



SCHOOL OF COMPUTING

BOARD OF STUDIES -MINUTES OF MEETING

Venue : CONFERENCE HALL

Date: 11.11.2019

The Minutes of the Meeting of Board of Studies for the School of Computing was held on 11.11.2019 at 2.30 PM in the Conference Hall.

The following members were present:

S.NO	NAME	DESIGNATION
1.	Dr. S.Nedunchellian – Dean	Chairman
2.	Dr.A.Kumaravel, Professor & Head/IT, BIHER	Member Secretary
3.	Dr.K.P.Kaliyamurthie, Professor and Head/CSE, BIHER	Member
4.	Dr.A.Muthukumaravel Professor and Head / MCA, BIHER	Member
5.	Dr.C.Nalini Professor/CSE, BIHER	Member
6.	Dr.G.Michael Professor/CSE, BIHER	Member
7.	Dr. S. Thirunakkarasu Associate Professor/IT	Member
8.	Dr. S. Sadagopan, Associate Professor/CSE	Member
9.	Mrs. S. R. Srividhya Assistant Professor/CSE	Member
10.	Dr.R.Jagdeesh Kannan Dean ,School of Computer Science and Engineering, VIT University, Chennai	Academic Expert Member
11.	Mr.M.Arun Shankar Locuz Enterprise Solutions Ltd.,	Industry Expert Member

Agenda Point: 1.0

Welcoming the members by BOS Chairman

The Board of Studies Chairman, in the Department of Computer Science & Engineering has welcomed all the members of the BOS who are present. He also introduced members of the board.

Agenda Point: 2.0

Dr.A.Kumaravel briefed on the relevance of the revision of curriculum and syllabus of 2018 in view of industry needs ,as per new educational policy and also model curriculum suggested by AICTE for the academic year 2020 . As the entire world is moving towards DATA SCIENCE, its necessary to bring change in the syllabus with more number of specialization streams that can conducted in the School of computing .

Agenda Point: 3.0

Presenting the proposed change in Regulation with revised curriculum & Syllabus of the B.Tech–Computer Science &Engineering and also with Different Specialization courses to start as New programs in the School of computing with revised curriculum & Syllabus of the B.Tech–Computer Science &Engineering by the Chairman, board of studies

The board of studies Chairman, Department of CSE has presented the proposed, change in Regulation with revised curriculum & Syllabus of the B.Tech–Computer Science & Engineering and also with Different Specialization courses to start as New programs in the School of computing with revised curriculum & Syllabus of the B.Tech–Computer Science &Engineering under Regulation2020 starting from III to VIII semesters, and invited members for their valuable comments and suggestions by the Chairman, board of studies

The following points were discussed:

It is resolved to recommend that the Regulation 2020 with the courses covering the New Program B.Tech .Computer Science And Engineering with professional Core subjects , Open Electives and professional electives

✓ In the domain specialization of field **Artificial Intelligence and Machine Learning**, we propose to include:

- Speech and Natural Language Processing
- Pattern Recognition and Soft computing
- Computer Vision
- Machine Learning
- Deep learning
- Cognitive Modeling
- Multi-Agent Systems
- Robotics

In the domain specialization of field **Cyber Security**, we propose to include:

- Intrusion Detection and Prevention System
- Web Security
- Information Security
- Cloud Security
- Ethical Hacking
- Cyber Forensics
- Software and Application Security
- Block Chain Technology

In the domain specialization of field for **Data Science** we propose to include:

- Data warehousing and Data Mining
- Web Mining
- Data and Visual Analytics
- Data Visualization
- Big Data Analytics
- Big Data for Healthcare

- Multivariate Techniques for Data Analysis
- Computing for Data Analytics

In the domain specialization of field for **Internet of Things** we propose to include:

- Internet of Things
- Embedded Systems
- Communication Technologies
- Multimedia Technologies
- Mobile Surveillance System
- Cloud services
- IOT Cloud and data analytics

The credits can be reduced in the following manner

Course Categories	Total Contact Hours	Total Credits
Basic Sciences (B)	41	32
Humanities and Social Sciences (H)	15	12
Engineering Sciences (E)	25	19
Professional Core (C)	62	52
Professional Elective (S)	24	18
Open Elective (O)	15	12
Project and Internship (P)	30	15
TOTAL	212	160

It was also resolved to recommend the following:

- Latest edition of text books for all courses
- Adequate weight age of each module, if the syllabus can have more than 6 modules.
- NPTEL lectures wherever possible

It was resolved to recommend rearranging the **Open Elective** Courses based on pre requisite conditions

Open Elective

Course Code	Course Title	Course Type	L
U20CSOT01	E-Commerce	OE	3
U20CSOT02	Virtual Reality	OE	3
U20CSOT03	Mobile Application Development	OE	3
U20CSOT04	Object Oriented Programming	OE	3
U20CSOT05	Fuzzy logic and Neural Networks	OE	3

It was resolved to recommend the list of courses introduced to B.Tech (CSE) and to recommend to finalize the revised (incorporating all of the above changes suggested by the members) curriculum and syllabus of B.Tech- Computer Science & Engineering, under R2020 can be framed.

