PANDIT DEENDAYAL PETROLEUM UNIVERSITY (PDPU), GANDHINAGAR
SCHOOL OF TECHNOLOGY (SOT)

Department of Computer Science and Engineering (CSE)

BOS Minutes of Meeting (CSE Department)

Date: 10th June 2020

The meeting of the Board of Studies (BOS) of the Department of Computer Science and Engineering (CSE) was held on 10th June 2020 at 10:30 am in online mode on Zoom.

The following members were part of the meeting:

Representatives of the SOT: • Dr. D. M. Parikh, Dean, FoET
External Members - BoS of the Department of CE: • Dr. Dr. Avnish Kshatriya, Global Head (Data Analytics & Artificial Intelligence), Wipro-Bangalore. • Mr. Adarsh Parikh, Associate Vice President, Silver Touch Technologies Ltd. Ahmedabad. • Dr. Snehanshu Saha, Professor, BITS Pillani, Goa. • Dr. D. C. Jinwala, Professor, SVNIT, Surat.
Internal Members - BOS of the Department of CSE: • Dr. Samir Patel, Chairman, BOS, CSE • Dr. Shakti Mishra, Assistant Professor, CSE • Dr. Nishant Doshi, Assistant Professor, CSE • Dr. Reema Patel, Assistant Professor, CSE
Faculty members from department of CSE, who were present in the meeting: • Dr. Samir Patel (HoD, Dept. of CE), Dr. Rutvij Jhaveri, Dr. Payal Chaudhari, Dr. Santosh Bharti, Dr. Rudresh Dwivedi.

The following members were absent and were granted leave of absence: -Nil-

The following points were discussed in the BOS meeting:

- BOS approves the minutes of the previous BOS meeting.
- BOS approves the Course Outcomes prepared as per the Blooms Taxonomy, for all existing ongoing courses of CSE syllabus. 2016-2020 and there were no other changes in the existing syllabus.

- **BOS discussed and approved the syllabus of all 4 year of revised syllabus 2020-24 as per new academic structure for <u>UG B. Tech-CSE 2020-24</u>, with the following suggestions w.e.f. 2020.**
    - Python syllabus should have experiments based on OOP's concepts such as class, objects, inheritance, method overloading, method overriding, encapsulation, etc.
        - Necessary inclusion is done in first year Computer Programming II course.
    - Data and File Structures is a bit too heavy for the 3rd semester – It was suggested to keep the name of the course as Data Structures and move the File Structures topics in the DBMS course.
        - Necessary changes are done.

- BOS Suggested to sequence the following courses based on dependencies. DBMS (4th Sem) should follow Data Structures (3rd Sem) course and OS (4th Sem) following the Microprocessor (3rd Sem)
    - Shifted the courses as suggested.
- Suggestion to include Tools/Techniques in the syllabus of "Formal Methods and Verification" is given.
    - Included tools/Techniques in the course
- It was suggested to have tutorial in DAA course instead of a Lab.
    - Tutorial based contents are already covered by the faculty member in their regular classes, so no changes are done in this regards.
- Suggestion regarding moving Software Engineering into the lists of Core Electives was given and have a full (sort of hybrid) course on Digital Signal Processing for concepts of linear algebra is given.
    - Being a core course in Computer Engineering with respect to GATE, Software Engineering is not moved in the Elective basket it is kept as it is. And topics of Linear Algebra are already covered in other courses.

- **BOS discussed and approved the syllabus of two year 2020-24 for <u>PG - M. Tech (Data Science)</u> program, with the following suggestions w.e.f. 2020.**
    - Introduction of Linear Algebra course for Data Science (from CS perspective)
        - The same has been incorporated as "Mathematics for Data Science" in Semester-I.
    - To incorporate Computer Science component to statistics and probability.
        - The syllabus has been revised as per the need of data science application and theory.
    - The course can be outlined as "Linear Algebra & optimization in Machine Learning". Reference can be considered as same title book by Charu C. Aggarwal.
        - The required component has been included in Mathematics for Data Science" in Semester-I with reference to Charu C. Aggarwal book.
    - Meta-heuristic optimization (which are an essential component of Non-CS applications such as Energy, Oil, and Manufacturing) must be a part of course. The objective of such courses is to increase the data science technique suitability to versatile application domains.
        - The same has not been incorporated as it needs more clarity and subject area expertise.
    - To induce pre-requisite in each course for better understanding of desired skills for the course.
        - The syllabus has been designed as per template provided by DG sir, though the pre-requisite may be separately mentioned in the document.
    - Development of Life cycle of data science application must be emphasized upon in projects and labs.
        - The same has been be adopted in Data Science lab courses.
    - The information on various roles in Data science industry must be given to students.
        - The same will be articulated to students during Industry training.
    - Students must understand the Data preparation and Data modelling. Hence it is suggested to ensure same through course/lab/assignment.
        - The same has been incorporated in Exploratory Data Analysis & Data Visualization.
    - Students must be aware of various regulation and law associated with data security.
        - Students may be given this information by Colloquium/Seminar or Expert Talk during semester

- **BOS discussed and approved the syllabus of 2 year 2020-24 for <u>PG - M. Tech (Cyber Security)</u> program, with the following suggestions w.e.f. 2020.**
    - BOS suggested to include an elective "Machine Learning in Information Security" in both M Tech courses.
        - We have added elective course “Machine learning in Cyber Security” in 2nd semester with course scheme 3-0-2.
    - BOS suggested to change the title "Algorithms and Programming".
        - We have changed the title of course “Algorithms and Programming” to “Algorithms and Complexity”.

- BOS suggested to have a course on "Abstract Algebra" in the M Tech (Cyber Security) program - in the first semester itself. This is as important as Linear Algebra is to the DS students.
    - We have incorporated “Mathematical Foundation of Cyber Security” course in 1st semester as a regular course with scheme 3-1-0. This course covers the required concepts of abstract algebra and number theory for cyber security courses.
- Algorithm design techniques and NP Theory to be given more importance.
    - We have added one specific unit “Complexity theory” covering NP theory in “Algorithms and Complexity” course.
- Secure Program Development instead of "Secure Programming"
    - We have changed the course name of “Secure Program Development” to “Secure Programming”.
- BOS suggested to merge few security courses.
    - We have merged “Foundation of Cryptography”, “Advanced Network Security” and “Computer Security” courses into two new courses named as “Cryptography and Network Security” and “Advanced Computer Security”.
    - “Cryptography and Network Security” course is added to 1st semester as a regular course.
    - “Advanced Computer Security” is considered as an elective course to be offered in 2nd semester.

Sd/-
Dr. Samir B. Patel (HOD and Chairman BOS, CSE Dept.)

Approved by:

Internal Members - BOS	**Signature**		**External Members - BoS**	**Signature**
Dr. Samir Patel, Chairman, BOS of CSE Dept.			Dr. Avnish Kshatriya	
Dr. Nishant Doshi, Member, BOS - CSE			Mr. Adarsh Parikh	
Dr. Reema Patel, Member, BOS - CSE			Dr. Snehanshu Saha	
Dr. Shakti Mishra Member, BOS - CSE			Dr. D. C. Jinwala	
School / Department Heads				
Dr. Sunal Khanna, Director, SoT				
Dr. Samir Patel, HoD, Dept. of CE				