VASAVI COLLEGE OF ENGINEERING (Autonomous)

9-5-81, Ibrahimbagh, Hyderabad-500031, Telangana, India
(Sponsored by Vasavi Academy of Education)
ACCREDITED BY NAAC WITH 'A++' GRADE
Phone: +91-40-23146003 Fax: +91-40-23146090, +91-40-23146080

Dr. K. Ram Mohan Rao
Professor & Head, Chairman, BoS

Department of Information Technology
Phone: +91-40-23146050, 6051

Minutes of the XIII BoS Meeting conducted on 18-05-2024 from 10:30AM

The XIII BOS Meeting started with a formal welcome address by the BOS Chairman Dr. K. Ram Mohan Rao, Professor & Head, Department of Information Technology

Members Present

Dr. K. Ram Mohan Rao, Professor & Head	Chairman, BOS
Dr. K. Shyamala, Professor, Department of Computer Science, University College of Engineering, Osmania University, Hyderabad	University Nominee
Dr. Salman Abdul Moiz, Professor, School of Computer & Information Sciences, University of Hyderabad, Hyderabad	Subject Expert
Dr. Bheemarjuna Reddy Tamma Assoc. Professor, Dept. of Computer & Engineering, IIT-Hyderabad, Hyderabad	Subject Expert
Dr. Raghavendra Kune, Scientist / Engineer 'SG', Head High performance computing Drones(HPCD), Advanced Data Processing Research Institute (ADRIN), ISRO, Secunderabad.	Expert from Research Organization
Mr Amit Kumar Gupta Sr Data Scientist, CSEO, Microsoft India, Microsoft Campus, Gachibowli, Hyderabad 500032, TS.	Subject Expert from Industry
Mr.Vijay Kumar Information Security Manager, Wells Fargo, Hyderabad	Alumnus
Entire Faculty members of the Department in each specialization	Faculty Members

Members Absent

Mr. Surya Kiran, Software Engineer-9 Teradata Corporation India Pvt Ltd . Hyderabad	Alumnus

The following points were discussed in the meeting.

1. **Presentation of Department Profile:**
   - Head of the Department presented the Department Profile.
   - The consistent placement record of the students was appreciated by all BOS members.
   - The effort of the department in organizing International Conferences successfully was also appreciated by all members.

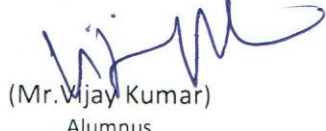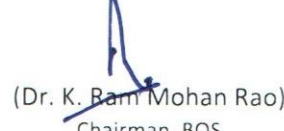|			
(Dr. K. Shyamala) University Nominee	(Dr. Salman Abdul Moiz) Subject Expert from UoH	(Dr. Bheemarjuna Reddy Tamma) Subject Expert from IITH	(Dr. Raghavendra Kune) Subject Expert from Research Organization
Mr. Amit Kumar Gupta) Expert from Industry	(Mr.Vijay Kumar) Alumnus	(Mr. Suryakiran) Alumnus	(Dr. K. Ram Mohan Rao) Chairman, BOS

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2. The Action Taken Report on XII BOS meeting has been reviewed and ratified.
3. The BOS Chairman presented Student Exit Feedback, Faculty Feedback on Curriculum and Minutes of Department Advisory Committee (DAC) held on 14th May 2024 regarding the R24 regulations.
4. The draft version of R24 regulations (scheme and detailed syllabus) considering the inputs from Student exit feedback, Faculty feedback and the recommendations of DAC for both B.E Regular and Honours programs has been presented.

Following are the Recommendations/ Approvals by the Members of BOS.

I Year:

1. Inclusion of Plotting data in lists using Matplotlib and SciPy library in Unit-II of Python Programming theory course in Semester-I
2. Inclusion of an experiment on Basic Operations on Matrices and Vectors in Python Programming Lab in Semester-I
3. Inclusion of an experiment on BJT CE using Virtaul Labs as part of Basic Electronics Lab in Semester-II

II Year:

4. It was considered to offer Programming in C++ course through MOOCs.
5. Following are the changes proposed in Object Oriented Programming Course in Semester-III:
   - Lambda Expressions - Lambda expression fundamentals, Functional Interfaces, Examples of Lambda expressions in Unit-II
   - java.time API in place of java.util.Date & java.util.Calendar, and java.util.regex in Unit-3.
   - Replace Applets with GUI Programming using JavaFX in Unit-5.
6. Introduce SpringBoot framework in place of .NET framework and ASP.NET in Unit -3 of Full Stack Development theory course in Semester-IV. .NET may be covered through workshops in Semester-IV itself.

