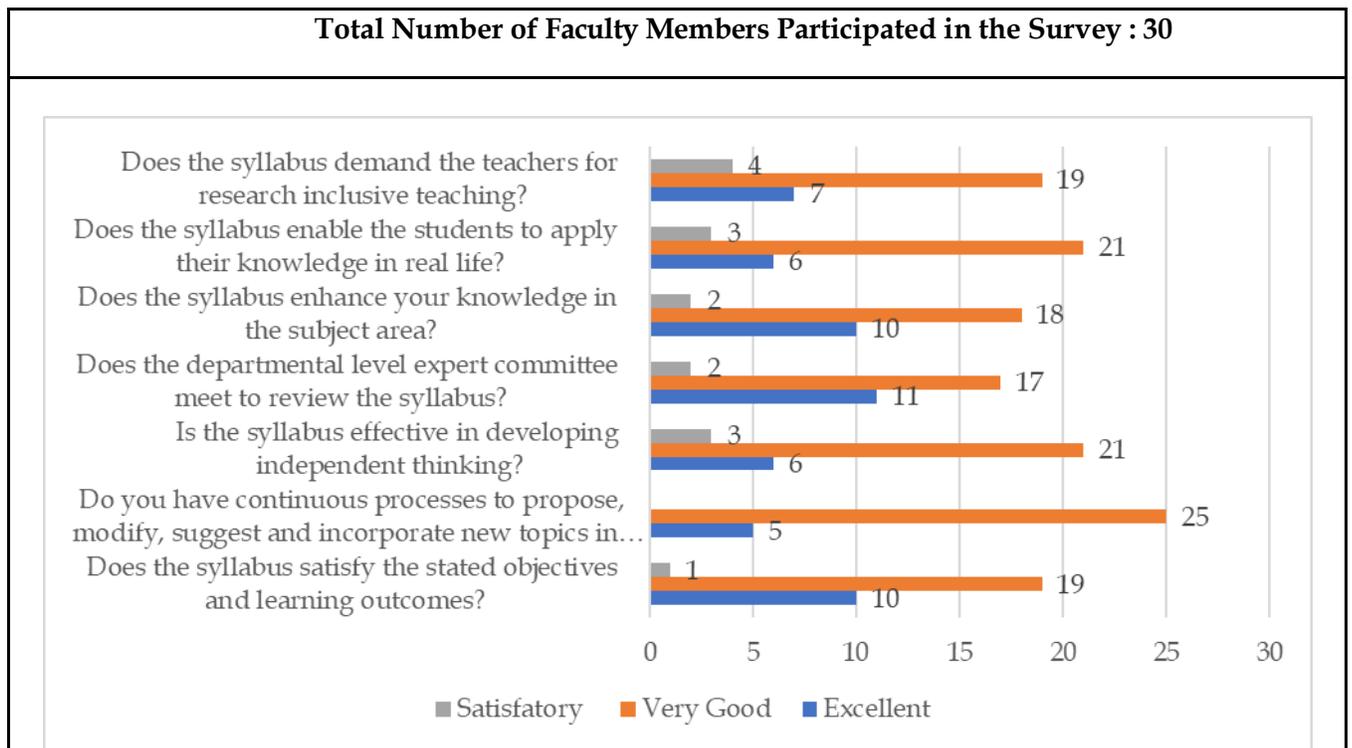
The graph given below depicts the overall expectation meeting of the students from all years as far as syllabus is concerned. From the feedback it can be seen, where 90% of the students are satisfied with the curriculum being offered. However, when the General comments and suggestions were analyzed, the following were the main points given by the students

- In the curriculum of B.Tech in Computer Science and Engineering and M.Tech in Computer Science and Engineering, no major concerns were present based on the feedback.
- The students under specialization program such as CSE(AIML), CSE(DS), CSE(IOT) & M.Tech(DS) has given concerns on the specialization core course and relevant credits.

Faculty Feedback on Curriculum

Faculty members are the backbone of any higher education institution and their feedback is very important to analyse the curriculum and to update it as per the necessity. As a practice, the department takes feedback from every course handling faculty member and the below section is an analysis of the same.

The questionnaire floated with 60 faculty members concentrated on the below questions and also on suggestions/ recommendations for the courses handled by them in the odd/even semester of 2022- 23 . The synopsis of the same is given below



Based on the feedback of the faculty members, there was a need for restructuring the course structure for B.Tech in UG programs and M.Tech DS. This was due to courses having certain pre-requisites falling in the same semester of study. This was deliberated by the members of CDC and the course structure was recommended to be changed for M.Tech in DS.

Since the UG program undergoes NEP 2020 policy and structure level implementation, the UG program structure have undergone increase in credits, curriculum structure change and NEP policy inclusion.

However, the the UG (CSE / CSE specialization and IT) & PG (CSE) structure for the existing batch of students remain the same, still the course level syllabus content updation stands application of them. Change in syllabus has been recommended by CDC and submitted in annexure for the BOS 2023 approval.

Feedback from Alumni.

The feedback were also collected from Alumni, who are one of our stakeholders and also BOS Members. Few majorly observed suggestions are

1. To improve Programming and Logical Thinking among the students
2. To make use of Kaggle and codersearth websites to improve the designing pattern and learn the real time problem solving.
3. Certifications and project works are equally important to showcase their technical and softskills during the placements.

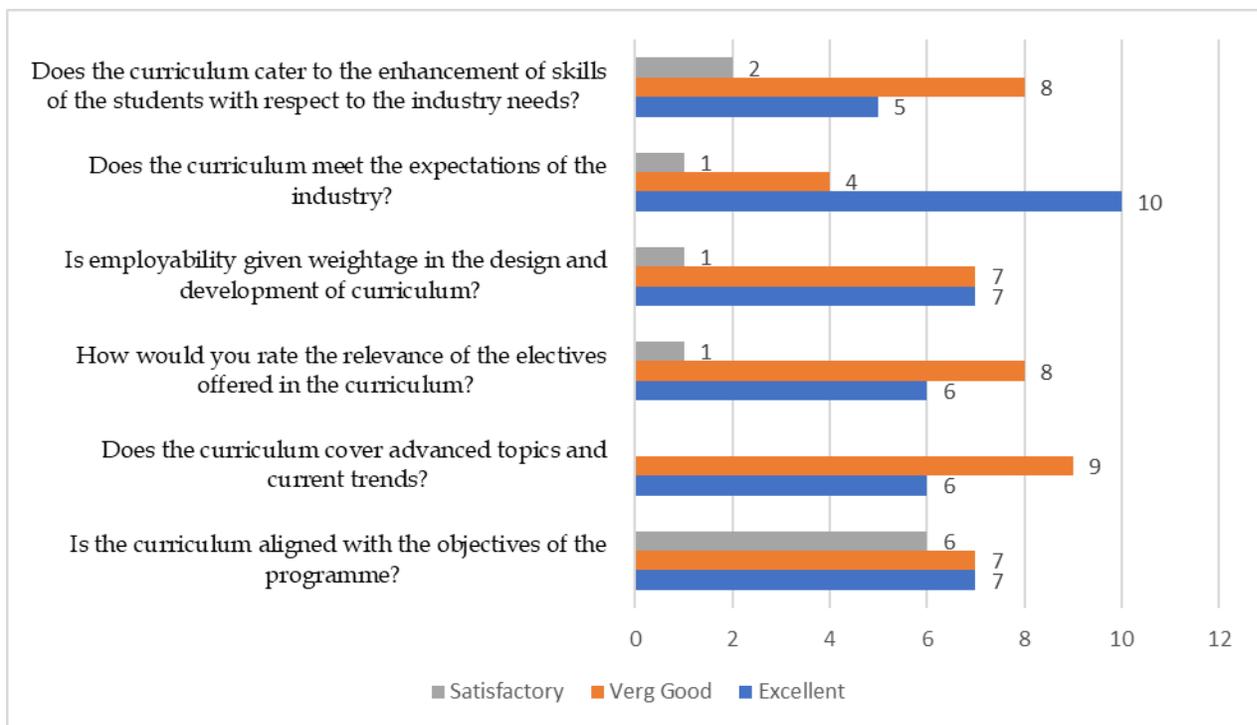
Total Number of Alumni Participated in the Survey : 33 (2016 to 2021)					
Questions	Excellent	Very Good	Satisfactory	Average	Needs to Improve
Is the syllabus updated on a regular basis depending on the current trends and advanced topics?	4	17	8	0	4
Does the syllabus orient towards higher education?	5	12	9	3	4
Does the syllabus provide employability weightage?	1	18	9	3	2
Does the syllabus meet the expectations of the industry?	4	10	11	7	1
Does the syllabus enable the students to connect the knowledge to real life application?	4	12	10	6	1
Does the syllabus encourage entrepreneurship?	4	10	8	6	5
Do you think that the syllabus motivates the students for research and development?	5	10	9	6	3

Feedback from Industry Expert and Academic Expert

In addition to the above feedback collected from faculty members, feedbacks were also collected from alumni, employers and parents. The major suggestions as given by these stakeholders areas follows

1. Inclusion of more hands on training in the trending areas like artificial intelligence and machine learning.
2. To increase credits for Project work. Project work to concentrate on the specialization
3. Certifications and real time projects could improve the skillset and placement opportunity
4. Constant programming practices throughout the course of study.
5. Observed the eligibility criteria for MTech in DS is allowed from other stream of study, in such case the Level of core course deliberations should begin from beginner level and end in expert level. In most cases prerequisite courses may not fit. Alternate solution to be looked for compensation.

Total Number of Industry and Academic Experts participated survey : 15



Feedback from Parents

Total Number of parents participated survey : 12			
Questions	Excellent	Very Good	Satisfactory
Does the syllabus orient the students toward higher education?	7	5	-
Is employability given weightage in the design and development of the syllabus?	8	4	-
Is the syllabus have component on value based education?	6	6	-
Does the syllabus have components to serve the needs of the society?	6	6	-
Does the syllabus promote self-study and attitude of research?	6	6	-
Does the syllabus help the students to enhance their personality?	7	4	1

This analysis report on all the feedbacks collected from the students, faculty members, alumni and verticals shall be presented to the Department CDC for discussion and deliberation to be recommended to the Department Board of Studies for the academic year 2023-24 to be held in the month of February/ March 2023.



CDC Coordinator



HEAD of the Department



School of Engineering and Technology
Department of Computer Science and Engineering
Action Taken Report on Curriculum Feedback Analysis 2022-23



The Department of Computer Science and Engineering collects analyses and takes action based on the feedback received from all the stakeholders as far as curriculum is concerned. The stakeholders from whom the feedback is collected are

1. Students
2. Teachers
3. Alumni
4. Parents
5. Industry Experts / Academic Experts

The Curriculum Design and Development Cell (CDC) of the Department initiates this feedback collection, also analyses the same, and prepares a feedback analysis report on the curriculum every academic year. These are then proposed to the Department Board of Studies (BoS) for their approval to be included in the curriculum for the subsequent academic year.

This report highlights the action taken in the below mentioned courses which have been revised as per the feedbacks received from the stakeholders.

