MINUTES OF THE FOURTEENTH BOARD OF STUDIES MEETING

Faculty: Computer Science **Board: Information Technology**

The Meeting of Board of Studies (BoS) was held as given below:

Name of the Body	**Board of Studies (BoS)**
Department	**Information Technology**
Meeting No.	**14**
Date and Time	**06.12.2022 @ 11.00 a.m.**
Venue	**IQAC Board Room**
Members Attended	**The details are given in the ANNEXURE -I**

AGENDA	
01	Discussion on syllabi for Part III – Core Courses for Second semester UG 2022-23 Batch and onwards
02	Discussion on syllabus for Part III – Inter Disciplinary Course (IDC) offered by other departments
03	Discussion on syllabus for Part III- Inter disciplinary Course (IDC) offered to other departments
04	Discussion on Part I (Tamil/Hindi/French/Malayalam) offered by Language department for 2022-23 Batch and onwards
05	Discussion on Part II (English) offered by English department for 2022-23 Batch and onwards
06	Discussion on Part IV (AECC) Basic Tamil / Advanced Tamil / Human Rights and Women's Rights for 2022-23 Batch and onwards
07	Discussion on credits for Part V Extension Activity for 2022-23 Batch and onwards
08	Discussion on Value Added Certificate Courses (VACC) for 2021-22 Batch and onwards
09	Any other matters

MINUTES OF THE FOURTEENTH BOARD OF STUDIES MEETING

Faculty: Computer Science **Board: Information Technology**

The Chairman of BoS welcomed all the Panel members for the meeting. The items listed in the agenda were taken for discussion.
The following are the minutes of the meeting:

Item-01	**Discussion on syllabi for Part III – Core Courses for Second semester UG -2022-23 Batch and onwards**
Discussion	**224CA1A2CA : Data Structures** • The unified syllabus approved by Board of Studies in Computer Applications was placed for endorsement. **224CS1A2CA : Object Oriented Programming with C++ (New Course)** • The unified syllabus approved by Board of Studies in Computer Science was placed for endorsement. **224IT1A2CP: Data Structures and C++ (New Course)** • The Syllabus approved by the Board Members.
Resolution	The Board approved the syllabus.
Item -02	**Discussion on syllabus for Part III - Inter Disciplinary Course (IDC) offered by Department of Mathematics**
Discussion	**222MT1A2IC - Discrete Mathematics** • The unified syllabus approved by the Board of Studies in Mathematics was placed for endorsement.
Resolution	The Board approved the syllabus.
Item-03	**Discussion on syllabus for Part III - Inter Disciplinary Course (IDC) offered to Department of Clinical Laboratory Technology**
Discussion	**224IT1A2IP - Computer Applications in Clinical Laboratory (New Course)** • Dr. Vadivel suggested to change titles MS Word, MS Excel and MS PowerPoint to generic terms such as Word processing, Spreadsheet and Presentation software.
Resolution	The Board unanimously approved the syllabus.
Item -04	**Discussion on Part I (Tamil/Hindi/French/Malayalam) offered by Language department for 2022-23 Batch and onwards**
Discussion	**221TL1A2TA - Part I:Tamil-II: Ara Illakiyam / 221TL1A2HA - Hindi-II: Modern Literature / 221TL1A2MA - Malayalam – II : Modern Literature/ 221TL1A2FA - French-II: Grammar, Translation and Civilization respectively** • The unified syllabus approved by the Board of Studies in Languages were placed for endorsement
Resolution	The Board approved the syllabus.

