



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

(An Autonomous Institution, Affiliated to Bharathiar University, Coimbatore)
Approved by Government of Tamil Nadu and Accredited by NAAC A++ Grade (3rd Cycle- 3.64 CGPA)
Dr. N.G.P.-Kalapatti Road, Coimbatore-641048, Tamil Nadu, India
Web: www.drnpgpsc.ac.in | Email: info@drnpgpsc.ac.in | Phone: +91-422-2369100

BoS

7th

Board of Studies Meeting

Department of Computer Science with Cognitive Systems

The minutes of the 7th meeting of Board of Studies held on 17.10.2023 at 10.00 am through google meet.

Members Present:

S.No.	Name	Category
1	Dr.A.Nirmala	Chairman
2	Dr.T.Meyyappan	Subject Expert
3	Dr.Shantharaja	Subject Expert
4	Mr.Stephen Moses Dinakaran	Industrial Expert
5	Ms.P.Keshika	Alumni
6	Dr.R.Senthilkumar	Member
7	Dr.P.Sakthi Murugan	Member
8	Dr. N. Kuppuchami	Co-opted Member
9	Dr.R. Vithya Prabha	Co-opted Member
10	Dr.Sowrirajan	Co-opted Member
11	Dr.S.Namashivayam	Co-opted Member
12	Mr.Tamil Selvam	Student Representative- UG

The HoD and Chairman of the department of Computer Science with Cognitive Systems welcomed and introduced all the members and appreciated them for their continuous support, contribution for the development of academic standard and enrichment of the syllabus.

Further, Chairman informed the inability of the following members to attend the meeting and requested to grant leave of absence.

1. Dr. E.Chandra- University Nominee

The items of the agenda were taken one by one for discussion and the following resolutions were passed.

Item 7.1

To review and approve the minutes of the previous meeting held on **10.06.2023**

The chairman of the Board presented the minutes of the previous meeting held on **10.06.2023** and requested the members to approve. After brief discussion the following resolution was passed

Resolution:

Resolved to approve the minutes of the previous meeting held on 10.06.2023

Item 7.1(a): To consider and approve the syllabi for IV semester for the students admitted

during the academic year 2022-23.

The chairman presented the detailed scheme and syllabus for the IV semester for the students admitted from the academic year 2022-23 onwards. The details of changes made also presented as follows.

Changes Made:

B.Sc. Computer Science with Cognitive Systems		
Course	Code	Reason
Cloud and Virtualization	224CG1A4CA	Unit II: Google cloud and IBM cloud included to understand different cloud service models.
Artificial Intelligence	224CG1A4CB	Unit V: Applications of Expert system included to learn the importance of various AI expert systems

New Courses Introduced:

Course	Code	Reason
Python for Data Science	224DA1A4SP	To introduce the concept of Data Science and learn Python

Courses Removed: NIL

Course	Code	Reason
-	-	-

IDC Offered

Course	Code	Department
Industrial Internet of Things	224CG1A4IA	Commerce in Business Process Service

After discussion the following resolution was passed with the above changes and modifications.

Resolution:

Resolved to approve the syllabus for the II semester for the students admitted from the academic year 2023-24 onwards.

Item 7.1(b) :To consider and approve the changes, if any, in the syllabi for II semester for the students admitted during the academic year 2023-24.

The Chairman presented the detailed syllabus for the II semester for the students admitted from the academic year 2023-24 onwards. The details of changes made also presented as follows:

Changes Made: Nil

B.Sc. Computer Science with Cognitive Systems		
Course	Code	Reason
-	-	-

New Courses Introduced: Nil

Course	Code	Reason

Courses Removed: NIL

Course	Code	Reason
-	-	-

IDC Offered

Course	Code	Department
Applications of Computers	224CG1A2IP	Catering Science and Hotel Management

After discussion the following resolution was passed with the above changes and modifications.

Resolution:

Resolved to approve the syllabus for the II semester for the students admitted from the academic year 2023-24 onwards.

Item 7.2: To approve the panel of examiners for question paper setting and evaluation of answer scripts for the even semester of the academic year 2023-24.

The Chairman presented the panel of examiners for question paper setting and evaluation of answer scripts for the even semester of the academic year 2023-24.

Resolution:

Resolved to approve the panel of examiners for question paper setting and evaluation of answer scripts for the even semester of the academic year 2023-2024.

Item 7.3: To consider and approve any other item brought forward by the Chairman and the members of the board.

No other item was brought forward.