K. Balachandran



Semester: I

Course: Computer Programming

Course Code: CS134P/CS234P

Unit	Existing Syllabus	Proposed Syllabus	Reasons for Change	Remarks
Unit-1	Unit-1 Algorithms and Flowcharts, Constants, Variables and Datatypes, Operators Algorithms and flowcharts: Algorithms, Flowcharts, Examples on algorithms and flowcharts. Basic structure of a C program, C Tokens, Data types. Declaration of variables. Operators: Arithmetic operators, Relational operators, Logical operators, Assignment operators, Increment and Decrement operators, Conditional operator, Bitwise operators, Special operators, Arithmetic expressions, Evaluation of expressions, Precedence of Arithmetic operators, Type conversions in expressions, Operator precedence and associatively	Unit 1: Algorithms and Flowcharts, Constants, Variables and Data types, Operators Algorithms and flowcharts: Algorithms, Flowcharts, Examples on algorithms and flowcharts. Basic structure of a C program, C Tokens, Data types. Declaration of variables. Operators: Arithmetic operators, Relational operators, Logical operators, Assignment operators, Increment and Decrement operators, Conditional operator, Bitwise operators, Special operators, Arithmetic expressions, Evaluation of expressions, Precedence of Arithmetic operators, Type conversions in expressions, Operator precedence and associativity, Coding Ethics and Coding Standards.	Based on stakeholders feedback	Applicable for Batch 2023
Unit-3	Unit-3 Arrays, User Defined Functions Arrays: One-dimensional Arrays, Declaration of one-dimensional Arrays, Initialization of one-dimensional Arrays, Two-dimensional Arrays, Initializing two dimensional Arrays. User-defined functions: Need for User-defined Functions, A multi-function Program, Elements of user - defined Functions, Definition of Functions, Return Values and their types, Function Calls, Function Declaration, Category of Functions, No Arguments and no Return Values, Arguments but no Return	Unit 3: Arrays, User Defined Functions Arrays: One-dimensional Arrays, Declaration of one-dimensional Arrays, Initialization of one-dimensional Arrays, Two-dimensional Arrays, Initializing two dimensional Arrays. User-defined functions: Need for User-defined		

<p>Unit-4</p>	<p>CSE(DS)_2022_26 B.Tech - CSE-(Data Science)-2022-26 Values, Arguments with Return Values, No Argument but Returns a Value, Functions that Return Multiple Value, recursion -recursive functions, Limitations of recursion. Storage Class Specifiers</p> <p>Unit-4 Pointers String concepts: declaration and initialization, String I/O functions, Array of strings, String manipulation function. Understanding the pointers, Accessing the Address of a Variable, Declaring Pointer Variables, Initialization of Pointer Variables, Accessing a Variable through its Pointer, Pointer Expressions, Pointer Increments and Scale Factor, Pointers and Arrays, Pointers and Character Strings, Pointers as Function Arguments. Dynamic Memory Allocation;</p>	<p>Functions, A multifunction Program, Elements of user - defined Functions, Definition of Functions, Return Values and their types, Function Calls, Function Declaration, Category of Functions, No Arguments and no Return Values, Arguments but no Return Values, Arguments with Return Values, No Argument but Returns a Value, Functions that Return Multiple Value, recursion - recursive functions, Limitations of recursion.</p> <p>Unit 4: Strings, Pointers String concepts: declaration and initialization, String I/O functions, Array of strings, String manipulation function. Understanding the pointers, Accessing the Address of a Variable, Declaring Pointer Variables, Initialization of Pointer Variables, Accessing a Variable through its Pointer, Pointer Expressions, Pointer Increments and Scale Factor, Pointers and Arrays, Pointers and Character Strings, Pointers as Function Arguments</p>		
<p>Unit-5</p>	<p>Unit-5 Strings, Derived Types, Files Basic of structures, structures and Functions, Arrays of structures, structure Data types, type definition. Unions Files: Defining, opening and closing of files, Input and output operations, Standard Library Functions for Files</p>	<p>Unit 5: Structures, Unions and Files Basic of structures, structures and Functions, Arrays of structures,</p>		

		structure Data types, type definition, Unions, Overview of UI/UX design, Demonstration of gcc compiler for compiling C codes.		
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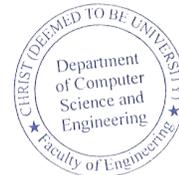
Semester: IV

Course: Operating System

Course Code: CS432P/CSE432P

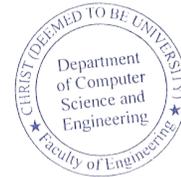
Unit	Existing Syllabus	Proposed Syllabus	Reasons for Change	Remarks
UNIT-3	Process Synchronization: Background, The Critical Section Problem, Peterson's Solution, Synchronization Hardware, Semaphores, Classical Problems of Synchronization, Monitors, Synchronization Examples	Process Synchronization: Background, The Critical Section Problem, Peterson's Solution, Synchronization Hardware, Semaphores, Classical Problems of Synchronization, Monitors, Synchronization Examples, Deadlocks.	Based on stakeholders feedback and subject experts suggestions.	Applicable for Batch 2022

K. Balachandran



	Coordinate Generation, Texture Objects.	Installing & epic games Launcher, Starter Content, Learn Tab, Marketplace Tab, Library Tab, Vault Cache, Actors and geometry. Components, Tools and editors, Unreal editor Interface, Assets and packages, Coordinate Space Terminology, Directory Structure.		
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K. Balachandran



Semester: III

Course: Computer Networks

Course Code: CS531P/CSE435P

Unit	Existing Syllabus	Proposed Syllabus	Reasons for Change	Remarks
UNIT-1	Unit-1 DATA COMMUNICATIONS Components - Direction of Data flow - networks - Components and Categories - types of Connections - Topologies - Protocols and Standards - ISO / OSI model - Transmission Media - Coaxial Cable - Fiber Optics - Line Coding - Modems - RS232 Interfacing sequences.	Unit-1 DATA COMMUNICATIONS - Proposed Introduction- Data communications: Components - Data Flow - Networks - Physical Structures - Network Types - Protocol Layering - TCP/IP Protocol Suite - OSI Model	To accommodate recent industry-based concepts	Applicable for 2022,2021 Batch
UNIT-2	Unit-2 DATA LINK LAYER Error - detection and correction - Parity - LRC - CRC - Hamming code - low Control and Error control - stop and wait - go back-N ARQ - selective repeat ARQ- sliding window - HDLC. - LAN - Ethernet IEEE 802.3 - IEEE 802.4 - IEEE 802.5 - IEEE 802.11 - FDDI - SONET - Bridges. Unit-4 TRANSPORT LAYER Duties of transport layer -	Data and Signals - Digital Signals- Data Rate Limits- Performance- Digital Transmission - Digital to Digital Conversion- Line coding -Line coding Schemes -Transmission Media UNIT -2 Data-Link Layer-Proposed Introduction - Link Layer Addressing - Error Detection and		

<p>UNIT-4</p>	<p>Multiplexing - Demultiplexing - Sockets - User Datagram Protocol (UDP) - Transmission Control Protocol (TCP) - Congestion Control - Quality of services (QOS) - Integrated Services.</p> <p>Unit-5 APPLICATION LAYER</p>	<p>Correction-Cyclic Codes- Check sum- Forward Error correction -Data Link Layer Protocols- Automatic Repeat (ARQ) protocols -Stop and Wait, Go-back-N, Selective Repeat, HDLC, PPP</p>		
<p>UNIT-5</p>	<p>Domain Name Space (DNS) - SMTP - FTP - HTTP - WWW - Security - Cryptography-Case study.</p>	<p>Medium Access Control - Random Access Protocols -CSMA/CD, CSMA/CA, Channelization -FDMA- TDMA-CDMA, Wired LANs: IEEE Project 802.3, IEEE 802.4 - IEEE 802.5, Wireless LAN- IEEE Project 802.11, WiMAX -IEEE Project 802.16</p> <p>Introduction - Network- Layer Services- Packet Switching- Network- Layer Performance- IPv4 Addresses - Internet Protocol (IP)- IPV4 , ICMP V4, ARP, IPv6 , Subnetting</p> <p>Routing</p>		

		<p>Introduction - Routing Algorithms- Distance Vector Routing, Link State Routing, Path Vector Routing, Unicast Routing Protocols- RIP, OSPF, BGP -NAT</p> <p>Unit-4 Transport Layer - Proposed</p> <p>Transport Layer Protocols- UDP</p> <p>Introduction - Services, Port Numbers, User Datagram Protocol- User Datagram, UDP Services, UDP Applications</p> <p>Transport Layer Protocols TCP, SCTP</p> <p>Transmission Control Protocol- TCP Services, TCP features- TCP Connection- TCP Congestion control - SCTP - SCTP Services, SCTP Features , Packet Format, Flow Control To Improve Qos</p>		
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		<p>Unit-5 APPLICATION LAYER -Proposed</p> <p>Application Layer</p> <p>Introduction - DNS- SMTP- DHCP- FTP- HTTP-Telnet</p> <p>Cryptography and Network Security- Security Goals- Attacks- Confidentiality - Concepts of symmetric and asymmetric key cryptography-RSA, Sharing of symmetric keys - Diffie Hellman - Firewalls.</p> <p>Foundations of Modern Networking- Introduction: Software Defined Networking - SDN Architecture, Virtualization, The Internet of Things- Components.</p>		
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Semester: VI
Course: Compiler Design
Course Code: CS632P/CSE532

Unit	Existing Syllabus	Proposed Syllabus	Reasons for Change	Remarks
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UNIT-1	<p>Unit-1 INTRODUCTION TO COMPILERS Translators-Compilation and Interpretation-Language processors -The Phases of Compiler-Errors encountered in Different Phases-The Grouping of PhasesCompiler Construction Tools - Programming Language basics.</p> <p>Unit-2 LEXICAL ANALYSIS Need and Role of Lexical Analyzer-Lexical Errors-Expressing Tokens by Regular Expressions- Converting Regular Expression to DFA-Minimization of DFA-Language for Specifying LexicalAnalyzers-LEX-Design of Lexical Analyzer for a sample Language.</p> <p>Unit-3 SYNTAX ANALYSIS Need and Role of the Parser-Context Free Grammars -Top Down Parsing -General Strategies- Recursive Descent Parser Predictive Parser-LL(1) ParserShift Reduce Parser-LR Parser-LR (0)Item-Construction of SLR Parsing Table -Introduction to LALR</p>	<p>Unit-1 INTRODUCTION TO COMPILERS</p> <p>Introduction- Structure of a compiler – Lexical Analysis – Role of Lexical Analyzer – The Phases of Compiler- Grouping of the phases - Errors in different phases - Input Buffering – Specification of Tokens – Recognition of Tokens – Lex – Finite Automata – Regular Expressions to Automata – Minimizing DFA.</p> <p>Unit-2 SYNTAX ANALYSIS</p> <p>Role of Parser – Grammars – Error Handling – Context-free grammars – Writing a grammar – Top Down Parsing – Recursive Descent Parser - Predictive Parser - Bottom Up Parser - SR Parser , LR Parser - SLR – CLR -</p>	Based on stakeholders feedback and Suggestion given by Program and Course Coordinator	Applicable for Batch 2023,2022 and 2021
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	<p>Parser - Error Handling and Recovery in Syntax Analyzer- YACC-Design of a syntax Analyzer for a Sample Language</p> <p>Unit-4 SYNTAX DIRECTED TRANSLATION & RUN TIME ENVIRONMENT Syntax directed Definitions- Construction of Syntax Tree- Bottom-up Evaluation of S- Attribute Definitions- Design of predictive translator - Type Systems Specification of a simple type checker- Equivalence of Type Expressions-Type Conversions. RUN-TIME ENVIRONMENT: Source Language Issues- Storage Organization Storage Allocation- Parameter Passing- Symbol Tables-Dynamic Storage Allocation-Storage Allocation in FORTAN.</p> <p>Unit-5 CODE OPTIMIZATION AND CODE GENERATION Principal Sources of Optimization-DAG- Optimization of Basic Blocks- Global Data Flow Analysis- Efficient Data Flow</p>	<p>LALR – Error Handling and Recovery in Syntax Analyzer- Case study : YACC</p> <p>Unit-3 INTERMEDIATE CODE GENERATION</p> <p>Syntax Directed Definitions, Evaluation Orders for Syntax Directed Definitions, Intermediate Languages: Syntax Tree, Three Address Code, Types and Declarations, Translation of Expressions, Type Checking.</p> <p>Unit 4 RUN-TIME ENVIRONMENT AND CODE GENERATION</p> <p>Storage Organization, Stack Allocation Space, Access to Non-local Data on the Stack, Heap Management – Issues in Code Generation – Design of a simple Code Generator - Incremental Design: A Case Study of a compiler</p>		
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	Algorithms-Issues in Design of a Code Generator - A Simple Code Generator Algorithm.	Unit-5 CODE OPTIMIZATION Principal Sources of Optimization – Peephole optimization – DAG- Optimization of Basic Blocks-Global Data Flow Analysis – Efficient Data Flow Algorithm.		
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Semester: VI

