

Date: 09.12.2022

Third Board of Studies (BoS)
Minutes of Meeting

Venue : Jasmine, Imperial Hall (Hybrid)

Meeting ID : Zoom Meeting
<https://us06web.zoom.us/j/87448672224?pwd=RVNTYmFYVnRpVkIzNUQ1a3RrWXpjQT09>
Meeting ID: 874 4867 2224 & Passcode: 148848

Date : 05.05.2023 (Friday)


Time : 11.30 AM – 01.00 PM

Agenda:

To discuss and pass

1. Curriculum Restructuring for UG programme B.E. Computer Science and Engineering (Artificial Intelligence and Machine Learning) under Regulation 2021 Revised.
2. Approval of 3rd and 4th Semester Syllabus.
3. Approval of Programme Elective Course Syllabus.
4. Approval of Open Elective Course Syllabus.
5. Internal Assessment Exam Pattern
6. Any other matter brought by the Chair.

Members Present:

S. No.	Name of the member with Designation	Category	Signature
1.	Dr. S.Karthikeyan, Associate Professor and Head, Department of CSE (AIML), KPRIET	Chairman	
2.	Dr. M.Vijayalakshmi, Professor, Department of Computer Science and Engineering, Thiyagarajar College of Engineering, Madurai.	University Nominee	Online
3.	Dr. M.Narasimha Murty, Honorary Professor, Dept. of CSA, Indian Institute of Science (IISc), Bangalore - 560 012	Academic Expert	Online

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S. No.	Name of the member with Designation	Category	Signature
4.	Dr. Partha Pratim Roy, Associate Professor, Dept. of Computer Science and Engineering, Indian Institute of Technology (IIT), Roorkee, Uttarakhand - 247667	Academic Expert	Online
5.	Dr. Hari Seetha, Professor & Director, COE in AI and Robotics, School of Computer Science and Engineering VIT - AP University, Andhra Pradesh - 522237	Academic Expert (Special Invitee)	Online
6.	Dr. Mohanraj Vengadachalam Machine Learning Lead, Standard Chartered GBS, Chennai	Academic Expert (Special Invitee)	Online
7.	Dr. Ranga Rajagopal Vice Chair, ACM Coimbatore Professional Chapter, Director & CEO - Acenet Technologies Pvt. Ltd, Coimbatore.	Professional Chapter (Special Invitee)	Online
8.	Mr. Aswathaman Ramachandran Data Analyst (Member of technical staff 2), Biofourmis, Bengaluru	Alumni	Online
9.	Mr. G.Pandiya Rajan, Assistant Professor (Sl.G), Department of CSE (AIML), KPRIET	Member	

Minutes of the 3rd BoS Meeting:

The meeting was convened by the Board Chairman. He welcomes all the members of the Board of Studies of CSE (AIML) department. The meeting started with the presentation on Agenda of the meeting, Vision, Mission, PEOs, PSOs, POs, Curriculum of Regulations 2021 Revised, and highlighting the various features of the curriculum.

Previous (2nd) BoS Meeting Major Points and its changes.

- Suggested maintaining the common course codes across all the CS Clusters – Common course code given.

- Suggested introducing Machine Learning I, Machine Learning II, Deep Learning I and Deep Learning II (since it is a specialization course) – Introduced in 4th, 5th, 6th and 7th Semesters.
- Suggested to add “Software Engineering” course in the 4th or 5th Semester – Included in 4th Semester.
- Suggested us to add “Optimization Techniques” course as a part of ML I/II – Included in 6th Semester.
- Suggested us to add “Pattern Recognition” course – Included in Vertical I (Data Science).
- Suggested few subjects for addition in Programme Elective Courses/verticals – Added in Vertical II (Artificial Intelligence and Machine Learning).

Following points have been discussed during the 3rd Board of Studies meeting:

- I. **Curriculum Restructuring for UG programme B.E. Computer Science and Engineering (Artificial Intelligence and Machine Learning) under Regulation 2021 Revised.**

“U21AM301 - Introduction to Data Science” is renamed as “Introduction to R Programming” in the curriculum.

Reason: The entire course contents focus on the core concepts of R Programming and its data structures.