III Year:

7. Case study on "Android OS" to be included along with case studies on Windows 10 and LINUX OS in Unit 5 of the Operating Systems course in Semester-V.
8. Inclusion the following experiments in Operating Systems Lab course:
   - Install and setup Android Studio with latest SDK
   - Develop test and debug a small Android App.
9. Advanced topics such as Transfer Learning, Attention Models, Generative Adversarial Neural Networks (GANs) are to be included in Unit-5 of Neural Networks and Deep Learning theory course in Semester-VI.

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10. The following changes are proposed to be included as part of Software Engineering theory course in Semester-VI:
    - Introduce "System Design" concept with case studies in Unit-III
    - All three assignments are to be designed in such a way that each student should explore all the stages of System Design for a given case study.
    - Functional and Non-functional requirements like scalability, performance, and cost estimation should be included in the assignments as part of case studies.
    - Case Study references may be taken from:
        ○ Text Book written by Prof. Salman Abdul Moiz
        ○ Consultancy projects under execution in the department
        ○ Tools like PEDALS Framework and others
        ○ focus on e-commerce applications, Google Site Reliability Engineering (SRE)
    - Every student has to apply all these design concepts in their theme-based projects and it is to be documented in their report.

Mr. Amit Kumar Gupta, Microsoft said that he would give the syllabus for two units covering the proposed contents.

IV Year:

11. Introducing Container concept in place of Microsoft Hyper-V in Unit 4 of Distributed Systems and Cloud Computing Course in Semester-VII.
12. An experiment on Containers to be included in Distributed Systems and Cloud Computing lab course in Semester-VII.
13. Network Security concepts like Firewall, end-to-end Security, ACL, PKI, TLS, IP Sec, ATTACKS (VIRUS) to be included in Cryptography and Network Security course in Semester VII.

New theory Courses proposed from AY 2024-25:

1. A course on Cyber Security has been suggested by members to be offered as a Professional Core course in the VII Semester.
2. A course on Generative AI is to be offered as Professional Elective IV under Artificial Intelligence Track.
    - Members suggested to include tools as part of Unit-IV and Unit-V of the proposed curriculum.
3. Course on "Fog and Edge Computing" is to be offered as Professional Elective IV under Data Science and Advanced Computing Track
    - Syllabus to be shared with BoS members for final approval.

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New lab Courses proposed from AY 2024-25:

The following changes were suggested by the BoS members in the proposed lab courses to be included as part of Professional Electives I and II in Semester-VII:

Professional Elective - I

Digital Image and Video Processing Lab
- Experiments on Image Enhancement to be included along with the proposed experiments.

Cryptography and Network Security Lab
- Random key generation using open SSL tool to be included.
- Separate experiments for stream chipper and block chipper to be included.
- Experiments on SHA -1 / SHA-2 to be included.
- Experiment on AES to be included.

Software Testing Lab
- Include experiments on Black Box and White Box Testing using relevant tools.
- Test cases for evaluating mail service (email addresses) to be included
- Include a program for testing APIs Functionalities.
- Include programs on Regression, stress and Load Testing.
- Include Testing of Theme Based Project using the relevant automation tool.
- Combine Experiments 1,2 and 3 of the proposed syllabus into a single experiment.
- Include experiment on developing a Test Plan in the initial sessions of the Lab.

Data Mining Lab
- Mention any open-source tool in the proposed Lab Syllabus
- Lab Manual to be prepared with Orange Data Miner.
- For Data Profiling (Exploratory Data Analysis) multiple tools.

Professional Elective – II
Natural Language Processing Lab
- More scenario-based experiments to be encouraged.
- NLTK, PyText, and other libraries are to be included.
- Named Entity Recognition experiment to be included.
- Explore the possibility of a ChatGPT license for the institute.

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Blockchain Lab:

- Implement the data structures used blockchain technology
- Install and configure blockchain development tools such as Ganache, Truffle, Hardhat, MetaMask, Hyperledger Fabric and Hyperledger Indy
- Develop smart contracts using Ethereum, Solidity, Truffle and Hyperledger Fabric
- Identify opportunities and challenges associated with blockchain adoption
- Introducte Ubin, GST, cryptoKitties blockchain case studies.

Agile Software Development Lab

- Include a statement, select one Case study and apply the Agile Software Development Lab on them.
- Add first experiment on introduction of DevOps.
- Build out a product backlog and user stories.
- Apply Test Driven Development.
- Add Release burndown charts for tracking.

Data Analytics and Visualization Lab

- Advised to include more scenarios as the course proceeds.

Virtual Labs

- It is advised to include few experiments available in virtual labs for each laboratory course.

The meeting concluded formally with vote of thanks.

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