Course: Internet of Things

Course Code: CS631P

Unit	Existing Syllabus	Proposed Syllabus	Reasons for Change	Remarks
3	IoT Architecture Web of Things versus Internet of Things - Two Pillars of the Web - Unified Multitier WoT Architecture, Cloud Providers and Systems, The Cloud of Things Architecture. IoT Protocols: Application Protocols, Service Discovery Protocols, Infrastructure Protocols,	Title 3: IoT Architecture Web of Things versus Internet of Things - Two Pillars of the Web - Unified Multitier WoT Architecture, Cloud Providers and Systems, The Cloud of Things Architecture. IoT Protocols: Application Protocols, Service Discovery Protocols, Infrastructure Protocols, IoT Data Link Protocols, Network Layer Routing		

		Protocols, Network Layer Encapsulation Protocols, Session Layer Protocols.		
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Semester: VII

Course: Database Administration

Course Code: CS744E02

Unit	Existing Syllabus	Proposed Syllabus	Reasons for Change	Remarks
UNIT-5	Overview of extraction loading and Transformation, Loading Data: Using the SQL Loader Utility, Using External Tables to Load Data. Overview of Common Techniques used for Transforming Data, Introduction to Data Pump Technology - Benefits, Uses and Components of Data Pump. Access method, Data Pump Files, Privileges, Mechanics of Data Pump Job. Backing Up Oracle Databases: Backup Terms, Guidelines, Strategies, Examining Flash Recovery Area - benefits of Flash	Data Loading, Backup & Recovery & Database Performance Tuning Overview of extraction loading and Transformation, Loading Data: Using the SQL Loader Utility, Using External Tables to Load Data. Overview of Common Techniques used for Transforming Data, Introduction to Data Pump Technology - Benefits, Uses and Components of Data Pump. Access method, Data Pump Files, Privileges, Mechanics of Data Pump Job. Backing Up Oracle Databases: Backup Terms, Guidelines,	To accommodate recent industry based concepts	Applicable for 2022,2021,2020

	<p>recovery Area, Looking into Flash Recovery Area, Setting size of Flash Recovery Area Creating Flash Recovery Area, Backing up Flash Recovery Area, RMAN - Benefits, Architecture, Connecting to RMAN. SQL Query Optimization: Approach to Performance Tuning, Optimizing Oracle Query Processing, Cost-based Optimizer, Drawbacks of CBO. SQL Performance Tuning Tools - EXPLAIN PLAN, Autotrace, SQL Trace and TKPROF. Tuning the instance: Introduction, Automatic Tuning vs. Dynamic Views. Tuning Oracle Memory: Tuning Shared Pool - Library Cache, Dictionary Cache, Hard vs. Soft Parsing, Sizing Shared Pool, Tuning Buffer Cache -</p>	<p>Strategies, Examining Flash Recovery Area - benefits of Flash recovery Area, Looking into Flash Recovery Area, Setting size of Flash Recovery Area Creating Flash Recovery Area, Backing up Flash Recovery Area, RMAN - Benefits, Architecture, Connecting to RMAN. SQL Query Optimization: Approach to Performance Tuning, Optimizing Oracle Query Processing, Cost-based Optimizer, Drawbacks of CBO. SQL Performance Tuning Tools - EXPLAIN PLAN, Autotrace, SQL Trace and TKPROF. Tuning the instance: Introduction, Automatic Tuning vs. Dynamic Views. Introduction to iSQL*Plus: Installation, configuration, Starting and Stopping iSQL*Plus, Logging into and disconnecting from</p>		
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	Sizing buffer Cache, Multiple pools for Buffer Cache, Tuning Large, Streams and Java Pools. Introduction to iSQL*Plus: Installation, configuration, Starting and Stopping iSQL*Plus, Logging into and disconnecting from iSQL*Plus. Case study.	iSQL*Plus. Case study.		
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Semester: VII

Course: Research Methodology

Course Code: CS744E05

Unit	Existing Syllabus	Proposed Syllabus	Reasons for Change	Remarks
Unit-5	Unit-5 INTERPRETATION AND REPORT WRITING Meaning Of Interpretation, Technique of Interpretation: Precaution in Interpretation, Significance of Report Writing, Different Steps in Writing Report, Layout of the Research Report, Types of Reports, Oral Presentation, Mechanics	Unit-5 INTERPRETATION AND REPORT WRITING Meaning Of Interpretation, Technique of Interpretation: Precaution in Interpretation, Significance of Report Writing, Different Steps in Writing Report, Layout of the Research Report, Types of Reports, Oral	Suggestion given by Program and Course Coordinator	Applicable for 2022,2021,2020

	of Writing a Research Report, Precautions for Writing a Research Report, Case study.	Presentation, Mechanics of Writing a Research Report, Precautions for Writing a Research Report, Research report writing using Latex. Case study.		
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Semester: VII

Course: Simulation and Modeling

Course Code: CS743E03

Unit	Existing Syllabus	Proposed Syllabus	Reasons for Change	Remarks
Unit-3	Unit-3 DESIGN OF SIMULATION EXPERIMENTS Problem formulation, data collection and reduction, time flow mechanism, key variables, logic flow chart, starting condition, run size, experimental design consideration, output analysis and interpretation validation.	Unit-3 DESIGN OF SIMULATION EXPERIMENTS : Problem formulation, data collection and reduction, time flow mechanism, key variables, logic flow chart, starting condition, run size, experimental design consideration, Splitting and Sampling Techniques, output analysis and interpretation validation	To accommodate recent industry based concepts	Applicable for 2022,2021,2020
Unit-4	Unit-4 SIMULATION LANGUAGES Comparison and selection of simulation languages, study of anyone simulation	Unit-4 Systems Models : Deep learning models like ANN and CNN Models		

	language.	and Reinforcement learning models		
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Semester: VIII

Course: Grid Computing

Course Code: CS745E04

Unit	Existing Syllabus	Proposed Syllabus	Reasons for Change	Remarks
Unit 1	.	Comparison of Grid Computing and Cloud Computing	To accommodate recent industry based concepts	Applicable for 2022,2021,2020

Semester: VIII

Course: Quantum Computing

Course Code: CS745E01

Unit	Existing Syllabus	Proposed Syllabus	Reasons for Change	Remarks
Unit 1	Unit-1 FUNDAMENTAL CONCEPTS Global Perspectives, Quantum Bits, Quantum Computation, Quantum Information, Quantum Circuits - Universal Quantum Gates - Postulates of Quantum Mechanisms.	Title 1 : Fundamental Concepts Global Perspectives, Linear algebra and Dirac notation, , Quantum Bits, Quantum Computation, Properties of Quantum Algorithms, Quantum Information, Postulates of Quantum Mechanisms. Experiment 1: Implementation of superposition, interference and entanglement	To accommodate recent industry based concepts and based on stakeholders feedback	Applicable for 2022,2021,2020

Unit 2	<p>Unit-2 QUANTUM COMPUTATION</p> <p>Quantum Circuits - Quantum algorithms, Single Orbit operations, Control Operations, Measurement, Universal Quantum Gates, Simulation of Quantum Systems, Quantum Fourier transform, Phase estimation, Applications, Quantum search algorithms - Quantum counting - Speeding up the solution of NP - complete problems - Quantum Search for an unstructured database.</p>	<p>Title 2: Quantum Computation</p> <p>Quantum Gates and Quantum Circuits, Quantum States, Representation of Quantum States, Control Operations, Measurement, Simulation of Quantum Systems, Quantum Fourier transform, Quantum Phase estimation, Quantum search algorithms, Quantum counting Algorithms, Models of Computation, Analysis of Computational Problems.</p> <p>Experiment 1: Grover's Search Algorithms</p>	To accommodate recent industry based concepts and based on stakeholders feedback	Applicable for 2022,2021,2020
	<p>Unit-3 QUANTUM COMPUTERS</p> <p>Guiding Principles, Conditions for Quantum Computation, Harmonic Oscillator</p>	<p>Title 3: Quantum Information</p> <p>Classical Noise and Markov Processes, Quantum noise and Quantum Operations - Representations,</p>	To accommodate recent industry based concepts and based on stakeholders feedback	Applicable for 2022,2021,2020

	Quantum Computer, Optical Photon Quantum Computer - Optical cavity Quantum electrodynamics, Ion traps, Nuclear Magnetic resonance.	Examples, Applications of Quantum operations, Limitations of the Quantum operations formalism, Distance Measures for Quantum information. Experiment 2: Quantum Random Number Generation		
	Unit-4 QUANTUM INFORMATIONS Quantum noise and Quantum Operations - Classical Noise and Markov Processes, Quantum Operations, Examples of Quantum noise and Quantum Operations - Applications of Quantum operations, Limitations of the Quantum operations formalism, Distance Measures for Quantum information.	Title 4: Quantum Error Correction Introduction, The Shor code, Theory of Quantum Error - Correction, Constructing Quantum Codes, Stabilizer codes, Fault - Tolerant Quantum Computation, Entropy and information - Shannon Entropy, Basic properties of Entropy, Von Neumann, Strong Sub Additivity, Data Compression, Entanglement as a physical resource. Case study. Experiment 3: Constructing Quantum Codes for encoding and	To accommodate recent industry based concepts and based on stakeholders feedback	Applicable for 2022,2021,2020

		decoding information		
	Unit-5 QUANTUM ERROR CORRECTION Introduction, Shor code, Theory of Quantum Error -Correction, Constructing Quantum Codes, Stabilizer codes, Fault - Tolerant Quantum Computation, Entropy and information - Shannon Entropy, Basic properties of Entropy, Von Neumann, Strong Sub Additivity, Data Compression, Entanglement as a physical resource. Case study.	Title 5: Quantum Cryptography Classical Cryptography - Symmetrical Cryptosystem, Asymmetrical Cryptosystem, Quantum Key Distribution - No-Cloning Theorem, The BB84 Protocol, The Ekert Protocol, Real-World Implementation - Polarisation Encoding, Polarisation Entanglement, The "Venus von Willendorf" Experiment. Experiment 5: Quantum Key Distribution	To accommodate recent industry based concepts and based on stakeholders feedback	Applicable for 2022,2021,2020

Semester: 6

Course: Soft Computing

Course Code: AIML634

Unit	Existing Syllabus	Proposed Syllabus	Reasons for Change	Remarks
Unit 3	Unit-3 OPTIMIZATION ALGORITHMS What is an Algorithm? Newton's Method, Formulation of	Unit 3: OPTIMIZATION ALGORITHMS No-Free-Lunch Theorems, Nature-	Suggestion given by Program and Course Coordinator	Applicable for Batch 2022

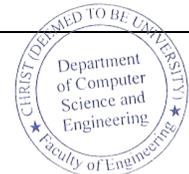
	<p>Optimization Problems, Optimization Algorithms: Gradient-Based Algorithms and Hill Climbing with Random Restart, Search for Optimality, No-Free-Lunch Theorems, Nature-Inspired Metaheuristics, A Brief History of Metaheuristics. Analysis of Optimization Algorithms: Exploration and Exploitation</p>	<p>Inspired Algorithms, A Brief History of Metaheuristics. Analysis of Optimization Algorithms: Exploration and Exploitation. Classification of Nature-Inspired Algorithms.</p>		
Unit 5	<p>Unit 5: APPLICATIONS Intelligent Image Color Reduction and Quantization, Minimum Spanning Tree, Robot Path Planning, Data Envelopment Analysis, Portfolio Optimization, Facility Layout Design, Vehicle Routing Problem, Parallel Machine Scheduling, Bin Packing Problem and Assignment problem.</p>	<p>Unit 5: Evolutionary and Bio-inspired Algorithms Genetic Algorithm, Differential evolution, Biogeography-based optimization, Shuffled frog leaping algorithm. Course Project: A substantial project work for applying these algorithms for any data science problem.</p>	<p>Suggestion given by Program and Course Coordinator</p>	<p>Applicable for Batch 2022</p>