- II. **Syllabus of 3rd and 4th Semesters, Programme Elective, and Open Elective of UG Programme under the Regulations 2021 Revised.**

The following courses have been introduced as Programme Elective courses in the Computer Science and Engineering (Artificial Intelligence and Machine Learning) Curriculum.

S. No.	Subject Code	Subject Name	Type of the Course
1.	U21AMP01	Knowledge Engineering	Programme Elective courses
2.	U21AMP02	Soft Computing	
3.	U21AMP03	Deep Neural Networks	
4.	U21AMP04	Reinforcement Learning	
5.	U21AMP05	Computer Vision	
6.	U21AMP06	Feature Engineering	
7.	U21AMP07	Object Detection & Face Recognition	
8.	U21AMP08	Text and Visual Analytics	

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9.	U21AMX02	AI for Everyone	Open Elective courses
10.	U21AMX03	Joy of Programming	
11.	U21AMX04	AI in Healthcare	

The following recommendation may be passed to the standing committee of the Academic Council that the choice-based credit system-based curriculum and syllabi for 3rd and 4th semesters of B.E Computer Science and Engineering (Artificial Intelligence and Machine Learning) program under Regulations 2021 be passed with the suggestions.

1. Dr. M.Vijayalakshmi : University Nominee

- Suggested to include Transformers and Large Language Models in Deep Learning I or II
- Suggested to teach and evaluate all Programme Elective Vertical courses as Project based assessments.

2. Dr. M. Narasimha Murty : Academic Expert

- Suggested to add "AdaBoost" along with the Gradient Descent algorithm in Machine Learning I Module-IV.
- Suggested to add MNIST dataset in Module-IV for training and testing of image classifications.
- Suggested to rename the title of Unit 4 as "Bigdata Analytics" (from "Fundamentals of Bigdata and Analytics") of cloud and big data analytics.
- Suggested to include the pre-requisites like Python Programming, R Programming for "Machine Learning I" Lab.
- Suggested to use Scikit-learn for "Machine Learning II Lab" if we use Python.
- Suggested to include Knowledge Graphs in "Knowledge Engineering".
- Suggested to include Rough sets, Fuzzy Sets and relations in "Soft Computing".
- Suggested to rename the Subject name as "Object Detection and Face Recognition". In Vertical II

- Suggested all the students from different domains to take the course “Reinforcement Learning”. Because it will be helpful in their domains. Also suggested to add some project component in the subject.
- Suggested to include missing data and outlier detection in “Feature Engineering”.

3. Dr. Partha Pratim Roy : Academic Expert

- Suggested to use Python and R Programming for “Machine Learning I Lab” (Based on the applications)
- Suggested to change the number of hours to be reduced for units 1 & 2. And add the remaining hours in the later part for Rough sets in “Soft Computing”.
- Suggested to go with both Python and R for teaching ML and DL theory and Labs.
- Suggested to consider time series data and algorithms related to that in “Feature Engineering”.
- Suggested to include some Biometrics with Face Recognition and verification in “Object Detection and Face Recognition” Subject in PCC.

4. Dr. Hari Seetha : Academic Expert

- Suggested to remove CNN in ML-I and it may be added in Deep learning I and Deep learning II.
- Suggested to include the Fuzzy applications like classification and clustering (unit 3) in “Soft Computing” subject.
- Suggested including the mini project as an assessment in “Deep Neural Networks”.

5. Dr. Mohanraj Vengadachalam : Industry Domain Expert

- Suggested to remove CNN, Object detection, image classification and segmentation concepts in unit 4. It may be focused on later in the Deep Learning part. Asked to add texture and colour features like image processing and computer vision-based features to do the classification.
- Suggested to include transfer learning with pre-trained ImageNet model in “Deep Neural Networks”. And some of the course contents have to be removed in unit 2.

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- Suggested to add texture based handcrafted feature engineering, edge detection, Laplace in “Computer Vision”
- Add transformers in “Deep neural networks”.
- Suggested to include one stage detection and two-stage detection in “Object Detection and Face Recognition”. Must differentiate normal detection with deep learning-based detection.

6. Mr. Aswathaman Ramachandran : Alumni

- Suggested to add the evaluation parameters in the “Machine Learning I” (Unit 5).
- Suggested to add kernel, convolution in “Computer Vision”.
- Consider anomaly and fraud detection in “Feature Engineering”.