Agenda Point: 4.0

Presenting the curriculum & Syllabus of the M.Tech–Computer Science Engineering

The chairman presented the M.Tech CSE curriculum and syllabus of regulation 2018. The syllabus may be updated based on requirements by the course instructors.

Agenda Point: 5.0

Presenting the proposed change in Regulation with revised curriculum & Syllabus of the B.Tech–Information Technology with revised curriculum & Syllabus

The chairman briefed about the CBCS implementation across the school and how the student can enroll themselves for course registration.

The proposed curriculum and syllabus of B.Tech information technology is presented and accepted by members.

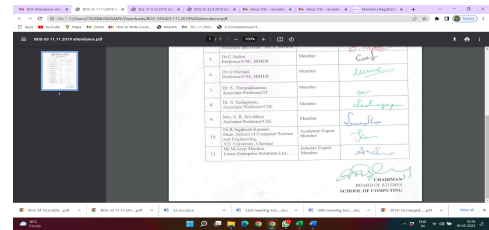
Agenda Point: 6.0

Presenting the curriculum & Syllabus of the M.Tech–Information Technology

The chairman presented the M.Tech IT curriculum and syllabus of regulation 2018. The syllabus may be updated based on requirements by the course instructors.

Vote of Thanks

The Chairman thanked all members for attending the meeting by giving valuable suggestions





Bharath

INSTITUTE OF HIGHER EDUCATION AND RESEARCH

(Declared as Deemed-to-be University under section 3 of UGC Act, 1956)
(Vide Notification No. F.9-5/2000 - U.3, Ministry of Human Resource Development, Govt. of India, dated 4th July 2002)

SCHOOL OF COMPUTING

BOARD OF STUDIES MINUTES OF THE MEETING

Venue : CONFERENCE HALL

Date: 19.05.2020

The Minutes of the Meeting of Board of Studies for the School of Computer Science and Engineering was held on 19.05.2020 at 2.30 PM in the Conference Hall.

The following members were present:

S.NO	NAME	DESIGNATION
1.	Dr. S.Nedunchellian – Dean	Chairman
2.	Dr.A.Kumaravel, Professor & Head/IT, BIHER	Member Secretary
3.	Dr.K.P.Kaliyamurthie, Professor and Head/CSE, BIHER	Member
4.	Dr.A.Muthukumaravel Professor and Head / MCA, BIHER	Member
5.	Dr.C.Nalini Professor/CSE, BIHER	Member
6.	Dr.G.Michael Professor/CSE, BIHER	Member
7.	Dr. S. Thirunakkarasu Associate Professor/IT	Member
8.	Dr. S. Sadagopan, Associate Professor/CSE	Member
9.	Mrs. S. R. Srividhya Assistant Professor/CSE	Member
10.	Dr.R.Jagdeesh Kannan Dean ,School of Computer Science and Engineering, VIT University, Chennai	Academic Expert Member
11.	Mr.M.Arun Shankar Locuz Enterprise Solutions Ltd.,	Industry Expert Member

Agenda Point: 1.0

Welcoming the members by BOS Chairman

The Board of Studies Chairman, has welcomed all the members of the BOS who are present. He also introduced members of the board.

Agenda Point: 2.0

The chairman briefed on the relevance of the revision of curriculum and syllabus in view of model curriculum suggested by AICTE for the academic year 2020 . He also provided details on the structure of the curriculum for Semesters I & II that has been already recommended by first year Board.

Agenda Point: 3.0

Presenting the finalized PSOs, proposed curriculum & Syllabus of the B.Tech-Computer Science & Engineering by the Chairman, board of studies

The board of studies Chairman, Department of CSE has presented the PSOs, curriculum and syllabus of B.Tech-Computer science and engineering under Regulation 2020 starting from III to VIII semesters, and invited members for their valuable comments and suggestions.

PROGRAMME SPECIFIC OUTCOMES (PSOs)

On completion of the B.Tech. Computer Science & Engineering degree the graduates shall be able to:

PSO 1: The Computer science and engineering graduates who might apply standard software engineering practices and strategies such as analyzing, developing, testing, applying in projects best practices with other technologies to deliver a quality product.