Semester: VI
 Course: Business Intelligence
 Course Code: DS634

Unit	Existing Syllabus	Proposed Syllabus	Reasons for Change	Remarks
UNIT-5	Unit-5 WORKING WITH BI TOOLS Overview of managerial, strategic and technical issues associated with Business Intelligence and Data Warehouse design, implementation, and utilization. Critical issues in planning, physical design process, deployment and on going maintenance. Dash Boards and Scorecards Creation, Case study on the specific data set in BI tools	Unit 5: HR & SUPPLY CHAIN ANALYTICS Human Resources - Planning and Recruitment - Training and Development - Supply chain network - Planning Demand, Inventory and Supply - Logistics - Analytics applications in HR & Supply Chain, Customer Behavior, Analytics applications in Marketing and Sales	To accommodate recent industry based concepts	Applicable for 2022-2026

Semester: 5
 Course: Introduction to IOT
 Course Code: IOT531P

Unit	Existing Syllabus	Proposed Syllabus	Reasons for Change	Remarks
3	IoT Architecture Web of Things versus Internet of Things - Two Pillars of the Web - Unified Multitier WoT Architecture, Cloud Providers and Systems, The	Title 3: IoT Architecture Web of Things versus Internet of Things - Two Pillars of the Web - Unified Multitier WoT	To accommodate recent industry based concepts	Applicable for 2021 and 2022 Batch <i>K. Balachandran</i>



	Cloud of Things Architecture. IoT Protocols: Application Protocols, Service Discovery Protocols, Infrastructure Protocols,	Architecture, Cloud Providers and Systems, The Cloud of Things Architecture. IoT Protocols: Application Protocols, Service Discovery Protocols, Infrastructure Protocols, IoT Data Link Protocols, Network Layer Routing Protocols, Network Layer Encapsulation Protocols, Session Layer Protocols.		
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Semester: 6

Course: Advance IOT (IIOT, IOMT, and BIOT)

Course Code: IOT631P

Unit	Existing Syllabus	Proposed Syllabus	Reasons for Change	Remarks
	Advanced IoT and Cloud : Internet of Things and Data Analytics in the Cloud with Innovation and Sustainability Introduction, The IoT and the Fourth Industrial Revolution, Internet of Things Technology, Standards and Protocols, IoT Ecosystem 11, Definition of Big Data, IoT, Data Analytics, and Cloud Computing, Creativity, Invention, Innovation, and Disruptive Innovation, Polya's "How to Solve it", Business Plan	Introduction to IOT, Definition of IIOT, IOT Vs. IIOT, History of IIOT, Components of IIOT - Sensors, Interface, Networks, Key terms - IOT Platform, Interfaces, API, clouds, Data Management Analytics, Mining & Manipulation, IOT components, Various Architectures	To accommodate recent industry based concepts	Applicable for 2021 and 2022 Batch

1	<p>and Business Model, Conclusion and Future Perspective Digital Services and Sustainable Solutions Introduction, Why IoT is not Just “Nice to Have”, Services in a Digital Revolution, Mobile Digital Services and the Human Sensor, Not Just Another App, The Hidden Life of Things, The Umbrellas are not what they Seem, Interacting with the Invisible, Society as Open Source, Learn from your Hackers, Ensuring High-Quality Services to Citizens, Government as a Platform, Conclusion</p>	<p>of IOT and IIOT, Advantages & disadvantages, Industrial Internet - Reference Architecture; IIOT System components: Sensors, Gateways, Routers, Modem, Cloud brokers, servers and its integration, WSN, WSN network design for IOT.</p>		
2	<p>Industrial Internet of Things (IIoT) : The Industrial Internet of Things (IIoT): Applications and Taxonomy Introduction to the IIoT , Some Examples of IIoT Applications , Toward a Taxonomy of the IIoT, Standards and Protocols for Connectivity , Connectivity Architecture for the IIoT, Data-Centricity Makes DDS Different, The Future of the IIoT Strategic Planning for Smarter Cities Introduction, What is a Smart City?, Smart Cities and the Internet of Things , Why Strategic Planning Matters, Beginning the Journey: First Things First, From Vision to Objectives to Execution, Pulling it</p>	<p>Introduction to sensors, Roles of sensors in IIOT, Various types of sensors, Design of sensors, sensor architecture, special requirements for IIOT sensors, Role of actuators, types of actuators. Need of protocols; Types of Protocols, Wi-Fi direct, Zigbee, Z wave, BACNet, BLE, Modbus, SPI, I2C,NFC, IIOT protocols -COAP, MQTT, 6lowpan, lwm2m, AMPQ.</p>	<p>To accommodate recent industry based concepts</p>	<p>Applicable for 2021 and 2022 Batch</p>

	all Together			
3	<p>Internet of Medical Things (IoMT) : Next-Generation Learning: Smart Medical Team Training Introduction , Learning, Analytics, and Internet of Things, IoT Learning Design Process, Conclusion. The Brain-Computer Interface in the Internet of Things Introduction , The Science Behind Reading the Brain, The Science of Writing to the Brain , The Human Connectome Project, Summary IoT Innovation Pulse The Convergence of Exponential Technologies as a Driver of Innovation , Six Dimensions of the Pleco system, Five Principles of the Pleco system , The Biologic Organism Analogy for the IoT, Components for Innovation with the Organismal Analog, Spinozan Value Trade- Offs, Human IoT Sensor Networks, Role of the IoT in Social Networks, Security and Cyberthreat Resilience, IoT Optimization for Sustainability of our Planet, Maintenance of Complex IoT Networks , The Accordion Model of Learning as a Source of Innovation</p>	<p>IIoT, Different Classes of Analytics, IIoT Analytics Technologies, Building IIoT Analytics, Understanding the Role of Infrastructure deploying Analytics, OSA Analytics and Practices, Working with MS Azure, ML Service.</p>	<p>To accommodate recent industry based concepts</p>	<p>Applicable for 2021 and 2022 Batch</p>
	<p>Internet of Wearable Things (IoWT), IPv6 for IoT and Gateway A Designer’s Guide to the Internet</p>	<p>Introduction to web security, Conventional web technology and</p>	<p>To accommodate recent industry based concepts</p>	<p>Applicable for 2021 and 2022 Batch</p>

4	<p>of Wearable Things Introduction, Interface Glanceability, The Right Data at the Right Time, Consistency Across Channels, From Public to Personal, Nonvisual UI, Emerging Patterns, Conclusion. IPv6 for IoT and Gateway Introduction, IP: The Internet Protocol, IPv6: The Next Internet Protocol, 6LoWPAN: IP for IoT , Gateways: A Bad Choice, Example IoT Systems, An IoT Data Model, The Problem of Data Ownership, Managing the Life of an IoT Device, Conclusion: Looking forward.</p>	<p>relationship with IIOT, Vulnerabilities of IoT, Privacy, Security requirements, Threat analysis, Trust, IoT security tomography and layered attacker model, Identity establishment, Access control, Message integrity, Non-repudiation and availability</p>		
5	<p>BIOT and SCADA : Beacon Technology with IoT and Big Data Introduction to Beacons , What is Beacon Technology, Beacon and BLE Interaction , Where Beacon Technology can be Applied/Used, Big Data and Beacons, San Francisco International Airport (SFO), Future Trends and Conclusion SCADA Fundamentals and Applications in the IoT Introduction, What Exactly is SCADA?, Why is SCADA the Right Foundation for an IoT Platform?, Case Study: Algae Lab Systems, The Future of SCADA and the Potential of the IoT</p>	<p>What are IoMT and its working? Tracking assets and resources, Internet of things in hospitals, collection and integration of clinical data, Major benefits of IoT in healthcare, Disadvantages of IoT in healthcare, Home Monitoring System for Aged Care, Smart Medicinal Packages for Medication Adherence, Smart Drug Delivery System for Automated Drug Dispensation,</p>	<p>To accommodate recent industry based concepts</p>	<p>Applicable for 2021 and 2022 Batch</p> <p><i>K. Balachandran</i></p> 

		Connected Rural Healthcare Consultation, Population and Environment Monitoring of Infectious Diseases.		
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Semester: 6

Course: IoT Analytics and security

Course Code: IOT632P

Unit	Existing Syllabus	Proposed Syllabus	Reasons for Change	Remarks
4	Data Analytics in Smart Buildings Introduction, Addressing Energy Efficiency in Smart Buildings, A proposal of general architecture for management systems of smart buildings, IoT based system for Energy Efficiency in Smart Buildings, Evaluation and Results	Unit 1,2,3 is catered to Analytics and unit 4,5 catered to security aspects(Cryptography and Network Security)	To accommodate recent industry based concepts	Applicable for 2021 and 2022 Batch
5	Introduction, Cloud based IoT Analytics, Cloud based city platform, New challenges towards Edge based solutions, Edge based IoT Analytics, Use case of Edge based data analytics	Unit 1,2,3 is catered to Analytics and unit 4,5 catered to security aspects(Cryptography and Network Security)	To accommodate recent industry based concepts	Applicable for 2021 and 2022 Batch

Semester: 1

Course: Mathematical and Statistical Skills for Data Science

Course Code:MTDS133

Unit	Existing Syllabus	Proposed Syllabus	Reasons for Change	Remarks
1-5	New	<p>Course Description:</p> <p>This course is an introduction to the field of statistics and how engineers use statistical methodology as part of the engineering problem-solving process. Mathematical and Statistical Skills for Data Science Course aligns with LRNG (√) / Skill Develop (√) / Entrup / Emplayobilty (√) / Cross Cutting Needs .</p>	As per stakeholders recommendation	2023

Semester:1

Course:Business intelligence and its applications

Course Code:MTDS134

Unit	Existing Syllabus	Proposed Syllabus	Reasons for Change	Remarks
1-5	New	<p>Course Description:</p> <p>This course elaborates on the basics of business intelligence concepts and the knowledge delivery. Students shall also examine the efficacy and the business applications in the real world.</p>	As per stakeholders recommendation	2023

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Semester:2

Course:Optimization Techniques for Data Science

Course Code:MTDS232

Unit	Existing Syllabus	Proposed Syllabus	Reasons for Change	Remarks
1-5	New	Course Description: Introduction to optimization techniques use both linear and nonlinear programming. The focus of the course is on convex optimization though some techniques will be covered for non-convex function optimization too. After an adequate introduction to linear algebra and probability theory, students will learn to frame engineering minima maxima problems in the framework of optimization problems .	As per stakeholders recommendation	2023

Semester:2

Course: Optimization Techniques Lab

Course Code:MTDS252

Unit	Existing Syllabus	Proposed Syllabus	Reasons for Change	Remarks
1-5	New	Course Description: Optimization techniques use both linear and nonlinear programming. The focus of the course is on convex optimization though some techniques will be covered for non-convex function optimization too. After an adequate introduction to linear algebra and probability theory, students will learn to frame engineering minima maxima problems in the framework of optimization problems.	As per stakeholders recommendation	2023

Semester:2

Course:Stochastic Processes and Queuing Theory

Course Code:MTDS241E03

Unit	Existing Syllabus	Proposed Syllabus	Reasons for Change	Remarks
1-5	New	Course Description: This course gives a detailed introduction	As per stakeholders recommendation	2023

		<p>into queueing theory along with the stochastic processes techniques useful for modeling queueing systems. A queue is a waiting line, and a queueing system is a system which provides service to some jobs (customers, clients) that arrive with time and wait to get served (Examples: - a telecommunication system that processes requests for communication; - a hospital facing randomly occurring demand for hospital beds; - central processing unit that handles arriving jobs)</p>		
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Semester:2

Course:Cognitive Science

Course Code:MTDS241E04

Unit	Existing Syllabus	Proposed Syllabus	Reasons for Change	Remarks
1-5	New	<p>Course Description: Cognitive Science is the science of mind and brain. In this course we study the history of Cognitive Science</p>	As per stakeholders recommendation	2023

		followed by developing a Unified Framework among different disciplines. We also see the way the mind is organized and the model of information processing in mind.		
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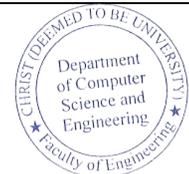
Semester:2

