DAYANANDA SAGAR UNIVERSITY

SCHOOL OF ENGINEERING

Devarakaggalahalli, Harohalli, Kanakapura Road, Ramanagara District, Karnataka – 562 112

Department of CSE (Data Science)

PROCEEDINGS OF BOS MEETING

- School : School of Engineering
- College : Dayananda Sagar University
- Program/Department : Computer Science & Engineering (Data Science)
- Mode of BOS Held : Hybrid (https://meet.google.com/akq-cvzk-yqj)
- Date : 07th June 2024
- Venue : A432, Block A, SOE, Main Campus, DSU
- Time : 2:00 PM to 4:00 PM

Members Present:

SL.No	Name	Designation & Affiliation	Signature
1	Dr. Udaya Kumar Reddy K R (Ph D from NIT-T)	Professor & Dean, School of Engineering Dayananda Sagar University Email: dean-engg@dsu.edu.in	
2	Dr. Shaila SG (Ph D from NIT-T)	Professor & Chairman, Dept. of CSE (Data Science), SoE Dayananda Sagar University Mobile: 8884560635 Email: chairman-ds@dsu.edu.in,	
3	Dr. Surendiran B (NIT-Puducherry)	Associate Professor, Department of CSE, NIT-Puducherry Mobile: 9942761363 Email: surendiran@nitpy.ac.in	
4	Dr. K S Sreedhar (Ph D from IIT-K)	Professor, Dept. of CS & E, UBDT College of Engineering, Davanagere Mobile: 9380060460 Email:ks_shreedhara@yahoo.com	
5	Dr. Sabeeha Sultana	Machine Learning Engineer, Cognizant, Bangalore Mobile: 9880973306 Email: drsultana25@gmail.com	
6	Dr. M K Banga (Ph D from IIT-K)	Professor & Dean-Research, Dayananda Sagar University Mobile: 9845448506 Email: banga.mkrishna@gmail.com	
7	Prof. Monish L	Assistant Professor, Dept of CSE (Data Science), Dayananda Sagar University Email: monishl-cse@dsu.edu.in	

- Members Absent:

SL. No	Name	Designation & Affiliation
1	Dr. Mahesh Kumar H.Kolekar (IIT- Patna)	Associate Professor, Ph.D, E and ECE Dept, IIT Kharagpur, Post-Doctoral Fellow, Dept of Computer Science, University of Missouri, MO, USA Mobile: 8986184240 Email: mahesh@iitp.ac.in
2	Dr. Kakoli Bora	Associate Professor, Dept of CSE (Data Science), Dayananda Sagar University Email: kakolibora-ds@dsu.edu.in

7/6/24.

CHAIRPERSON
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DAYANANDA SAGAR UNIVERSITY ★ SoE Kanakapura Road-562 112 ★ Dept of CSE Data Science

Minutes of Meeting

Minutes of Meeting of the Board of Studies held on 07th June 2024.

- Agenda

SL. No	Particulars
1	Vision and Mission of CSE (Data Science), PEOs, PSOs of CSE(Data Science)
2	Stakeholder feedback on curriculum: Faculty, Parents
3	Deliberation and discussion on the 2024 batch scheme of 1st - 2nd semester and CBCS syllabus 1st - 2nd semester of BTech CSE(Data Science)
4	Deliberation and discussion on the 2022 batch scheme and CBCS syllabus 5th - 8th semester of BTech CSE(Data Science)
5	Deliberation and discussion on the 2023 batch scheme and CBCS syllabus 3rd - 8th semester of BTech CSE(Data Science)
6	Overall suggestions and directions, Concluding remarks

Action Taken Report

- Discussions on Agenda

Agenda	Discussions Brief
1	**Vision and Mission of CSE (Data Science), PEOs,POs,PSOs of CSE(Data Science)** The Vison and Mission of CSE (Data Science)was discussed with the BOS members, the Vision and Mission of the department was compared with the Vision and Mission of the SOE. Followed by the PEOS and PSOs of the department were also discussed in the BOS meeting. The Vision and Mission of the department is in line with the Vision and mission of the SOE.
2	**Feedback Analysis on the curriculum of the Academic year 2023-2024** Faculty & Parents feedback on the curriculum was discussed. Based on the feedback collected the following changes in the curriculum have been incorporated. The theory courses have been incorporated with integrated Lab based on the suggestion of the BOS members.
3	**Deliberation and discussion on the 2024 batch scheme of 1st-2nd semester of BTech CSE(Data Science)** The semester-wise CBCS scheme for the 2024 batch was presented. It was discussed to swap "C Programming" to the 2nd semester and "Object-Oriented Programming with Python" to the 1st semester, ensuring a seamless continuation to "Data Structures" in the 3rd semester