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Item -05	**Discussion on Part II (English) offered by department of English for 2022-23 Batch and onwards**
Discussion	**221EL1A2EA : Part II: Professional English II** • The unified syllabus approved by the Board of Studies in English was placed for endorsement
Resolution	The Board unanimously approved the syllabus.
Item -06	**Discussion on Part IV (AECC:II) Basic Tamil / Advanced Tamil / Human Rights and Women's Rights for 2022-23 Batch and onwards**
Discussion	**221TL1A2AA-Basic Tamil** • The unified syllabus approved by the Board of Studies in Language was placed for endorsement **221TL1A2AB-Advanced Tamil** • The unified syllabus approved by the Board of Studies in Language was placed for endorsement **225CR1A2AA- Human Rights and Women's Rights** • The unified syllabus approved by the Board of Studies in Commerce with Corporate Secretaryship was placed for endorsement.
Resolution	The Board approved the same.
Item -07	**Discussion on credits for Part V Extension Activity for 2022-23 Batch and onwards**
Discussion	• One credit to be awarded for participation in YRC/RRC/NSS/ NCC/RRC/Yoga/Sports/Clubs
Resolution	The Board members accepted the same.
Item-08	**Discussion on Value Added Certificate Courses (VACC) for 2021-22 Batch and onwards**
Discussion	• The course titled "Mobile Application Development" to be offered for 2021-22 batch was discussed.
Resolution	The Board approved the same.
Item-09	**Any other matters**
Discussion	• The board members discussed and recommended the Panel of Examiners
Resolution	The Board approved the same.

The Chairman of Board of Studies (BoS) thanked all the members for their active participation and providing their valuable suggestions.

Date: 06.12.2022

06/12/22

(Dr. A. Adhiselvam)
BoS Chairman/HOD
Department of Information Technology
Dr. N.G.P. Arts And Science College
Coimbatore - 641 048

Syllabus Revision

Faculty : Computer Science **Board : Information Technology**
Course Code / Name: 224CA1A2CA / Data Structures **Semester: II**

Unit	Course Content
I	**Introduction to Data Structures and Arrays** Introduction: Basic Terminology -Classification of Data Structures -Operations on Data Structures-Abstract Data Type-Algorithms-Time and Space Complexity -Big O Notation-Omega Notation (Ω) -Theta Notation (Φ). Arrays: Declaration of Arrays-Accessing the elements of an array-Storing values in Arrays-Operations on Arrays. Applications of Arrays: Sparse Matrices
II	**Stacks and Queues** Stacks: Array Representation of Stacks- Operations on a Stack-Linked Representation of Stacks. Applications of Stacks: Evaluation of Arithmetic Expressions –Recursion. Queues: Array Representation of Queues - Operations on Queues -Linked Representation of Queues - Circular Queues. Applications of Queues: JOB Scheduling
III	**Linked Lists** Singly Linked Lists: Inserting a node in a Linked List- Deleting a node from a Linked List. Circular Linked Lists: Inserting a node in a Circular Linked List - Deleting a node from a Circular Linked List. Doubly Linked Lists: Inserting a node in a Doubly Linked List - Deleting a node from a Doubly Linked List. Applications of Linked Lists: Polynomial Addition.
IV	**Trees and Graphs** Trees: Binary Trees – Representation of Binary Trees -Creating a Binary Tree - Traversing a Binary Tree- Binary Search Trees and its Operations - Threaded Binary Trees. Applications of Trees: Expression Trees. Graphs: Graph Terminology - Representation of Graphs - Graph Traversal Algorithms. Applications of Graphs: Shortest Path Algorithm : Dijkstra's Algorithm. Minimum Spanning Trees : Prim's Algorithm.
V	**Searching, Sorting and Hashing** Searching: Linear search –Binary Search. Sorting: Bubble Sort - Insertion Sort - Selection Sort – Quick Sort-Merge Sort -Heap Sort. Hashing and Collision: Hash Tables - Hash Functions - Collision. Applications of Hashing: Keyword Table in a Compiler.