Finally, the Chairman thanked all the members for their cooperation and contribution in enriching the syllabus with active participation in the meeting and sought the same spirit in the future also. The meeting was closed with formal vote of thanks proposed by Dr. A.Nirmala, Head and Chairman - Computer Science with Cognitive Systems

Date:17.10.2023


Chairman

Bos Chairman / HoD
Dept. of Computer Science with Cognitive Systems
Dr. N. G. P. Arts and Science College
Coimbatore - 641 048

Syllabus Revision

Faculty: Computer Science

Board: Cognitive Systems

Course Code / Name: 224DA1A4EP/ Python for Data Science

Semester: IV

Unit	Contents
I	<p>Introduction to Data Analysis: Data Analysis - Knowledge Domains of the Data Analyst - Understanding the Nature of the Data - The Data Analysis Process - Quantitative and Qualitative Data Analysis - Open Data - Introduction to the Python World: Python - The Programming Language - Data Structures - Functional programming</p> <p>a) Programs using functions. b) Programs using tuples. c) Programs using sets.</p>
II	<p>NumPy: N-dimensional array - Basic Operations - Indexing, Slicing and Iterating - Conditions and Boolean Arrays - Shape and Array Manipulation - Copies of Objects - Vectorization - Broadcasting - Structured Arrays- Reading and Writing Array Data on Files.</p> <p>a) Programs using aggregate functions. b) Programs for array manipulation. c) Programs for reading and writing in files.</p>
III	<p>Pandas Data Structures: Series – Data Frame - Index Object - Functionalities on Indexes - Operations Between Data Structures - Function Application and Mapping - Sorting and Ranking - Correlation and Covariance - Not a Number Data - Hierarchical Indexing and Leveling</p> <p>a) Programs using Data Frame b) Programs to deal with missing values c) Programs to find Correlation and Covariance</p>
IV	<p>Data Preparation - Concatenating - Data Transformation - Removing Duplicates- Mapping - Discretization and Binning - Permutation - String Manipulation - Built -in Methods - Regular Expressions - Data Aggregation - Group Iteration - Advanced Data Aggregation</p> <p>a) Programs to implement data transformation b) Programs to implement string manipulation c) Programs to implement data aggregation</p>
V	<p>Matplotlib Architecture - pyplot - The plotting Window - Using the keyword args - Adding Elements to the Chart - Line Charts - Histograms - Bar Charts - Pie Charts - Advanced Charts</p> <p>a) Programs to visualize data using Bar Charts, Pie charts b) Programs to visualize data using Advanced Charts c) Project using Advanced libraries</p>

PERCENTAGE OF SYLLABUS REVISED: 100 %

COURSE FOCUS ON:

<input checked="" type="checkbox"/>	Skill Development	<input type="checkbox"/>	Entrepreneurial Development
<input checked="" type="checkbox"/>	Employability	<input type="checkbox"/>	Innovations
<input type="checkbox"/>	Intellectual Property Rights	<input type="checkbox"/>	Gender Sensitization
<input type="checkbox"/>	Social Awareness/ Environment	<input type="checkbox"/>	Constitutional Rights/ Human Values/ Ethics

Syllabus Revision

Faculty: Computer Science

Board: Cognitive Systems

Course Code / Name: 224CG1A4CA/ Cloud and Virtualization

Semester: IV

Unit	Existing	Changes
I	Introduction: Definition of Cloud – Evolution of Cloud Computing – Types of Cloud: Public cloud - Private cloud - Community cloud - Hybrid cloud - Underlying principles of Parallel & Distributed Computing – Cloud Characteristics – Advantages of Cloud.	
II	Three Service Models: Infrastructure as a Service (IaaS) - Platform as a Service (PaaS) - Software as a Service (SaaS) - Benefits of Cloud Computing - Pros and Cons of Cloud Computing - Cloud Vendors - Traditional Infrastructure Setup and Challenges – Amazon Web Service	IBM cloud - Google cloud-Azure
III	Introduction to vSphere and the Software - Defined Data Center Creating Virtual Machines - VCenter Server - Configuring and Managing - Virtual Networks Configuring and Managing Virtual Storage - Virtual Machine Management - Resource Management and Monitoring.	
IV	Virtual Machines: vSphere HA - vSphere Fault Tolerance - Protecting Data vSphere DRS - Network Scalability - vSphere Update Manager and Host Maintenance - Storage Scalability - Securing Virtual Machines	
V	Data center overview - Components - Provisions - Need of Data Center - Data Center Architecture - Different Racks - Data Center Architecture for Cloud Computing - Role of Data center in Cloud Computing	

PERCENTAGE OF SYLLABUS REVISED: 6 %

COURSE FOCUSES ON:

<input checked="" type="checkbox"/> Skill Development	<input type="checkbox"/> Entrepreneurial Development
<input checked="" type="checkbox"/> Employability	<input type="checkbox"/> Innovations
<input type="checkbox"/> Intellectual Property Rights	<input type="checkbox"/> Gender Sensitization
<input type="checkbox"/> Social Awareness/ Environment	<input type="checkbox"/> Constitutional Rights/ Human Values/ Ethics