Course:Predictive Analytics for Internet of Things

Course Code:MTDS242E01

Unit	Existing Syllabus	Proposed Syllabus	Reasons for Change	Remarks
1-5	New	<p>Course Description:</p> <p>The Predictive Analytics for IoT course provides students with the knowledge and skills to analyze IoT data using advanced predictive analytics techniques. The course covers the fundamentals of IoT and predictive analytics including data acquisition, preprocessing and Visualization. The course will also equip the students with the necessary skills to pursue a career in data analytics, IoT and</p>	As per stakeholders recommendation	2023

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		related fields.		
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Semester:2

Course:Computational Linear Algebra

Course Code:MTDS242E05

Unit	Existing Syllabus	Proposed Syllabus	Reasons for Change	Remarks
1-5	New	Course Description: In this course you will investigate fundamental concepts of linear algebra and explore their application to problems arising from mathematics, applied mathematics, and other fields.	As per stakeholders recommendation	2023

Semester:3

Course:Graphs Algorithms and Mining

Course Code:MTDS341E01

Unit	Existing Syllabus	Proposed Syllabus	Reasons for Change	Remarks
1-5	New	Course Description: This course “Graph Algorithm and Mining” will be helpful to understand some recent trends in Deep Learning technology based on Graph theory, for example, GNN, GAT etc. This course provides depth knowledge of Graph theory as well as its	As per stakeholders recommendation	2023

		application on computer vision tasks.		
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Semester:3

Course:Business Analytics

Course Code:MTCS361OE03

Unit	Existing Syllabus	Proposed Syllabus	Reasons for Change	Remarks
1-5	New	<p>Course Description: This course is a source of information that can be used to teach business intelligence in one semester. It will be a good place to start for people who are learning for the first time, especially those in engineering and management. You can't just study one part of Business Intelligence. The subject gives a complete look at BI, starting with an enterprise context and going on to explain how to use tools to learn more. It also talks about a few areas where BI is used and the problems it can help solve. It covers the whole life cycle of a BI/Analytics project,</p>	As per stakeholders recommendation	2023

		including operational/transactional data sources, data transformation, data mart/warehouse design-build, analytical reporting, and dashboards.		
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Semester: I

Course: Advanced Database Systems

Course Code: MTCS133

Unit	Existing Syllabus	Proposed Syllabus	Reasons for Change	Remarks
Title 1 : Introduction to DBS	New course	Database Management systems Application of DBMS, Advantages of DBMS-ER model, Components of E-R diagram, Cardinality - Relational databases, Converting ER Diagram into Relations/Tables.	As per recommendation and need of the hour	2023
Title 2: Normalization: Database Design Theory		Introduction to Normalization using Functional and Multivalued Dependencies: Informal design guidelines for relation schema, Functional Dependencies, Normal Forms based on Primary Keys, Second and Third Normal Forms	As per recommendation and need of the hour	2023
Title 3: SQL :		Simple queries in SQL, queries involving more than one relation, sub queries, full relational operations, Database modifications, defining a relational	As per recommendation and need of the hour	2023

		schema in SQL, view definitions.		
Title 4: Constraints and Triggers:		Keys and foreign keys, constraints on attributes and tuples, modification of constraints, schema level constraints and Triggers.	As per recommendation and need of the hour	2023
Title 5: Transaction Processing		<p>Transaction Processing: Introduction to Transaction Processing, Transaction and System concepts, Desirable properties of Transactions, Characterizing schedules based on recoverability, Characterizing schedules based on Serializability, Transaction support in SQL.</p> <p>Concurrency Control in Databases: Two-phase locking techniques for Concurrency control, Concurrency control based on Timestamp ordering, Multiversion Concurrency control techniques, Validation Concurrency control techniques, Granularity of Data items and Multiple Granularity Locking.</p> <p>Recovery Concepts, NO-UNDO/REDO recovery based on Deferred update, Recovery techniques based on immediate update, Shadow paging, Database backup and recovery from catastrophic failures.</p>	As per recommendation and need of the hour	2023
Title 6: Object-Orientation in Query Languages:		Introduction to OQL, Additional Forms of OQL Expressions, Object Assignment and Creation in OQL, User-Defined Types in SQL, Operations on Object-Relational Data.	As per recommendation and need of the hour	2023

Semester:I

Course: Advanced Data Science

Course Code: MTCS135

Unit	Existing Syllabus	Proposed Syllabus	Reasons for Change	Remarks
Title 1 : INTRODUCTION AND THE DATA SCIENCE	New Course	Data science process - roles, stages in data science project - working with data from files -relational and Non-Relational databases - exploring data - managing data - cleaning and sampling for modeling and validation - Data preprocessing-Statistics for Data Science-Data Distributions.	As per recommendation and need of the hour	2023
Title 2: MODELING METHODS		Choosing and evaluating models - mapping problems to machine learning, evaluating clustering models, validating models - cluster analysis - K-means algorithm unsupervised methods. , Naïve Bayes - Memorization Methods - Linear and logistic regression - unsupervised methods.	As per recommendation and need of the hour	2023
Title 3: ANALYTICS WITH PYTHON		Data Analysis with Numpy and Pandas - Visualization with Seaborn Matplotlib, Plotly and Cufflinks - Scikit -learn - Regression, KNN, PCA and SVM in Python- Recommender systems - NLP with NLTK - Neural Nets and Deep Learning with Tensor Flow	As per recommendation and need of the hour	2023
Title 4: SPARK		Introduction -Hadoop vs Spark - Spark	As per	2023

SYSTEMS		Data Frame - Group by and Aggregate - RDD(Resilient Distributed Datasets) - Spark SQL - Spark Running on Cluster- Machine Learning with Mlib- Collaborative Filtering-NLP Applications-Spark Streaming.	recommendation and need of the hour	
Title 5: Convolutional Neural Networks		CNN Architectures - Convolution - Pooling Layers - Transfer Learning - Image Classification using Transfer Learning - Recurrent and Recursive Nets - Recurrent Neural Networks - Deep Recurrent Networks - Recursive Neural Networks - Applications.	As per recommendation and need of the hour	2023

Semester: I

Course: Advanced Database Systems Lab

Course Code: MTCS152

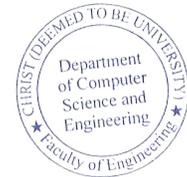
Unit	Existing Syllabus	Proposed Syllabus	Reasons for Change	Remarks
Title1:	New Course	Study of all SQL commands	As per recommendation and need of the hour	2023
Title2:		Study of all SQL commands	As per recommendation and need of the hour	2023
Title3:		Study of all SQL commands	As per recommendation and need of the hour	2023
Title4:		Implementation of PL/SQL Programs.	As per recommendation and need of the hour	2023
Title5:		Implementation of PL/SQL Programs.	As per recommendation and need of the hour	2023
Title6:		Implementation of PL/SQL Programs.	As per recommendation and need of the hour	2023
Title7:		Implementation of	As per recommendation	2023

		Cursor, Trigger.	and need of the hour	
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Semester: II
 Course: Data and Web Analytics
 Course Code: MTCS232

Unit	Existing Syllabus	Proposed Syllabus	Reasons for Change	Remarks
Title 1 : Introduction to Data and Web Analytics	New Course	Introduction, It's All About Data , Data Analytics, Data Mining, and Knowledge Discovery, Data and Relations, The Iris Data Set, Data Scales, Set and Matrix Representations , Relations , Dissimilarity Measures , Similarity Measures , Sequence Relations, Sampling, and Quantization. Differences between Data Analytics and Web Analytics, Case Study - Web Analytics , Current Landscape and Challenges , Web Analytics Fundamentals, Capturing Data , Selecting Optimal Web Analytics Tool , Understanding Clickstream Data Quality , Implementing Best Practices , Apply the "Three Layers of So What" Test	As per recommendation and need of the hour	2023

K. S. Alachandran



<p>Title 2: Data Preprocessing and web analytics data collection</p>		<p>Data Preprocessing-Error Types, Error Handling, Filtering Data Transformation , Data Integration , Problems , Data Visualization Diagrams , Principal Component Analysis, Multidimensional Scaling , Sammon Mapping , Auto-encoder, Histograms , Spectral Analysis , Case Study web analytics Data Collection – Importance and Options Understanding the Data Landscape , Clickstream Data , Outcomes Data , Research Data , Competitive Data</p>	<p>As per recommendation and need of the hour</p>	<p>2023</p>
<p>Title 3: Correlation and Regression</p>		<p>Correlation , Linear Correlation , Correlation and Causality , Chi-Square Test for Independence, Problems , Regression , Linear Regression , Linear Regression with Nonlinear Substitution , Robust Regression , Neural Networks, Radial Basis Function Networks , Cross-Validation , Feature Selection , Problems</p>	<p>As per recommendation and need of the hour</p>	<p>2023</p>
<p>Title 4: Forecasting , Classification and Clustering</p>		<p>Forecasting , Finite State Machines , Recurrent Models , Autoregressive Models Problems and Use cases, Classification , Classification Criteria ,Naive Bayes Classifier ,Linear Discriminant Analysis , Support Vector Machine , Nearest Neighbor Classifier, Learning Vector Quantization , Decision Trees , Problems</p>	<p>As per recommendation and need of the hour</p>	<p>2023</p>
<p>Title 5: Clustering</p>		<p>Clustering , Cluster Partitions , Sequential Clustering ,</p>	<p>As per recommendation</p>	<p>2023</p>

		Prototype-Based Clustering , Fuzzy Clustering , Relational Clustering ,Cluster Tendency Assessment , Cluster Validity , Self-organizing Map, Problems and Use cases , Case study related to Web Analytics perspective of Creating a Data-Driven Culture – Practical Steps and Best Practices , Key Skills to Look for in a Web Analytics Manager/Leader	ion and need of the hour	
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Semester: II

Course: Network Security Lab

Course Code: MTCS251

Unit	Existing Syllabus	Proposed Syllabus	Reasons for Change	Remarks
Experiment 1:	New Syllabus	Implement the following algorithms a) DES b) RSA Algorithm	As per recommendation and need of the hour	2023
Experiment 2:		Implement the following algorithms Diffiee-Hellman , MD5 , SHA-1	As per recommendation and need of the hour	2023
Experiment 3:		Fire wall implementation using different security requirements	As per recommendation and need of the hour	2023
Experiment 4:		Demonstrate intrusion detection system (ids) using any tool (snort or any other s/w)	As per recommendation and need of the hour	2023
Experiment 5:		Implement some simple filtering rules based on IP and TCP header information	As per recommendation and need of the hour	2023

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Semester: II

Course: Data and Web Analytics Lab

Course Code: MTCS252

Unit	Existing Syllabus	Proposed Syllabus	Reasons for Change	Remarks
Title 1 :	New Syllabus	Hands-on experiments about Data and Web Analytics fundamentals using python / matlab / R	As per recommendation and need of the hour	2023
Title 2:		Hands-on experiments about data Preprocessing and web analytics data collection	As per recommendation and need of the hour	2023
Title 3:		Hands-on experiments about Correlation and Regression	As per recommendation and need of the hour	2023
Title 4:		Hands-on experiments about Forecasting, Classification and Clustering	As per recommendation and need of the hour	2023
Title 5:		Hands-on experiments about Clustering	As per recommendation and need of the hour	2023

Semester: II / PEC II

Course:IoT Architecture and Computing

Course Code: MTCS242E01

Unit	Existing Syllabus	Proposed Syllabus	Reasons for Change	Remarks
	New Course	Course Description:	As per recommendation and need of the hour	2023

Semester: II / PEC II

Course: Digital Image Forensics

Course Code: MTCS242E05

Unit	Existing Syllabus	Proposed Syllabus	Reasons for Change	Remarks
All the Units	New Course	prerequisite as DIP, This course will cater to advance image processing and digital forensic	As per recommendation and need of the hour	2023