PERCENTAGE OF SYLLABUS REVISED :36 %

COURSE FOCUSES ON:

✓	Skill Development		Entrepreneurial Development
✓	Employability		Innovations
	Intellectual Property Rights		Gender Sensitization
	Social Awareness/ Environment		Constitutional Rights/ Human Values/ Ethics

Syllabus Revision – New Course

Faculty : Computer Science **Board : Information Technology**

Semester: II

Course Code / Name: 224CS1A2CA/ Object Oriented Programming with C++

Unit	Course Content
I	**Introduction to Object Oriented Programming** Introduction - Programming Paradigms - Key concepts of Object-Oriented Programming – Applications of Object-Oriented Programming - Variable, Value and Constant - Components of a C++ Program - Data Types - Expressions - Type Conversion - Order of Evaluation - Formatting Data: Manipulators in Input/Output- Branching and Looping.
II	**Classes and Arrays** User-Defined Types: Classes-Class Definition-Member function- Access Modifiers- Inline function- Constructors and Destructors- Instance Members: Instance Data Members- Instance Member Functions -Static Members - Arrays: One-Dimensional Arrays - Multidimensional Arrays. Case Study: Wave Array
III	**Pointers, Strings and Inheritance** References - Pointers - Pointer Types and Pointer variables - Constant Modifiers – Pointer to Pointer- Arrays and Pointers - Strings: C ++ String Class -C++ String Library – Inheritance: Private, Public and Protected Inheritance - Association - Dependency
IV	**Polymorphism and Exception Handling** Polymorphism- Binding- Abstract Class : Pure Virtual Functions - Multiple Inheritance - Overloading Principles - Overloading as Member- Nonmember: Friend function-Exception Handling : Approach- Exceptions in Classes - Standard Exception Classes – Templates: Function Template - Class Template.
V	**File Handling and Standard Template Library** Input and Output stream – Stream Classes - Console Streams - Console Objects - Stream State - File Streams - File I/O - Opening Modes - Sequential Vs Random Access - String Streams - Formatting Data: Direct use of Flags, Fields and Variables - Predefined Manipulators- Standard Template Library: Iterators, Sequence Containers, Container Adapters.

PERCENTAGE OF SYLLABUS REVISED: 100 %

COURSE FOCUSES ON:

✓	Skill Development	☐	Entrepreneurial Development
✓	Employability	☐	Innovations
☐	Intellectual Property Rights	☐	Gender Sensitization
☐	Social Awareness/ Environment	☐	Constitutional Rights/ Human Values/ Ethics

Syllabus Revision – New Course

Faculty : Computer Science **Board : Information Technology**
Course Code / Name: 224IT1A2CP /Data Structures and C++ **Semester: II**

S.No	List of Programs
1	Program to implement the following using an array a) Stack ADT b) Queue ADT
2	Program to perform normal queue using array method in C++
3	Program to implement list ADT to perform following operations a) Insert an element into a list. b) Delete an element from list c) Search for a key element in list d) Count number of nodes in list
4	Program to demonstrate Circular queue using array
5	Program to use functions and perform the following a) Create a doubly linked list of elements. b) Delete a given element from the above doubly linked list. c) Display the contents of the above list after deletion.
6	Program to Use recursive functions and Tree Traversal for the following a) Preorder b) Inorder c) Postorder
7	Program to perform the following a) Create a binary search tree of characters. b) Traverse the above Binary search tree recursively in Preorder, Inorder and Postorder.
8	Program to perform Insertion and Deletion from an AVL-tree.
9	Program to perform the following a) Search for a key element in a list of elements using linear search. b) Search for a key element in a list of sorted elements using binary search.
10	Program to implement the following a) Create a binary search tree of integers. b) Traverse the above Binary search tree non recursively in Inorder
11	Program to implement Sorting algorithms a) Bubble sort b) Selection sort c) Quick sort d) Insertion sort
12	Program to implement all the functions of a dictionary (ADT) using hashing.