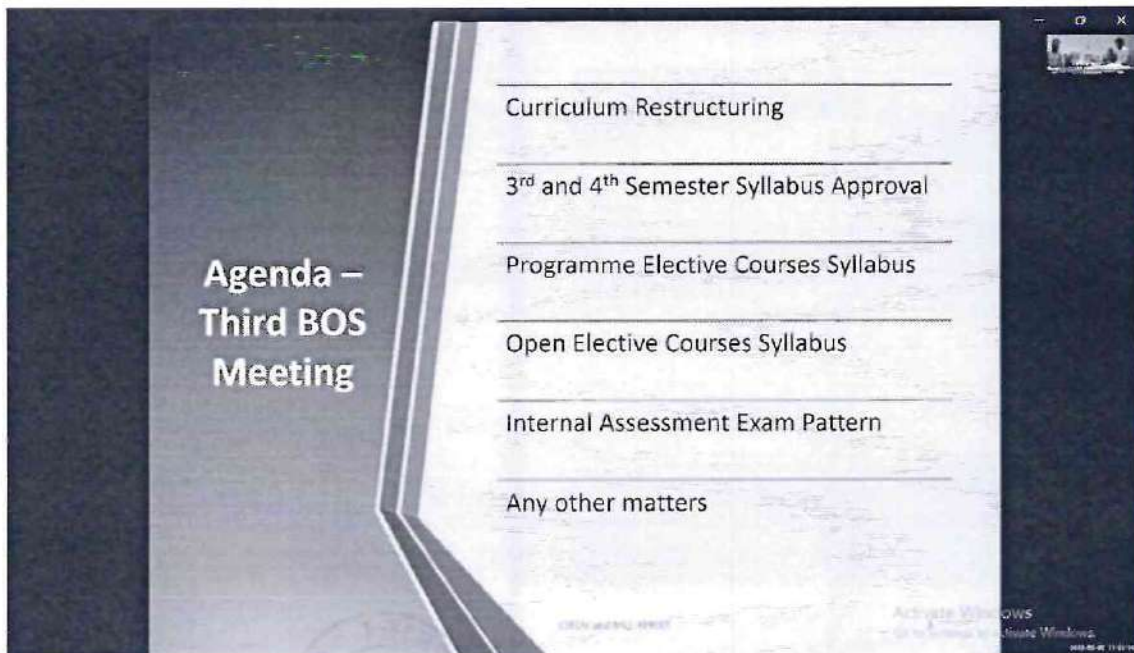
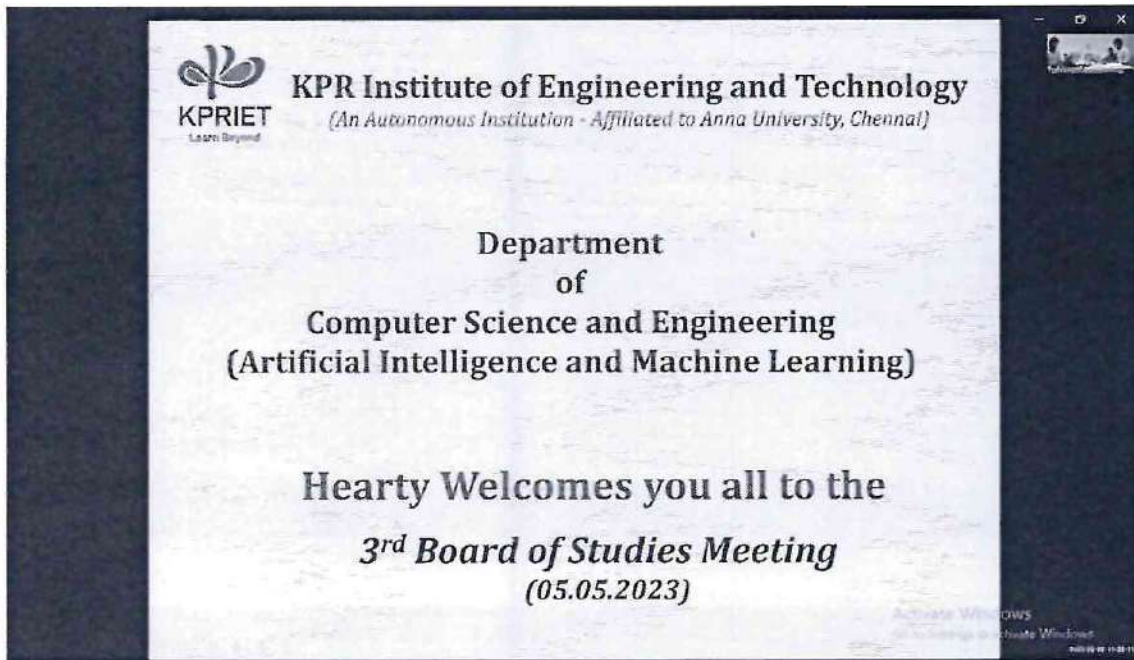
III. Internal Assessment Exam Pattern