Semester: III/PEC-III

Course: MTCS341E02

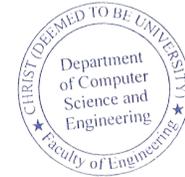
Course Code: Advanced Cognitive Science

Unit	Existing Syllabus	Proposed Syllabus	Reasons for Change	Remarks
Title 1 : Introduction	New course	What is Cognitive Science, Representation, Computation, Interdisciplinary Perspective	As per recommendation and need of the hour	2023
Title 2: The Big Picture: Bridging The Science And Technology For The Decision Maker		Introduction and Study Origin, What Decision Makers Want to Know	As per recommendation and need of the hour	2023
Title 3: Current Cognitive Neuroscience		Introduction, Challenges to the Detection of Psychological States and Intentions via Neurophysiological Activity, Neuropsychopharmacology, Functional	As per recommendation and need of the hour	2023

Research And Technology: Selected Areas Of Interest	Neuroimaging		
Title 4: Emerging Areas Of Cognitive Neuroscience And Neurotechnologies	Introduction, Computational Biology Applied to Cognition, Functional Neuroimaging, Genomics, and Proteomics, Distributed Human-Machine Systems	As per recommendation and need of the hour	2023
Title 5: Cultural And Ethical Underpinnings Of Social Neuroscience	Introduction, Cultural Underpinnings of Social Neuroscience, Ethical Implications of Cognitive Neuroscience and Related Technologies	As per recommendation and need of the hour	2023
Title 6: Potential Intelligence And Military Applications Of Cognitive Neuroscience And Related Technologies	Introduction, Market Drivers of Cognitive Neuroscience and Related Technologies as Indicators of the Demand for COTS Technologies, Technology Assessments: Neuropsychopharmacology, Technology Assessments: Distributed Human-Machine Systems and Computational Biology, Findings and Recommendation	As per recommendation and need of the hour	2023
Title 7: Robotics : The Ultimate Intelligent Agents	Introduction, Some Robotic Achievements, Evaluating Robotic Potentials, Biological and Behavioral Foundations of Robotic Paradigms, Foundations of Robotic Paradigms, Robotic Paradigms, Overall Evaluation of Robots as Ultimate Intelligent Agents, In Depth: Autonomous Robot Architecture (AuRA), Minds On Exercise: Relational Graphs	As per recommendation and need of the hour	2023

Title 8: Conclusion		The Benefits of Cognitive Science, Working Memory: An Example of an Integrated Program of Study, Issues in Cognitive Science, Enhancing Cognitive Science.	As per recommendation and need of the hour	2023
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K. S. Alexander



6BT _ Course Exit Survey _ Even (2022-23)

The respondent's email (siddhartha.srivastava@btech.christuniversity.in) was recorded on submission of this form.

Enter your name (in Capital Letters) *

SIDDHARTHA SRIVASTAVA

Enter your regno *

2060408

Enter your section *

- 6BTCS A
- 6BTCS B
- 6BTCS C
- 6BT IT
- 6BTCS AIML
- 6BTCS DS
- 6BTCS IOT

Linear Scale (

(Mark between 1 to 5; Where 5 being highest Mark)

CO1: I was able to Explain emerging abstract models for Blockchain Technology. (Mark between 1 to 5; Where 5 being highest Mark) *

1

2

3

4

5

CO2: I was able to Develop programing skills to design IoT solutions using Arduino and Raspberry Pi to solve real life problems. (Mark between 1 to 5; Where 5 being highest Mark) *

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CO3: I was able to Summarize various IoT protocols in Application and Network layers by outlining their advantages and disadvantage. (Mark between 1 to 5; Where 5 being highest Mark) *

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CO4: I was able to Experiment with Arduino, CDAC, and Raspberry Pi to choose the appropriate hardware for different IoT projects. (Mark between 1 to 5; Where 5 being highest Mark) *

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CO5: I was able to Survey successful IoT products and solutions to analyze their architecture and technologies. (Mark between 1 to 5; Where 5 being highest Mark) *

1

2

3

4

5

Course Feedback for Compiler Design

Linear Scale ((Mark between 1 to 5; Where 5 being highest Mark)

CO1: I was able to Explain the concepts and different phases of compilation with Compiler Construction Tools. (Mark between 1 to 5; Where 5 being highest Mark) *

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CO2: I was able to Interpret language tokens using regular expressions and design lexical analyzer for a language. (Mark between 1 to 5; Where 5 being highest Mark) *

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CO3:I was able to Build top down parsing, bottom up parsing and parse tree representation of the input. (Mark between 1 to 5; Where 5 being highest Mark) *

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5

CO4: I was able to Outline intermediate code for the statements during the process of compilation. (Mark between 1 to 5; Where 5 being highest Mark) *

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2

3

4

5

CO5: I was able to Experiment the optimization techniques to intermediate code and generate machine code for high level language program. (Mark between 1 to 5; Where 5 being highest Mark) *

1

2

3

4

5

Course Feedback for Design Pattern

Linear Scale ((Mark between 1 to 5; Where 5 being highest Mark)

CO1: I was able to Describe the SOLID principle as major design principles.(Mark between 1 to *
5; Where 5 being highest Mark)

1

2

3

4

5

CO2: I was able to Implement the efficient coding practices learnt. (Mark between 1 to 5; Where *
5 being highest Mark)

1

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CO3: I was able to Examine Creational design patterns to exploit object creation. (Mark between *
1 to 5; Where 5 being highest Mark)

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CO4: I was able to Interpret Structural design patterns to understand the class-object relation. *
(Mark between 1 to 5; Where 5 being highest Mark)

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CO5: I was able to Justify Behavioral design patterns to analyze the class behavior. (Mark between 1 to 5; Where 5 being highest Mark) *

1

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Select your Elective Course

Select your Elective course *

- Mobile Application Development
- Advanced Databases
- Data Warehousing and Data Mining
- Foundations to Blockchain Technology

Course Feedback for Mobile Application Development

Linear Scale ((Mark between 1 to 5; Where 5 being highest Mark)

I am able to Explain the concepts in mobile applications and its development. *

1

2

3

4

5

I am able to Build an interface for mobile applications and web applications. *

1

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3

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5

I am able to Design mobile application for Android platform using primitive UI features, SQLite and GPS. *

1

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5

I am able to Design a mobile application for the Android platform using advanced features like animations and graphics. *

1

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4

5

I am able to Develop a mobile application for IOS platform. *

1

2

3

4

5

Course Feedback for Advanced Databases

Linear Scale ((Mark between 1 to 5; Where 5 being highest Mark)

CO1: I am able to Interpret ER models for relational database design. (Mark between 1 to 5; Where 5 being highest Mark) *

1

2

3

4

5

CO2: I am able to Experiment with Object Databases and XML for advanced databases. (Mark * between 1 to 5; Where 5 being highest Mark)

1

2

3

4

5

CO3: I am able to Identify query optimization parameters and appropriate scheduling for improved transactions. (Mark between 1 to 5; Where 5 being highest Mark) *

1

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4

5

CO4: I am able to Compare the working principles of concurrency and recovery methods for a database. (Mark between 1 to 5; Where 5 being highest Mark) *

1

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4

5

I am able to Examine solutions to problems pertaining to security aspects for a database. (Mark between 1 to 5; Where 5 being highest Mark) *

1

2

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4

5

Course Feedback for Data Warehousing and Data Mining

Linear Scale ((Mark between 1 to 5; Where 5 being highest Mark)

I am able to Extend the need for data warehousing to formulate the decision support system. *

1

2

3

4

5

I am able to Make use of various data pre-processing techniques. *

1

2

3

4

5

I am able to Analyse association rule mining. *

1

2

3

4

5

I am able to Analyse the various clustering and classification algorithm. *

1

2

3

4

5

I am able to Outline the scope of providing IT solutions for different domains. *

1

2

3

4

5

Course Feedback for Foundation of Blockchain Technology

Linear Scale ((Mark between 1 to 5; Where 5 being highest Mark)

I am able to illustrate the architecture of different models of blockchain. *

1

2

3

4

5

I am able to identify the technologies and challenges associated with different sectors. *

1

2

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4

5

I am able to analyse the functioning of the security involved in blockchain applications. *

1

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4

5

I am able to examine the hyperledger fabric and ethereum platforms for blockchain application development. *

1

2

3

4

5

I am able to determine the security and architecture for blockchain for different industrial applications *

1

2

3

4

5

Course Feedback for Service Learning

Linear Scale ((Mark between 1 to 5; Where 5 being highest Mark)

I am able to Apply the concepts of Computer Science and Information Technology to solve given real world societal problems through prototypes. *

1

2

3

4

5

I am able to Design solutions to given real world societal problems through working prototypes. *

1

2

3

4

5

I am able to Select appropriate hardware and software as per the requirement of the project designed to solve given real world societal problems. *

1

2

3

4

5

I am able to Understand the impact of the developed projects on environmental factors. *

1

2

3

4

5

I am able to Demonstrate project management skills including handling the finances in doing projects for given real world societal problems. *

1

2

3

4

5

Choose your Specialization for core Subject Feedback

Select your program *

BTCS / IT

BTCS(AIML)

BTCS(DS)

BTCS(IOT)

Course Feedback for Digital Image Processing

Linear Scale ((Mark between 1 to 5; Where 5 being highest Mark)

I am able to Identify the fundamental concepts of image formation and image transformations *

1

2

3

4

5

I am able to Interpret histogram and their use to enhance quality of images based on matching *
and specification techniques

1

2

3

4

5

I am able to Demonstrate the use of degradation function for distorted images and compare compression techniques *

1

2

3

4

5

I am able to Evaluate Morphological processing for image representation *

1

2

3

4

5

I am able to Utilize descriptors and patterns to describe an image for Object recognition *

1

2

3

4

5

Course Feedback for Soft Computing

Linear Scale ((Mark between 1 to 5; Where 5 being highest Mark)

I am able to Calculate fuzzification and defuzzification for decision support systems. *

1

2

3

4

5

I am able to Apply fuzzy set theory in a fuzzy inference system. *

1

2

3

4

5

I am able to Calculate the optimum values using derivative – free and derivative – based optimization techniques. *

1

2

3

4

5

I am able to Construct supervised and unsupervised neural networks for classification and clustering problems. *

1

2

3

4

5

I am able to Explain the concept of extreme neural network learning techniques and a hybrid system of fuzzy, genetic algorithm and ANN. *

1

2

3

4

5

Course Feedback For Business Intelligence

Linear Scale ((Mark between 1 to 5; Where 5 being highest Mark)

I am able to Understand the Business intelligence framework and responsibilities *

1

2

3

4

5

I am able to Design the ETL process for handling the data from a given source. *

1

2

3

4

5

I am able to Design a star / snowflake schema for a given problem. *

1

2

3

4

5

I am able to Illustrate the data mining concepts with suitable examples. *

1

2

3

4

5

I am able to Ability to Apply classification and prediction concepts to various applications. *

1

2

3

4

5

Course Feedback for Big Data Analytics

Linear Scale ((Mark between 1 to 5; Where 5 being highest Mark)

I am able to Summarize the big data and its use cases for business analytics *

1

2

3

4

5

I am able to Illustrate the NOSQL data models *

1

2

3

4

5

I am able to Identify various data format and interface used in hadoop *

1

2

3

4

5

I am able to Construct the MapReduce job scheduling and execution for various application *

1

2

3

4

5

I able to Discover data model and its implementation using hadoop related tools *

1

2

3

4

5

Course Feedback for Advance IOT

Linear Scale ((Mark between 1 to 5; Where 5 being highest Mark)

I am able to understand the advanced cloud architecture that has been implemented on various IOT's and comprehend the same with sample service cases in different fields such as medicine, wearable devices and so on. *

1

2

3

4

5

Course Feedback for IOT Analytics and Security

Linear Scale ((Mark between 1 to 5; Where 5 being highest Mark)

I am able to understand the IOT analytics and the big data integration to the IOT framework. *
The development tools for IT applications could be seamlessly used with multiple IOT analytics applications such as smart cities smart grids and so on.