PSO 2: Designing and developing computer programs/computer-based systems in areas that are related to algorithms, network protocol applications, web design, and cloud with intelligence computation of varying complexity.

PSO 3: Acquaint with contemporary skills in Artificial intelligence, machine Learning, and data analytics projects in industrial/ research setting, and thereby innovate novel solutions to existing programs.

PROGRAMME EDUCATIONAL OBJECTIVES (PEOS)

The Program Educational Objectives (PEOs) of the Computer Science and Engineering discipline are listed below:

The graduate after 3-5 years of program completion shall be able to

PEO1: PREPARATION

Provide students with sound fundamentals in Mathematical, Scientific and Engineering fields that are necessary to formulate, analyze, and comprehend the fundamental concepts essential for articulation, solving and assessing engineering problems, and to prepare them for research & development by higher education.

PEO2: CORE COMPETENCE

To apply critical reasoning, quantitative, qualitative, designing and programming skills in identifying, solving problems by analyzing the experimental evaluations, and finally making appropriate decisions along with knowledge in computing principles, and applications that may be able to integrate from knowledge by a variety of industry and inter-disciplinary settings.

PEO3: PROFESSIONALISM

To broaden knowledge by establishing themselves as creative practicing professionals, locally and globally, in fields such as design, development, problem solving to production support in software industries and R&D sectors.

PEO4: SKILL

To provide better opportunity in becoming a future researcher/ scientist with good communication skills, so that they may be both good team-members and leaders with innovative ideas for sustainable development.

PEO5: ETHICS

To be ethically and socially responsible solution providers and entrepreneurs in Computer Science and related engineering disciplines.

Agenda Point: 4.0

The following points were discussed :

Resolved to recommend and introduce the following Courses (Credit) from III to VIII Semesters for B.Tech - CSE:

1. By allocating course work in Python Programming as joint course to II year curriculum and the board of studies members passed the resolution.
2. It is resolved to recommend inclusion of the following courses in professional core(C)
 - i) Cryptographic Principles and Techniques.
 - ii) Java Programming
 - iii) IOT Programming
 - iv) Machine Learning
3. It is recommended to rename the following subjects in R-2020 curriculum
 - i) Database Management System is renamed as Database Information System.
 - ii) Cloud computing is renamed as cloud computing and virtualization.
 - iii) Software Engineering is renamed as Software Engineering Program Management.
 - iv) Computer Networks is renamed as Networks and Communication.
 - v) Artificial Intelligence is renamed as Principles of Artificial Intelligence.
 - vi) Essence of Indian Knowledge Tradition is renamed as Indian Traditional Knowledge.
4. In Big Data Analytics Laboratory – Lab has been removed and changed as professional elective.
5. The following courses has been delisted from the existing curriculum
 - i) Term Paper is renamed as Phase -1 (Mini Project in VIIth Term.
 - ii) Behavioral Interpersonal and Nature Club has been delisted in this curriculum.
 - iii) Design Analysis & Algorithm has been delisted.
 - iv) Formula Language Automata Theory, Self Development has been delisted.
 - v) Social Science and Object Oriented Software Engineering has been delisted.
 - vi) Functional Programming has been delisted.

In the domain specialization of field **Artificial Intelligence and Machine Learning**, we propose to include:

- Speech and Natural Language Processing
- Pattern Recognition and Soft computing
- Computer Vision
- Machine Learning

- Deep learning
- Cognitive Modeling
- Multi-Agent Systems
- Robotics

In the domain specialization of field **Cyber Security**, we propose to include:

- Intrusion Detection and Prevention System
- Web Security
- Information Security
- Cloud Security
- Ethical Hacking
- Cyber Forensics
- Software and Application Security
- Block Chain Technology

In the domain specialization of field for **Data Science** we propose to include:

- Data warehousing and Data Mining
- Web Mining
- Data and Visual Analytics
- Data Visualization
- Big Data Analytics
- Big Data for Healthcare
- Multivariate Techniques for Data Analysis
- Computing for Data Analytics

In the domain specialization of field for **Internet of Things** we propose to include:

- Internet of Things
- Embedded Systems
- Communication Technologies
- Multimedia Technologies
- Mobile Surveillance System
- Cloud services
- IOT Cloud and data analytics
- Industrial IOT

It is resolved to recommend the revised (incorporating all of the above changes suggested by the members) curriculum and syllabus of B.Tech- Computer Science & Engineering, under R2020. (Annexure- I)