PERCENTAGE OF SYLLABUS REVISED: 100 %

COURSE FOCUSES ON:

✓	Skill Development		Entrepreneurial Development
✓	Employability		Innovations
	Intellectual Property Rights		Gender Sensitization
	Social Awareness/ Environment		Constitutional Rights/ Human Values/ Ethics

Syllabus Revision

Faculty: Computer Science **Board: Information Technology**

Course Code/ Name: 222MT1A2IC / Discrete Mathematics (IDC) **Semester: II**

Unit	Course Content
I	**Set Theory** Introduction - set and its elements - set description - types - Venn-Euler Diagrams - set operations and laws of set theory - fundamental products - index and indexed sets - partitions of sets - minsets - countable and uncountable sets - Algebra of sets and duality - computer representation - the inclusion and exclusion principle- Fuzzy sets.
II	**Relations and Functions** Relations: Introduction - cartesian product of sets - binary relations – set operations on relations - types– partial order relations – equivalence relation and classes-Functions: Introduction - types – invertible functions - composition of functions.
III	**Mathematical Logic** Introduction - propositional calculus – basic logical operations - statements generated by a set - conditional statements -converse, inverse and contrapositive statements - biconditional - tautologies - contradiction - contingency - argument - methods of proof - equivalence and implication - predicate calculus-quantifiers.
IV	**Graph Theory and Trees** Introduction - paths, cycles and connectivity - subgraphs - types - isomorphic and homeomorphic graphs - representation of graphs in computer memory- Eulerian and Hamiltonian graphs-cartesian product- shortest path. Trees: Introduction - binary trees - complete binary tree - tree of an Algebraic expression - traversing binary trees.
V	**Language, Grammar and Automata** Introduction - language: the set theory of strings - languages – regular expressions and regular languages – grammar – finite state machine – finite state automata.

PERCENTAGE OF SYLLABUS REVISED: 20%

COURSE FOCUSES ON:

✓	Skill Development		Entrepreneurial Development
✓	Employability		Innovations
	Intellectual Property Rights		Gender Sensitization
	Social Awareness/ Environment		Constitutional Rights/ Human Values/ Ethics

Syllabus Revision – New Course

IDC – B.Sc. Clinical Laboratory Technology

Faculty: Computer Science **Board : Information Technology**

Course Code/Name:224IT1A2IP / COMPUTER APPLICATIONS IN CLINICAL LABORATORY Semester: II

Unit	Course Content
I	Word Processing: Create a word document - Enter, Select and Copy text - Save the document - Correct Proofing Errors - Apply Styles - Insert a Picture - Page Layout - Create a table - convert text to table - Print Document. 1. Create and Format a word documents. 2. Create Healthcare Organizational Chart. 3. Mail merge for advertising Master Health Check-up.
II	Presentation software : Create a Slide - Insert a Picture - Apply a Theme - Animations - Run the Slideshow - Presenter view - Choose and Use the template - Rehearse the timings - Print the slideshow. 4. Preparation of Blood Donation Camp advertisement using PowerPoint. 5. Create Agenda for clinical laboratory practice. 6. Create professional medical presentation using transition.
III	Spreadsheet: Entering Data in Excel - Transforming and Managing data - Sorting and Filtering - Formulae and Functions: Summing and Subtracting values - Basic calculations - Count function - Text functions. 7. Formatting an Excel Sheet for patient billing statements. 8. Sorting and Filtering the Blood group from Blood bank in Excel 9. Calculation using formulae in Excel.
IV	Data Analysis: Pivot tables - Create a pivot table - Calculation and grouping - Power Pivot and Power Query - Analysis ToolPak - Activate Analysis ToolPak add-in - Components of Analysis ToolPak - Analyzing data using ToolPak. 10. Import medical data from webpage, text file and remove duplicates 11. Analyze clinical trial dataset using ToolPak 12. Create a Pivot Table for COVID-19 clinical trial dataset with pivot chart
V	Data Visualization: Charts - Insert a chart - Add or remove chart elements - Different types of charts - Column and Bar charts - Line Charts - Pie Chart or Doughnut chart - Histogram chart - Area Chart - Scatter Chart and Bubble Chart. 13. Visualize the patient history details using chart in Excel. 14. Categorize the diabetes dataset and visualize it in various chart elements. 15. Classify any medical related dataset and prepare various chart.