3	**Deliberation and discussion on the 2022 batch scheme of 5th - 8th semester of BTech CSE(Data Science)** The Committee suggested that: 1. Design and Analysis of Algorithms: All lab programs should be in Java (considering the market demand for Java and Python). 2. Rename **"Machine Learning Tools & Techniques"** to "Machine Learning Techniques". 3. Rename **"Data Warehouse & Knowledge Mining"** to "Data Engineering". 4. The **"Foundations of Data Science"** course should cover time series analysis. 5. Change Skill Enhancement to 3 credits. 6. Rename **"Deep Learning"** to "Deep Learning and Neural Networks" as neural networks are challenging to understand. 7. Change the credits for Computer Network to 4 (2 for lab and 2 for lecture). 8. A report must be submitted as proof of the 8th-semester internship
4	**Deliberation and discussion on the 2023 batch scheme of 3rd - 8th semester of BTech CSE(Data Science)** 1. In the 4th semester course change the name **"Data Management for IOT"** to "Iot and Data Management" 2. In 5th semester suggested to rename "Theory of Computation" to "Finite Automata and Finite Language" 3. Suggested to change the name **"Applied ML"** to "Machine Learning Techniques" 4. Suggested to change **"Data Analytics with Hadoop"** to "Big Data Analytics" 5. Suggested to change the Professional Elective **"Introduction to IOT"** to "Recommendation System" 6. Suggested to include NOSQL as Professional Elective. 7. Suggested to add domain specific course like **Financial Risk Analysis and its management, Data Science for Logistic and Supply chain Management, Heterogeneous computing, Mobile computing, Web Intelligence, Mining of Massive Datasets, Massive Graph Analysis, Distributed Computing, Bio Informatics and HCI.** 8. Suggested to swap Skill enhancement course 1 and 2, **"OOPS with JAVA and ALTAIR"**, to support Data Engineering in 4th semester. 9. Replace Machine Learning as Machine Learning for Data Science, add **"Mathematical Foundations of Data Science"**. 10. Replace the title Deep Learning and Neural Network as **"Deep Learning Essentials for Data Science"**. 11. Replace the title Big Data analytics as **"Predictive Analytics"**. 12. Replace the title Artificial Intelligence as **"Data Science for Artificial Intelligence"**. 13. Replace the title Computer Vision, Cloud Computing as **"Vision Analytics"** and **"Cloud Analytics"**. 14. Merge the Concepts in HPC and Distributed computing to form **"HPC for Distributed Computing"**.

	15. Replace the titles NLP, Recommendation system, ARVR as **"Data Science for NLP, Data Science for Recommendation system, NLP for ARVR"**. 16. Suggested to add use cases and applications in 5th unit.
5	**Deliberation and discussion on the 2022 batch syllabus of 5th - 8th semester & 2023 batch syllabus of 3rd - 8th semester of BTech CSE(Data Science)** 1. In **Foundations of Data Science (FODS)**, include confidence intervals in different chapters. 2. Rename **"Advanced R"** in FODS to "Statistical Processes". 3. In **Web Technologies,** combine units 1 and 2, combine JavaScript and Node.js, and make unit 4 focus on AngularJS. 4. In **Machine Learning Techniques**, include decision trees, replace "Bayesian Inference" with "Ensemble Learning", and change unit 5 to "Ensemble Learning" with "Clustering" preceeding "Classification". 5. For **"Data Warehouse & Knowledge Mining"**, create a syllabus including "Ensemble Learning" after "Clustering and Classification", rename "Introduction to Data Warehouse", and change "Classification and Clustering" to feature engineering, PCA, ICA, and dimensionality reduction. Change unit V to "Self Learning" and try to add ETL and ETL pipelining (Informatica), referring to other syllabi. 6. In **"Deep Learning"**, include mathematical background (Gaussian function, gradient function) in unit 1 and reduce the syllabus for "Computational Graph". 7. Rename the contents of module 5 in **"Advanced Data Science"** to "Data Analytics for Healthcare". 8. Replace the elective **"Pattern Recognition"** with **"Digital Image Processing"**, without changing modules 4 and 5. 9. In **"Soft Computing"**, include Fuzzy Logic (2 modules), Neural Networks (1 module), Genetic Algorithms (1 module), and Evolutionary Computation (ANT, SWARM). 10. In **"Business Intelligence"**, replace the last module with a certificate and course instead of real applications. 11. **"High-Performance Computing"** is not required in the Data Science syllabus. 12. In **"Cloud Computing"**, make a project and upload it to a free cloud for 10 marks. 13. In **"Digital Forensics"**, add reporting and more details on the textbook. 14. Suggested to add domain specific course like Financial Risk Analysis and its management, Logistic and Supply chain Management, Heterogenous computing, Mobile computing, Web Intelligence, Mining of Massive Datasets,

	Massive Graph Analysis, Distributed Computing, Bio Informatics and HCI.

- Overall suggestions and directions, Concluding remarks

Agenda	Decisions/Resolutions/Recommendations
1-5	▯ Decision was taken to incorporate the changes suggested by the members. ▯ Decision was taken to have a common guideline for all the departments Internship/MOOC. ▯ Decision was taken to include MOOC courses from NPTEL/SWYAM which are not part of the curriculum.

- List of Enclosures based on Decisions/Resolutions/Recommendations submitted:

SNo.	Particulars
1	BoS Members list
2	Proceedings of the BoS Meeting Agenda 1-6
3	Scheme and Syllabus of 2022 Batch 5th - 8th semester
4	Scheme and Syllabus of 2023 Batch 3rd - 8th semester
5	Scheme and Syllabus of 2024 Batch 1st - 2nd semester
7	Feedback Analysis on the curriculum of the Academic year 2022-2023
8	Vision and Mission of CSE (Data Science), PEOs,POs,PSOs of CSE(Data Science)

7/6/24

Signature of Chairman of BOS with Date

Dr Shaila SG