

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.drngpasc.ac.in | Email: info@drngpasc.ac.in | Phone: +91-422-2369100

BoS

8th

Department of Computer Science with Cognitive Systems

Board of Studies Meeting

The minutes of the 8th meeting of Board of Studies held on 03.04.2024 at 10.00 am through google meet.

Members Present:

| S.No. | Name | Category |
|-------|--|------------------------|
| 1 | Dr.A. Nirmala | Chairman |
| 2 | Dr.T. Meyyappan, Professor, Department of Computer Science, Alagappa University | Subject Expert |
| 3 | Dr. S. P. Shanthyraja, Professor & Head, Department of Software & Systems Engineering, Vellore Institute of Technology (VIT) | Subject Expert |
| 4 | Mr. J. Vengatesh, Senior Consultant, Tata Consultancy Services | Industrial Expert |
| 5 | Ms.P.Keshika, Package App Development Associate Accenture | Alumni |
| 6 | Dr.R.Senthilkumar | Member |
| 7 | Dr.P. Sakthi Murugan | Member |
| 8 | Mrs.M. Sowndharya | Member |
| 9 | Dr.A. Mythili | Member |
| 10 | Mrs .S. Vishnu Priya | Member |
| 11 | Dr. N. Kuppuchamy | Co-opted Member |
| 12 | Dr. A. Hazel Verbina | Co-opted Member |
| 13 | Dr. R.Sowrirajan | Co-opted Member |
| 14 | Mr. M. Tamil Selvam | Student Representative |

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 and 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 8.1: *To review and approve the minutes of the previous meeting held on 17.10.2023*

The chairman of the Board presented the minutes of the previous meeting held on **17.10.2023** 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 17.10.2023

Item 8.2: To consider and approve the scheme, regulation and syllabi for I semester for the students admitted during the academic year 2024-25

The chairman presented the detailed Scheme and Regulation for the students admitted during the academic year 2024-25 and Syllabi for the I Semester. The members deliberated in detail about the modification required. After discussion it is unanimously decided to adopt the following changes.

Changes Made:

| B.Sc. Computer Science with Cognitive Systems | | |
|--|---------------|-----------------------------|
| Course Code | Course | Changes & Reason |
| - | Nil | - |

New Courses Introduced:

| Course Code | Course | Changes & Reason |
|--------------------|-----------------|--|
| 24CGU5DC | Computer Vision | To impart knowledge on interpreting visual data and automating expertise as suggested by Dr T. Meyyappan |

Courses Removed:

| Course Code | Course | Changes & Reason |
|--------------------|---------------------------|--|
| 234CG1A5DC | Infrastructure Management | The concepts are included in Process Management Course |
| IDC Offered | | |
| Course Code | Course | Department |
| - | Nil | - |

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

Resolution:

Resolved to approve the above modification and adopt the revised scheme and retain existing I semester syllabus of 2023-24 batch for the students admitted during the academic year 2024-25.

Item 8.3 : To consider and approve the syllabi for III semester for the students admitted during the academic year 2023-24.

The Chairman presented the detailed syllabi for the III semester to the students admitted for the academic year 2023-2024. The members deliberated in detail and unanimously decided to adopt the existing syllabi of 2022-23 batch without any changes

Changes Made:

| B.Sc. Computer Science with Cognitive Systems | | |
|--|---------------|-----------------------------|
| Course Code | Course | Changes & Reason |
| - | Nil | - |

New Courses Introduced: NIL

| Course Code | Course | Changes & Reason |
|--------------------|---------------|-----------------------------|
| - | Nil | - |

Courses Removed: NIL

| Course Code | Course | Changes & Reason |
|--------------------|---------------|-----------------------------|
| - | Nil | - |

IDC Offered:

| Course Code | Course | Department |
|--------------------|---------------|-------------------|
| - | Nil | - |

After discussion the following resolution was passed.

Resolution:

Resolved to approve the existing syllabus of 2022-23 batch without any modification for the students admitted from the academic year 2023-24.

Item 8.4 : To consider and approve the syllabi for V semester for the students admitted during the academic year 2022-23.

The chairman presented the detailed syllabi for the V semester for the students admitted during the academic year 2022-23. The members deliberated in detail about the modification required. After discussion it is unanimously decided to adopt the following changes.

Changes Made:

| B.Sc. Computer Science with Cognitive Systems | | |
|--|------------------|---|
| Course Code | Course | Changes & Reason |
| 224CG1A5CC | Software Testing | <p>Unit 1: Requirement Traceability Matrix Preparation, Project Closure included in Software Testing to understand the final phases of STLC.</p> <p>Unit 5: Case Study included to enhance the practical knowledge of Test Design Phase and Requirement Traceability Matrix.</p> <p>-As suggested by Dr.T.Meyyappan</p> |

| | | |
|------------|-----------------------------|---|
| 224CG1A5CP | Selenium Automation Testing | Script to automatically work with browsers Handle all the locators and web elements. -As suggested by Mr. J. Vengatesh and Dr.S.P.Shantharaja |
|------------|-----------------------------|---|

New Courses Introduced:

| Course Code | Course | Changes & Reason |
|-------------|--------|------------------|
| - | Nil | - |

Courses Removed:

| Course Code | Course | Changes & Reason |
|-------------|--------|------------------|
| - | Nil | - |

GE Offered

| Course Code | Course | Department |
|-------------|-----------------------|-------------------------------------|
| 224CG1A5GA | Smart Living with IoT | UG- III rd Year Students |

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

Resolution:

Resolved to approve the above modification and adopt the revised syllabus for students admitted for the academic year 2022-23.