1

2

3

4

5

Feedback on curriculum and syllabus. (Mark between 1 to 5; Where 5 being highest Mark)

Does the content of the curriculum satisfy the stated objectives and outcomes? (Mark between 1 to 5; Where 5 being highest Mark) *

1

2

3

4

5

Does the curriculum covers advanced topics?(Mark between 1 to 5 ; Where 5 being highest Mark) *

1

2

3

4

5

Whether the curriculum enhances your knowledge and skills in the relevant domain?(Mark between 1 to 5; Where 5 being highest Mark) *

1

2

3

4

5

Is the curriculum effective in developing critical/ analytical thinking?(Mark between 1 to 5; Where 5 being highest Mark) *

1

2

3

4

5

Are the text books and reference materials are relevant to the content of the curriculum (Mark * between 1 to 5; Where 5 being highest Mark)

1

2

3

4

5

Does the curriculum orient towards higher education? (Mark between 1 to 5; Where 5 being highest Mark) *

1

2

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4

5

Does the curriculum enable the student to apply their knowledge in real life situation? (Mark between 1 to 5; Where 5 being highest Mark) *

1

2

3

4

5

Is the employability given weightage in the design and development of the curriculum? (Mark between 1 to 5; Where 5 being highest Mark) *

1

2

3

4

5

Does the curriculum promote self-study and attitude of research? (Mark between 1 to 5; Where 5 being highest Mark) *

1

2

3

4

5

The course workload was manageable (Mark between 0 to 5 ; Where 5 being highest Mark) *

1

2

3

4

5

The course provided a mixture of Concepts, Explanation, Practical and Demonstrations when & where required. (Mark between 0 to 5; Where 5 being highest Mark) *

1

2

3

4

5

Does the curriculum meets your overall expectation? (Mark between 1 to 5; Where 5 being highest Mark) *

1

2

3

4

5

This form was created inside of Christ University.

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6BT _ Course Exit Survey _ Even (2022-23)

The respondent's email (siddharth.sivakumar@btech.christuniversity.in) was recorded on submission of this form.

Enter your name (in Capital Letters) *

SIDDHARTH SIVAKUMAR

Enter your regno *

2062211

Enter your section *

- 6BTCS A
- 6BTCS B
- 6BTCS C
- 6BT IT
- 6BTCS AIML
- 6BTCS DS
- 6BTCS IOT

Linear Scale (

(Mark between 1 to 5; Where 5 being highest Mark)

CO1: I was able to Explain emerging abstract models for Blockchain Technology. (Mark between 1 to 5; Where 5 being highest Mark) *

1

2

3

4

5

CO2: I was able to Develop programing skills to design IoT solutions using Arduino and Raspberry Pi to solve real life problems. (Mark between 1 to 5; Where 5 being highest Mark) *

1

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3

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5

CO3: I was able to Summarize various IoT protocols in Application and Network layers by outlining their advantages and disadvantage. (Mark between 1 to 5; Where 5 being highest Mark) *

1

2

3

4

5

CO4: I was able to Experiment with Arduino, CDAC, and Raspberry Pi to choose the appropriate hardware for different IoT projects. (Mark between 1 to 5; Where 5 being highest Mark) *

1

2

3

4

5

CO5: I was able to Survey successful IoT products and solutions to analyze their architecture and technologies. (Mark between 1 to 5; Where 5 being highest Mark) *

1

2

3

4

5

Course Feedback for Compiler Design

Linear Scale ((Mark between 1 to 5; Where 5 being highest Mark)

CO1: I was able to Explain the concepts and different phases of compilation with Compiler Construction Tools. (Mark between 1 to 5; Where 5 being highest Mark) *

1

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3

4

5

CO2: I was able to Interpret language tokens using regular expressions and design lexical analyzer for a language. (Mark between 1 to 5; Where 5 being highest Mark) *

1

2

3

4

5

CO3:I was able to Build top down parsing, bottom up parsing and parse tree representation of the input. (Mark between 1 to 5; Where 5 being highest Mark) *

1

2

3

4

5

CO4: I was able to Outline intermediate code for the statements during the process of compilation. (Mark between 1 to 5; Where 5 being highest Mark) *

1

2

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5

CO5: I was able to Experiment the optimization techniques to intermediate code and generate machine code for high level language program. (Mark between 1 to 5; Where 5 being highest Mark) *

1

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4

5

Course Feedback for Design Pattern

Linear Scale ((Mark between 1 to 5; Where 5 being highest Mark)

CO1: I was able to Describe the SOLID principle as major design principles.(Mark between 1 to *
5; Where 5 being highest Mark)

1

2

3

4

5

CO2: I was able to Implement the efficient coding practices learnt. (Mark between 1 to 5; Where *
5 being highest Mark)

1

2

3

4

5

CO3: I was able to Examine Creational design patterns to exploit object creation. (Mark between *
1 to 5; Where 5 being highest Mark)

1

2

3

4

5

CO4: I was able to Interpret Structural design patterns to understand the class-object relation. *
(Mark between 1 to 5; Where 5 being highest Mark)

1

2

3

4

5

CO5: I was able to Justify Behavioral design patterns to analyze the class behavior. (Mark between 1 to 5; Where 5 being highest Mark) *

1

2

3

4

5

Select your Elective Course

Select your Elective course *

- Mobile Application Development
- Advanced Databases
- Data Warehousing and Data Mining
- Foundations to Blockchain Technology

Course Feedback for Mobile Application Development

Linear Scale ((Mark between 1 to 5; Where 5 being highest Mark)

I am able to Explain the concepts in mobile applications and its development. *

1

2

3

4

5

I am able to Build an interface for mobile applications and web applications. *

1

2

3

4

5

I am able to Design mobile application for Android platform using primitive UI features, SQLite and GPS. *

1

2

3

4

5

I am able to Design a mobile application for the Android platform using advanced features like animations and graphics. *

1

2

3

4

5

I am able to Develop a mobile application for IOS platform. *

1

2

3

4

5

Course Feedback for Advanced Databases

Linear Scale ((Mark between 1 to 5; Where 5 being highest Mark)

CO1: I am able to Interpret ER models for relational database design. (Mark between 1 to 5; Where 5 being highest Mark) *

1

2

3

4

5

CO2: I am able to Experiment with Object Databases and XML for advanced databases. (Mark * between 1 to 5; Where 5 being highest Mark)

1

2

3

4

5

CO3: I am able to Identify query optimization parameters and appropriate scheduling for improved transactions. (Mark between 1 to 5; Where 5 being highest Mark) *

1

2

3

4

5

CO4: I am able to Compare the working principles of concurrency and recovery methods for a database. (Mark between 1 to 5; Where 5 being highest Mark) *

1

2

3

4

5

I am able to Examine solutions to problems pertaining to security aspects for a database. (Mark between 1 to 5; Where 5 being highest Mark) *

1

2

3

4

5

Course Feedback for Data Warehousing and Data Mining

Linear Scale ((Mark between 1 to 5; Where 5 being highest Mark)

I am able to Extend the need for data warehousing to formulate the decision support system. *

1

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3

4

5

I am able to Make use of various data pre-processing techniques. *

1

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4

5

I am able to Analyse association rule mining. *

1

2

3

4

5

I am able to Analyse the various clustering and classification algorithm. *

1

2

3

4

5

I am able to Outline the scope of providing IT solutions for different domains. *

1

2

3

4

5

Course Feedback for Foundation of Blockchain Technology

Linear Scale ((Mark between 1 to 5; Where 5 being highest Mark)

I am able to illustrate the architecture of different models of blockchain. *

1

2

3

4

5

I am able to identify the technologies and challenges associated with different sectors. *

1

2

3

4

5

I am able to analyse the functioning of the security involved in blockchain applications. *

1

2

3

4

5

I am able to examine the hyperledger fabric and ethereum platforms for blockchain application development. *

1

2

3

4

5

I am able to determine the security and architecture for blockchain for different industrial applications *

1

2

3

4

5

Course Feedback for Service Learning

Linear Scale ((Mark between 1 to 5; Where 5 being highest Mark)

I am able to Apply the concepts of Computer Science and Information Technology to solve given real world societal problems through prototypes. *

1

2

3

4

5

I am able to Design solutions to given real world societal problems through working prototypes. *

1

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5

I am able to Select appropriate hardware and software as per the requirement of the project designed to solve given real world societal problems. *

1

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4

5

I am able to Understand the impact of the developed projects on environmental factors. *

1

2

3

4

5

I am able to Demonstrate project management skills including handling the finances in doing projects for given real world societal problems. *

1

2

3

4

5

Choose your Specialization for core Subject Feedback

Select your program *

BTCS / IT

BTCS(AIML)

BTCS(DS)

BTCS(IOT)

Course Feedback for Digital Image Processing

Linear Scale ((Mark between 1 to 5; Where 5 being highest Mark)

I am able to Identify the fundamental concepts of image formation and image transformations *

1

2

3

4

5

I am able to Interpret histogram and their use to enhance quality of images based on matching *
and specification techniques

1

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5

I am able to Demonstrate the use of degradation function for distorted images and compare compression techniques *

1

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4

5

I am able to Evaluate Morphological processing for image representation *

1

2

3

4

5

I am able to Utilize descriptors and patterns to describe an image for Object recognition *

1

2

3

4

5

Course Feedback for Soft Computing

Linear Scale ((Mark between 1 to 5; Where 5 being highest Mark)

I am able to Calculate fuzzification and defuzzification for decision support systems. *

1

2

3

4

5

I am able to Apply fuzzy set theory in a fuzzy inference system. *

1

2

3

4

5

I am able to Calculate the optimum values using derivative – free and derivative – based optimization techniques. *

1

2

3

4

5

I am able to Construct supervised and unsupervised neural networks for classification and clustering problems. *

1

2

3

4

5

I am able to Explain the concept of extreme neural network learning techniques and a hybrid system of fuzzy, genetic algorithm and ANN. *

1

2

3

4

5

Course Feedback For Business Intelligence

Linear Scale ((Mark between 1 to 5; Where 5 being highest Mark)

I am able to Understand the Business intelligence framework and responsibilities *

1

2

3

4

5

I am able to Design the ETL process for handling the data from a given source. *

1

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5

I am able to Design a star / snowflake schema for a given problem. *

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5

I am able to Illustrate the data mining concepts with suitable examples. *

1

2

3

4

5

I am able to Ability to Apply classification and prediction concepts to various applications. *

1

2

3

4

5

Course Feedback for Big Data Analytics

Linear Scale ((Mark between 1 to 5; Where 5 being highest Mark)

I am able to Summarize the big data and its use cases for business analytics *

1

2

3

4

5

I am able to Illustrate the NOSQL data models *

1

2

3

4

5

I am able to Identify various data format and interface used in hadoop *

1

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4

5

I am able to Construct the MapReduce job scheduling and execution for various application *

1

2

3

4

5

I able to Discover data model and its implementation using hadoop related tools *

1

2

3

4

5

Course Feedback for Advance IOT

Linear Scale ((Mark between 1 to 5; Where 5 being highest Mark)

I am able to understand the advanced cloud architecture that has been implemented on various IOT's and comprehend the same with sample service cases in different fields such as medicine, wearable devices and so on. *

1

2

3

4

5

Course Feedback for IOT Analytics and Security

Linear Scale ((Mark between 1 to 5; Where 5 being highest Mark)

I am able to understand the IOT analytics and the big data integration to the IOT framework. *
The development tools for IT applications could be seamlessly used with multiple IOT analytics applications such as smart cities smart grids and so on.