Syllabus Revision

Faculty: Computer Science

Board: Cognitive Systems

Course Code / Name: 224CG1A4CB/ Artificial Intelligence

Semester: IV

Unit	Existing	Changes
I	Introduction to AI-Problem formulation, Problem Definition -Production systems, Control strategies, Search strategies. Problem solving methods – Problem graphs, Matching. Heuristic functions - Hill Climbing-Depth first and Breadth first search, A* Algorithm, Simulated Annealing, Constraints satisfaction	Issues in the design of search programs
II	Game playing –Predicate logic – Representing Instance and Isa Relationship, Introduction to predicate calculus, Resolution, Knowledge representation -Production based system, Frame based system	
III	Inference – Backward chaining, Forward chaining, Rule value approach, Fuzzy reasoning—Certainty factors—Basic plan generation systems—Strips—Advanced plan generation systems—K-strips.	Ontologies, Objects and Events- Representation and Mapping- Slot and Filler Structures - Issues in Knowledge Representation – Developments in Knowledge Representation
IV	Learning—Machine learning, Adaptive Learning. Expert systems – Architecture of expert systems, Roles of expert systems – Knowledge Acquisition – Meta knowledge. Typical expert systems—MYCIN, DART, XOON, Expert systems shells	Inference Process - Tracing Model of Execution– Applications of Prolog
V	Programming in Logic (PROLOG): Introduction, Prolog variables, Syntax, using rules, Input and Output predicates, Procedural and declarative meanings, Arithmetic operation, unification, lists, control structures, use of fail, CUT, not	Text Classification - Information Retrieval – Information Extraction Applications of Expert Systems

PERCENTAGE OF SYLLABUS REVISED: 40%

COURSE FOCUSES ON:

<input checked="" type="checkbox"/>	Skill Development	<input type="checkbox"/>	Entrepreneurial Development
<input checked="" type="checkbox"/>	Employability	<input type="checkbox"/>	Innovations
<input type="checkbox"/>	Intellectual Property Rights	<input type="checkbox"/>	Gender Sensitization
<input type="checkbox"/>	Social Awareness/ Environment	<input type="checkbox"/>	Constitutional Rights/ Human Values/ Ethics



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ATTENDANCE OF THE SEVENTH BOARD OF STUDIES MEETING

Faculty: Computer Science

Board: Computer Science with Cognitive Systems

Date : 17.10.2023

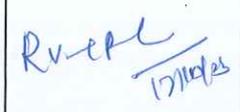
Time : 11.00 a.m.

Venue: Google Meet

The following members were present for the meeting

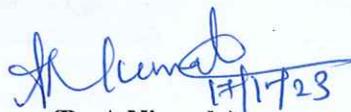
S.No	Name	Designation	Signature
1.	Dr.A.Nirmala Professor & Head i/c Department of Computer Science with Cognitive Systems Dr.N.G.P Arts and Science College Coimbatore - 48.	Chairman	 17/10/23
2.	Dr.E.Chandra Professor & Head Department of Computer Science Bharathiar University Coimbatore-46	VC Nominee	Absent
3.	Dr. S.P. Shantharajah Professor & Head Department of Software & Systems Engineering School of Information Technology & Engineering Vellore Institute of Technology (VIT) Vellore-632 014	Subject Expert	Present
4.	Dr. T. Meyyappan Professor Department of Computer Science Alagappa University Karaikudi-630 003	Subject Expert	Present
5.	Mr.Stephen Moses Dinakaran H CBO-Human Resources Program Lead-Academic Interface Program TATA Consultancy Services Chennai-600 058	Industry Expert	Present
6.	Ms. P. Keshika III B.Sc. CSCs Department of Computer Science with Cognitive Systems Dr.N.G.P. Arts and Science College Coimbatore	Alumni	Present



7.	Dr.N.Kuppuchamy Associate Professor & Head Department of Tamil Dr.N.G.P. Arts and Science College Coimbatore	Co-opted Member	
8.	Dr.R.Vithya Prabha Professor & Head Department of English Dr.N.G.P. Arts and Science College Coimbatore	Co-opted Member	
9.	Dr. R. Sowrirajan Assistant Professor & Head Department of Mathematics Dr.N.G.P. Arts and Science College Coimbatore	Co-opted Member	
10.	Dr.S.Namasivayam Professor & Head Department of Commerce -Business Process Services (BPS) Dr.N.G.P. Arts and Science College Coimbatore	Co-opted Member	
11.	Dr. R. Senthil Kumar Professor Department of Computer Science with Cognitive Systems Dr.N.G.P. Arts and Science College Coimbatore	Internal Member	
12.	Dr. P. Sakthi Murugan Assistant Professor Department of Computer Science with Cognitive Systems Dr.N.G.P. Arts and Science College Coimbatore	Internal Member	
13.	Mr. S. Tamil Selvam II B.Sc. CSCs Department of Computer Science with Cognitive Systems Dr.N.G.P. Arts and Science College Coimbatore	Student Representative	Present

- Virtual meeting – Signature not required

Date: 17/10/2023


(Dr.A.Nirmala)

Professor & HoD i/c

Bos Chairman / HoD
Dept. of Computer Science with Cognitive Systems
Dr. N. G. P. Arts and Science College
Coimbatore - 641 048