Item 8.5: *To approve the panel of examiners for question paper setting and evaluation of answer scripts for the even semester of the academic year 2024-25.*

The Chairman presented the panel of examiners for question paper setting, question paper scrutiny and conduct of practical and theory of examination are submitted to CoE for exam related works.

Resolution:

Resolved to approve the panel of examiners for question paper setting and evaluation of answer scripts for the odd semester of the academic year 2024-2025.

Item 8.6: *To consider and approve any other item brought forward by the Chairman and the members of the board.*

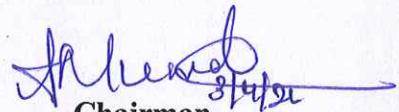
- Board recommended to provide Hands on Training on computer networks and discussed Value Added Certificate Course on Linux and Networking.
- Faculty Training Programme by TCS.

Resolution:

- **Resolved to approve the Value Added Certificate Course**

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. R. Senthil Kumar, Professor - Computer Science with Cognitive Systems.

Date:03.04.2024



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:234CG1A5DB/Machine Learning Principles Semester: V

| Unit | Contents |
|------|---|
| I | Machine perception -feature extraction -classification, clustering, linear and logistic regression -Types of learning -Bayesian decision theory -classifiers, discriminant functions, and decision surfaces -univariate and multivariate normal densities -Bayesian belief networks |
| II | Perceptron and backpropagation neural network -k-nearest-neighbor rule. Support vector machine: multiclass category generalizations -Regression. Decision trees: classification and regression tree -random forest. |
| III | Principal component analysis -Linear discriminant analysis -Independent component analysis. k-means clustering -fuzzy k-means clustering -Expectation-maximization algorithm-Gaussian mixture models -auto associative neural network. |
| IV | Convolution neural network (CNN) -Layers in CNN -CNN architectures. Recurrent Neural Network -Applications: Speech-to-text conversion-image classification-time series prediction |
| V | Generating diverse learners -model combination schemes -voting -error-correcting output codes -bagging -boosting -mixture of experts revisited -stacked generalization -fine-tuning an ensemble -cascading. |

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: 224CG1A5DC / Infrastructure Management Semester: V

| Unit | Contents |
|------|---|
| I | Introducing Windows 10 - Overview of Deploying Windows 10-Configure Devices and Drivers - Perform Post installation Configuration Tasks - Managing Apps in Windows |
| II | System Center Configuration Manager Overview - SCCM Features and Capabilities - SCCM Setup and Installation, Configuration Manager Basics- Deploying SCCM Client, User and Device Collections in SCCM |
| III | Application Management using SCCM - Operating System Deployment using SCCM - Endpoint Protection using SCCM - Troubleshooting SCCM Server - Troubleshooting SCCM Clients - Creating Reports using SCCM Reports |
| IV | System Center Operations Manager Overview - SCOM Features and Capabilities -SCOM Setup and Installation - Operations Manager Basics, Deploying SCOM Clients-Management Packs in SCOM |
| V | Managing and Administering SCOM Environment -Managing Alerts using SCOM- Creating Custom Management Packs and Alerts - Troubleshooting SCOM Server - Troubleshooting SCOM Clients - Creating Reports using SCOM Reporting |

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: 224CG1A5CC / SOFTWARE TESTING

Semester: V

| Unit | Existing | Changes |
|------|--|---|
| I | Software Testing, Automation Testing, Introduction to Selenium and its Components, Selenium IDE Features, Selenium Download and Installation, Creating Scripts using Firebug and Its Installation, Locator Types | Introduction to Software Testing-Testing Methodologies-Testing Types-Software Development Lifecycle-Software Testing Lifecycle- Manual and Automation Testing-Defect Lifecycle Management Protocol -Requirement Traceability Matrix Preparation-Project Closure. |
| II | Selenium WebDriver Installation with Eclipse, Handling Dropdowns, Explicit and Implicit Wait | Introduction to Selenium-History of selenium-selenium features-Uses and Benefits of selenium-Limitations and challenges - Complexities of selenium in web application - Selenium Components-Selenium IDE Features - Selenium Download and Installation-Creating Scripts using Firebug and Its Installation-Locator Types. |
| III | Handling Alerts/Pop-ups, Handling Web Tables, Frames, Dynamic Elements, Robot API, AutoIT | Selenium WebDriver Installation with Eclipse - Firefox Driver-Chrome Driver-Internet Explorer Driver - Microsoft Edge Driver-Safari Driver-Web Element-Accessing the various attributes of Web Elements-Object repository |
| IV | Introduction to TestNG, Test Automation Framework | Handling Alerts -Pop-ups- Handling Web Tables-Frame- Dynamic Elements- Robot API- AutoIT - TestNG-Test Automation Framework- Handling radio button-Handling Dropdowns- Form submission - Explicit and Implicit Wait - Quit |
| V | Selenium Grid Introduction, Transition Testing - States, State Graph, State Testing | Selenium Grid Introduction: Selenium grid Architecture- Selenium Server- Selenium grid test-Command line for selenium grid -Transition Testing - States, State Graph, State Testing. Case Study: Prepare a Test Design and Requirement Traceability Matrix for an Application/Website |