1

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3

4

5

Feedback on curriculum and syllabus. (Mark between 1 to 5; Where 5 being highest Mark)

Does the content of the curriculum satisfy the stated objectives and outcomes? (Mark between 1 to 5; Where 5 being highest Mark) *

1

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5

Does the curriculum covers advanced topics?(Mark between 1 to 5 ; Where 5 being highest Mark) *

1

2

3

4

5

Whether the curriculum enhances your knowledge and skills in the relevant domain?(Mark between 1 to 5; Where 5 being highest Mark) *

1

2

3

4

5

Is the curriculum effective in developing critical/ analytical thinking?(Mark between 1 to 5; Where 5 being highest Mark) *

1

2

3

4

5

Are the text books and reference materials are relevant to the content of the curriculum (Mark * between 1 to 5; Where 5 being highest Mark)

1

2

3

4

5

Does the curriculum orient towards higher education? (Mark between 1 to 5; Where 5 being highest Mark) *

1

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3

4

5

Does the curriculum enable the student to apply their knowledge in real life situation? (Mark between 1 to 5; Where 5 being highest Mark) *

1

2

3

4

5

Is the employability given weightage in the design and development of the curriculum? (Mark between 1 to 5; Where 5 being highest Mark) *

1

2

3

4

5

Does the curriculum promote self-study and attitude of research? (Mark between 1 to 5; Where 5 being highest Mark) *

1

2

3

4

5

The course workload was manageable (Mark between 0 to 5 ; Where 5 being highest Mark) *

1

2

3

4

5

The course provided a mixture of Concepts, Explanation, Practical and Demonstrations when & *
where required. (Mark between 0 to 5; Where 5 being highest Mark)

1

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3

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5

Does the curriculum meets your overall expectation? (Mark between 1 to 5; Where 5 being *
highest Mark)

1

2

3

4

5

This form was created inside of Christ University.

Google Forms

Faculty Feedback on Curriculum _ Christ University Survey (2022-23)

The respondent's email (chinthakunta.manjunath@christuniversity.in) was recorded on submission of this form.

Faculty Name *

Chinthakunta Manjunath

Employee _ ID *

1694

Current Area of Research *

Data Science

Does the syllabus satisfy the stated objectives and learning outcomes? *

- Excellent
- Good
- Satisfactory
- Average
- Needs improvement

Do you have continuous processes to propose, modify, suggest and incorporate new topics in the syllabus? Rate the process . *

- Excellent
- Good
- Satisfactory
- Average
- Needs improvement

Is the syllabus effective in developing independent thinking? *

- Excellent
- Good
- Satisfactory
- Average
- Needs improvement

Does the departmental level expert committee meet to review the syllabus? *

- Excellent
- Good
- Satisfactory
- Average
- Needs improvement

Does the syllabus enhance your knowledge in the subject area? *

- Excellent
- Good
- Satisfactory
- Average
- Needs improvement

Does the syllabus enable the students to apply their knowledge in real life? *

- Excellent
- Good
- Satisfactory
- Average
- Needs improvement

Does the syllabus demand the teachers for research inclusive teaching? *

- Excellent
- Good
- Satisfactory
- Average
- Needs improvement

This form was created inside of Christ University.

Google Forms

Faculty Feedback on Curriculum _ Christ University Survey (2022-23)

The respondent's email (gurudas.vr@christuniversity.in) was recorded on submission of this form.

Faculty Name *

Gurudas V R

Employee _ ID *

2568

Current Area of Research *

Medical Image Processing

Does the syllabus satisfy the stated objectives and learning outcomes? *

- Excellent
- Good
- Satisfactory
- Average
- Needs improvement

Do you have continuous processes to propose, modify, suggest and incorporate new topics in the syllabus? Rate the process . *

- Excellent
- Good
- Satisfactory
- Average
- Needs improvement

Is the syllabus effective in developing independent thinking? *

- Excellent
- Good
- Satisfactory
- Average
- Needs improvement

Does the departmental level expert committee meet to review the syllabus? *

- Excellent
- Good
- Satisfactory
- Average
- Needs improvement

Does the syllabus enhance your knowledge in the subject area? *

- Excellent
- Good
- Satisfactory
- Average
- Needs improvement

Does the syllabus enable the students to apply their knowledge in real life? *

- Excellent
- Good
- Satisfactory
- Average
- Needs improvement

Does the syllabus demand the teachers for research inclusive teaching? *

- Excellent
- Good
- Satisfactory
- Average
- Needs improvement

This form was created inside of Christ University.

Google Forms

CSE _ Alumni Feedback _ Curriculum

The respondent's email (jovidsilva@gmail.com) was recorded on submission of this form.

Alumni's Name *

D'SILVA JOVI JOSE SALVADOR

Select your program *

BT CSE

BTIT

MT CSE

MT IT

Year of Graduation *

2014

Is the syllabus updated on a regular basis depending on the current trends and advanced topics? *

- Excellent
- Good
- Satisfactory
- Average
- Needs improvement

Does the syllabus orient towards higher education? *

- Excellent
- Good
- Satisfactory
- Average
- Needs improvement

Does the syllabus provide employability weightage? *

- Excellent
- Good
- Satisfactory
- Average
- Needs improvement

Does the syllabus meet the expectations of the industry? *

- Excellent
- Good
- Satisfactory
- Average
- Needs improvement

Does the syllabus enable the students to connect the knowledge to real life application? *

- Excellent
- Good
- Satisfactory
- Average
- Needs improvement

Does the syllabus encourage entrepreneurship? *

- Excellent
- Good
- Satisfactory
- Average
- Needs improvement

Do you think that the syllabus motivates the students for research and development? *

- Excellent
- Good
- Satisfactory
- Average
- Needs improvement

This form was created inside of Christ University.

Google Forms

CSE _ Alumni Feedback _ Curriculum

The respondent's email (nishad@iamxo.com) was recorded on submission of this form.

Alumni's Name *

Nishad Menezes

Select your program *

BT CSE

BTIT

MT CSE

MT IT

Year of Graduation *

2015

Is the syllabus updated on a regular basis depending on the current trends and advanced topics? *

- Excellent
- Good
- Satisfactory
- Average
- Needs improvement

Does the syllabus orient towards higher education? *

- Excellent
- Good
- Satisfactory
- Average
- Needs improvement

Does the syllabus provide employability weightage? *

- Excellent
- Good
- Satisfactory
- Average
- Needs improvement

Does the syllabus meet the expectations of the industry? *

- Excellent
- Good
- Satisfactory
- Average
- Needs improvement

Does the syllabus enable the students to connect the knowledge to real life application? *

- Excellent
- Good
- Satisfactory
- Average
- Needs improvement

Does the syllabus encourage entrepreneurship? *

- Excellent
- Good
- Satisfactory
- Average
- Needs improvement

Do you think that the syllabus motivates the students for research and development? *

- Excellent
- Good
- Satisfactory
- Average
- Needs improvement

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Employer's / Industry Expert's / Academic Expert's Feedback on Curriculum

Dear Sir/ Madam,

Greetings from the Department of Computer Science and Engineering, CHRIST (Deemed to be University). It is our aim to constantly improve our curriculum to make it relevant and value adding to our students. Your feedback is very important to us in this endeavour. Kindly spare a few minutes of your time to complete this feedback form. You may use the below mentioned links to view our syllabus to give your feedback.

The information collected is for the sole purpose of incorporating changes in curriculum to add value to our students. This information will be kept confidential.

Warm Regards
CDC Coordinator ,
Department of Computer Science and Engineering, CHRIST (Deemed to be University)

The link to refer the syllabus is mentioned below:

Undergraduate (B.Tech)

[https://christuniversity.in/School%20of%20Engineering%20and%20Technology/COMPUTER%20SCIENCE%20AND%20ENGINEERING/Bachelor%20of%20Technology%20\(BTech\)%20in%20Computer%20Science%20and%20Engineering/syllabus/214/2022](https://christuniversity.in/School%20of%20Engineering%20and%20Technology/COMPUTER%20SCIENCE%20AND%20ENGINEERING/Bachelor%20of%20Technology%20(BTech)%20in%20Computer%20Science%20and%20Engineering/syllabus/214/2022)

Post Graduate(M.Tech)

<https://christuniversity.in/School%20of%20Engineering%20and%20Technology/COMPUTER%20SCIENCE%20AND%20ENGINEERING/Master%20of%20Technology%20in%20Computer%20Science%20and%20Engineering/syllabus/283/2022>

Name of the Employer / Industry Expert / Academic Expert *

Dr. MerinThomas

Name of the Company / Organization *

R V University

Location of the Company / Organization *

Bangalore, KA

Designation *

Associate Professor

Educational Qualification *

Ph.D

Contact Details (Not Mandatory, Individual's Preference)

Programme Name. (Kindly indicate the programme name for which the feedback is provided by you) *

- B.Tech in CSE
- B.Tech in CSE(AIML)
- B.Tech in CSE(DS)
- B.Tech in CSE(IOT)
- B.Tech in IT
- M.Tech in CSE
- M.Tech in DS

Please tick (_/) the appropriate option as per the following rating scale:

5.Excellent 4.Good 3.Satisfactory 2.Average 1.Need to Improve

Is the curriculum aligned with the objectives of the programme? *

Need to Improve

1

2

3

4

5

Excellent

Does the curriculum cover advanced topics and current trends? *

Need to Improve

1

2

3

4

5

Excellent

How would you rate the relevance of the electives offered in the curriculum? *

Need to Improve

1

2

3

4

5

Excellent

Is employability given weightage in the design and development of curriculum? *

Need to Improve

1

2

3

4

5

Excellent

Does the curriculum meet the expectations of the industry? *

Need to Improve

1

2

3

4

5

Excellent

Does the curriculum cater to the enhancement of skills of the students with respect to the industry needs? *

Need to Improve

1

2

3

4

5

Excellent

Recommendations / Suggestions , if any

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Name of the Employer / Industry Expert / Academic Expert *

Sanjay P

Name of the Company / Organization *

LGSI

Location of the Company / Organization *

Bangalore

Designation *

Software Engineer

Educational Qualification *

B.Tech

Contact Details (Not Mandatory, Individual's Preference)

.....

Programme Name. (Kindly indicate the programme name for which the feedback is provided by you) *

- B.Tech in CSE
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- B.Tech in CSE(DS)
- B.Tech in CSE(IOT)
- B.Tech in IT
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Need to Improve

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Need to Improve

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Need to Improve

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Need to Improve

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3

4

5

Excellent

Does the curriculum cater to the enhancement of skills of the students with respect to the industry needs? *

Need to Improve

1

2

3

4

5

Excellent

Recommendations / Suggeions , if any

Give more space for project works.

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Parent's Feedback on Curriculum

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Name of the Parent *

Reynold Biswas

Location / Place *

Madhya Pradesh

Qualification of the parent *

M.A, B.Ed

Designation *

Teacher

Give the Ward's Program details & year of study *

Aaron Biswas, 7BTCS(IOT)

Please tick (_/) the appropriate option as per the following rating scale:

5.Excellent

4.Good

3.Satisfactory

2.Average

1.Need to Improve

Does the syllabus orient the students toward higher education? *

Need to Improve

1

2

3

4

5

Excellent

Is employability given weightage in the design and development of the syllabus? *

Need to Improve

1

2

3

4

5

Excellent

Is the syllabus have component on value based education? *

Need to Improve

1

2

3

4

5

Excellent

Does the syllabus have components to serve the needs of the society? *

Need to Improve

1

2

3

4

5

Excellent

Does the syllabus promote self-study and attitude of research? *

Need to Improve

1

2

3

4

5

Excellent

Does the syllabus help the students to enhance their personality? *

Need to Improve

1

2

3

4

5

Excellent

Recommendations / Suggestions, If any

Recommend for more practical sessions

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Name of the Parent *

Mr. Kumaresan

Location / Place *

Tamil Nadu

Qualification of the parent *

UG

Designation *

Self Employed, Business

Give the Ward's Program details & year of study *

Vivek, BTCS(IOT), Final Year

Please tick (_/) the appropriate option as per the following rating scale:

5.Excellent

4.Good

3.Satisfactory

2.Average

1.Need to Improve

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Need to Improve

1

2

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Need to Improve

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Need to Improve

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Does the syllabus have components to serve the needs of the society? *

Need to Improve

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Need to Improve

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Excellent

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Need to Improve

1

2

3

4

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Excellent

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