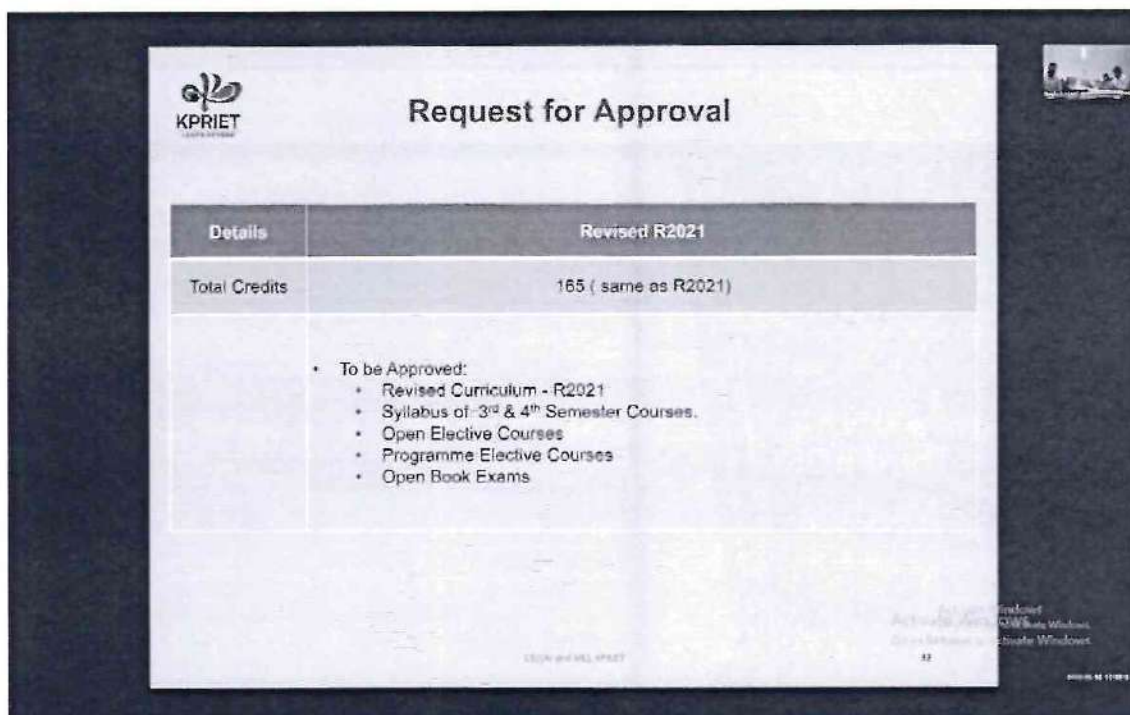
The following recommendation may be passed to the standing committee of the Academic Council that the Open Book test for the students of B.E., - Computer Science and Engineering (Artificial Intelligence and Machine Learning) programme under Regulations 2021 be passed with the suggestions.

- Open book exams (for the advanced core subjects and analytical courses in the Continuous Internal Assessment Tests) approved by the board members based on the department’s request. Committee instructed the same to be informed to the students well in advance.
- Regular processes will be followed for the other subjects.

Any other matter: NIL

Photos:





[Handwritten Signature]
 9.5.23
 Chairman
 BOS/CSE (AIML)