PERCENTAGE OF SYLLABUS REVISED: 100%

COURSE FOCUSES ON:

✓	Skill Development	☐	Entrepreneurial Development
✓	Employability	☐	Innovations
☐	Intellectual Property Rights	☐	Gender Sensitization
☐	Social Awareness/ Environment	☐	Constitutional Rights/ Human Values/ Ethics

Dr. N.G.P. ARTS AND SCIENCE COLLEGE

(An Autonomous Institution, Affiliated to Bharathiar University, Coimbatore)
Approved by Government of Tamil Nadu & Accredited by NAAC with A++ Grade (3rd Cycle-3.64 CGPA)
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ATTENDANCE OF THE FOURTEENTH BOARD OF STUDIES MEETING

Faculty: Faculty of Computer Science **Board: Information Technology**

VENUE : IQAC Board Room
DATE : 06.12.2022
TIME : 11.00 AM

The following members were present for the Board of Studies Meeting

S.NO.	NAME	DESIGNATION	SIGNATURE
1.	Dr.A.Adhiselvam Associate Professor & Head (i/c) Department of Information Technology Dr.N.G.P. Arts and Science College Coimbatore-641048	Chairman	6/12/22
2.	Dr. R. Vadivel Associate Professor Department of Information Technology Bharathiar University Coimbatore - 641 046.	Member (Subject Expert) (Nominated by Vice Chancellor)	06/12/2022
3.	Dr. Prashant R. Nair Associate Professor Computer Science Engineering School of Engineering Amrita Vishwa Vidyapeetham Amritanagar, Ettimadai Coimbatore-641 112.	Member (Subject Expert) (Nominated by Academic Council)	6/12/2022
4.	Dr.T.S. PradeepKumar Professor School of Computing Science and Engineering Vellore Institute of Technology Vandalur Kelambakkam Road, Chennai 600 048.	Member (Subject Expert) (Nominated by Academic Council)	ABSENT
5.	Mr.R. J. Senthil Kumar Founder Director – Sprout Solutions Private Limited 14, Light House Road R.S. Puram, Coimbatore -641 001.	Member (Industrial expert)	6/12/2022.
6.	Mr.K.Karthik Project Lead KGISL Saravanampatti, Coimbatore-641 035	Alumni	K. Karthik

S.NO.	NAME	DESIGNATION	SIGNATURE
7	Dr. N. Kuppuchamy	Co-opted Member (Tamil)	6/12/22
8	Dr. R. Vithya Prabha Professor & Head	Co-opted Member (English)	6/12/22
9	Dr. R. Sowrirajan Assistant Professor & Head	Co-opted Member (Mathematics)	
10	Ms.V.Haritha III B.Sc. IT	Student Representative	6/12/22
11	Dr.K.Santhi Professor	Member	ABSENT
12	Dr.J.Savitha Professor	Member	6/12/22
13	Dr.K.Thenmozhi Associate Professor	Member	6/12/22
14	Mrs.P.Menaka Assistant Professor(SG)	Member	6/12/22
15	Mr.B.M.Rajesh Assistant Professor	Member	6/12/22
16	Dr.B.Sivaranjani Assistant Professor	Member	6/12/22
17	Dr.S.Rekha Assistant Professor	Member	6/12/22
18	Dr.N.Vanitha Assistant Professor	Member	6/12/22
19	Dr.R.Praba Assistant Professor	Member	06/12/22

Date : 06.12.2022

6/12/22

(Dr. A.Adhiselvam)

BoS Chairman/HOD
Department of Information Technology
Dr. N.G.P. Arts And Science College
Coimbatore - 641 048

Academic Council
Dr.V. Rajendran
CHAIRMAN
Dr.N.G.P. Arts and Science College