CURRICULUM STRUCTURE AND CREDIT DISTRIBUTION

Course Work – Subject Area	2015	2018	2020
	Suggested Distribution of Credits		
Humanities and Social Sciences(HSS): Soft skills, Value Education & Professional Ethics, Languages, Aptitude, Personality Development, NCC/NSS/NSO/ Yoga etc	16	9	12
Maths&Basic Sciences(BS): including Maths, Physics, Chemistry, Biology and Environmental Science	36	38	32

Engineering Sciences (ES): Basic Civil Engg, Electrical Engg, Mechanical Engg, Electronics Engg, Computer, etc.	18	21	19
Professional Core (PC) or Core Electives (CE –R 2015): subjects under Core Engg, relevant to the chosen specialization/branch	95	69	52
Non Major and Open Electives (NE & OE): relevant to the chosen specialization/branch, other Technical, emerging subject areas, etc.	15	8	12
Project Work & Research (PR): includes Project work, Term Paper, Seminar and/or internship in industry or elsewhere, etc.	16	13	15
Professional Elective	NIL	15	18
Engineering Electives	NIL	2	-
Total credits for whole programmes:	196	175	160

The board of study members discussed various categories of courses with the credit assessment and percentage in credit distribution, presented by Chairman of the board of studies. The experts were keen to learn the details of mandatory Courses. The chairman explained that AICTE model curriculum introduced by the concept of three weeks Induction Program I, to which Mandatory courses was also listed.

When new students enter an institution, they come with diverse thoughts, backgrounds and preparations. It is important to help them adjust to the new environment and inculcate in them the ethos of the institution with a sense of larger purpose. Precious little is done by most of the institutions, except for an orientation program lasting a couple of days.

AICTE proposed a 3-week long induction program for UG students admitted to the institution, right at the beginning. Normal classes begin only after the induction program has been completed. Its purpose is to make the students feel comfortable in their new environment, orient them, set a healthy daily routine, create bonding in the batch as well as between faculty and students, developing awareness, sensitivity and understanding of the self, people around them, society at large, and nature.

It is proposed to continue the activity after the induction program is completed and hence distribute various activities throughout the studies from I to VIII s semester. The mandatory courses are of two types in which theory based courses like-Constitution of India , Universal Human Values, are included with 2 lecture contact hours and the other type is the activity based courses like Yoga, Sports, NSS activities that were included in laboratory. These courses are non-credit, but one has to necessarily register and earn marks for passing. Their pass/fail will be indicated in the Grade Card.

Resolved to recommend and introduce the following Mandatory Courses (Non Credit) from III to VIII Semesters for B.Tech - CSE:

- Theory Courses on
 - Constitution of India in IV Semester
 - Universal Human Values in V Semester
 - Essence of Indian Knowledge Tradition in VI Semester

- Activity Based courses in the I Semester
 - Culture- Learning an art form in III Semester
 - Culture – Intangible Cultural, heritage (festivals, Food ways, Local games) in III Semester
 - Literature & Media –Literature, Cinema & Media in IV Semester
 - Literature & Media – Group Reading of Classics in IV Semester
 - Social Services – Social Awareness in V Semester
 - Social Services – NSS in V Semester
 - Self-Development – Spiritual, Mindfulness & Meditation in VI Semester
 - Self-Development- religion and Inter-faith in VI Semester
 - Behavioral and interpersonal skills in VII Semester
 - Nature – Nature club in VII Semester
 - Project based – Sc., Tech, Social, Design & Innovation in VIII Semester

Agenda Point:5

Presenting the proposed B.Tech curriculum for III – VIII semesters of B.Tech-CSE by the Chairman, BOS

The Chairman board of studies, Department of Computer science and engineering has presented the curriculum for III – VIII semesters of B.Tech-CSE, under Regulation2020, and has invited members for their valuable comments and suggestions. Having detailed deliberations on the proposed curriculum, the following additions and omissions were suggested and resolved accordingly

It was resolved to recommend the following:

- Latest edition of text books for all courses
- Adequate weightage of each module, if the syllabus can have more than 6 modules.
- NPTEL lectures wherever possible

It was resolved to recommend rearranging the **Open Elective** Courses based on pre requisite conditions.

Agenda Point:6

The chairman presented B.Tech Computer Science Engineering curriculum and syllabus regulation 2020 and M.Tech Computer Science Engineering curriculum and syllabus regulation 2018.

New elective courses may be introduced in the forthcoming semesters.

Vote of Thanks

The Chairman thanked all members for attending the meeting by giving valuable suggestions