PERCENTAGE OF SYLLABUS REVISED: 41 %

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: 224CG1A5CP /Selenium Automation Testing

Semester: V

| S.No | Existing | Changes |
|------|--|---|
| 1 | Develop a test to Open a Firefox browser using Selenium Web driver | Write a script to open google.com and verify that title is Google and verify that it is redirected to google.co.in |
| 2 | Test the case To Print a Message to display that the website is opened successfully Wait for 5 Seconds and Close the Browser | Write a script to open google.co.in using chrome browser (Chrome Driver) |
| 3 | Develop a test to Upload a file with Send Keys method by using Web driver | Write a script to open google.co.in using internet explorer (Internet Explorer Driver) |
| 4 | Automate to Access a Link in Selenium Web driver by linkText () and partialLinkText () | Write a script to create browser instance based on browser name |
| 5 | To locate a link by Selecting multiple items in a dropdown | Write a script to search for specified option in the list box |
| 6 | Develop a test to locate a frame using Tag Name | Write a script to print the content of list in sorted order |
| 7 | Test the case to submit a login form using Web driver | Write a script to print all the options. For duplicates add entry only once. Use HashSet |
| 8 | Develop a test to Synchronize with an implicit wait | Write a script to close all the browsers without using quit () method. |
| 9 | Develop a test to Synchronize with an explicit wait | Write generic method in selenium to handle all locators and return web element for any locator. |
| 10 | Test the case by Identifying and handling a pop-up window by its name | Write generic method in selenium to handle all locators containing dynamic wait and return web element for any locator. |

PERCENTAGE OF SYLLABUS REVISED: 50%

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 EIGHT BOARD OF STUDIES MEETING

Faculty: Computer Science

Board: Computer Science with Cognitive Systems

Date : 03.04.2024

Time : 10.00 a.m.

Venue: Innovation Centre (Google Meet)

The following members were present for the meeting

| S.No | Name | Designation | Signature |
|------|---|-----------------|---|
| 1. | Dr.A.Nirmala Professor & Head Department of Computer Science with Cognitive Systems Dr. N.G.P Arts and Science College Coimbatore - 48. | Chairman |  8/4/24 |
| 2. | Dr.E.Chandra Professor & Head Department of Computer Science Bharathiar University Coimbatore-46 | VC Nominee | ABSENT |
| 3. | Dr. S.P. Shanthalrajah 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. Vengatesh Senior Consultant TATA Consultancy Services Chennai-600 058 | Industry Expert | PRESENT |
| 6. | Ms. P. Keshika Package App Development Associate Accenture Coimbatore-641 014 | Alumni |  |

| | | | |
|-----|--|------------------------|-----------------------|
| 7. | Dr.N.Kuppachamy Associate Professor & Head Department of Tamil Dr.N.G.P. Arts and Science College Coimbatore | Co-opted Member | 03/04/2024 |
| 8. | Dr.A.Hazel Verbina Professor & Head Department of English Dr.N.G.P. Arts and Science College Coimbatore | Co-opted Member | 03/04/2024 |
| 9. | Dr. R. Sowrirajan Assistant Professor & Head Department of Mathematics Dr.N.G.P. Arts and Science College Coimbatore | Co-opted Member | 03/04/2024 |
| 10. | Dr. R. Senthil Kumar Professor Department of Computer Science with Cognitive Systems Dr.N.G.P. Arts and Science College Coimbatore | Internal Member | 03/04/2024 |
| 11. | Dr. P. Sakthi Murugan Assistant Professor Department of Computer Science with Cognitive Systems Dr.N.G.P. Arts and Science College Coimbatore | Internal Member | 03/04/2024 |
| 12. | Mrs. M Sowndharya Assistant Professor Department of Computer Science with Cognitive Systems Dr.N.G.P. Arts and Science College Coimbatore | Internal Member | 03/04/2024 |
| 13. | Dr. A. Mythili Assistant Professor Department of Computer Science with Cognitive Systems Dr.N.G.P. Arts and Science College Coimbatore | Internal Member | 03/04/2024 |
| 14. | Mrs. S. Vishnu Priya Assistant Professor Department of Computer Science with Cognitive Systems Dr.N.G.P. Arts and Science College Coimbatore | Internal Member | 03/04/2024 |
| 15. | 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 | 03/04/2024 |

Date: 03/04/2024



Dr. Nirmala
(Dr.A.Nirmala)
31/4/24

Head of the Department

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