DEPARTMENT OF COMPUTER ENGINEERING

Minutes of meeting of Board of Studies in Computer Engineering held on 05.02.21

A meeting of Board of Studies in Computer Engineering was held on 5th February at 3:00 pm on Google Meet online meeting platform.

Following members attended the meeting.

1. Dr. Urjita Thakar — (Chairperson)
2. Mr. V.R. Sathe — IT Consultant, Indore (External Expert)
3. Prof. B.K. Joshi — Professor, Computer Engineering, MCTE, Mhow (External Expert)
4. Prof. D A Mehta — (Member)
5. Mr. Surendra Gupta — (Member)
6. Dr. Vandan Tewari — (Member)
7. Dr. Anuradha Purohit — (Member)
8. Ms. Priyanka Bamne — (Invitee)
9. Ms. Neha Mehra — (Invitee)
10. Ms. Jyoti Tiwari — (Invitee)

Mr. Rajesh Dhakad (Member) could not attend the meeting.

Discussions were held on all the agenda items. Following are the deliberations

Item no 1: To discuss the scheme and syllabi of BE| IV year of Computer Sc. & Engineering as per AICTE Model Curriculum. [B.Tech]
After due discussion, schemes and syllabi for the B.Tech, Computer Sc & Engg. course [B.E/B.Tech] (Enclosed enclosure-I) were finalized and recommended.

It was further resolved that
1. In practical subjects, up to 20% experiments can be carried out on any of the available online platforms like MHRD's VLab portal, Bodhitree etc. wherever required.
2. Students can take up to 20% subjects of a semester on well reputed Moocs platforms like NPTEL, CourSera, EDX etc. Internal assessment tests and final exam shall be conducted by the institute.

Item no 2: To discuss the Programme Educational Objectives & Programme Specific Outcomes (PEOs and PSOs) for PG programme of Computer Engineering (M.E. Computer Engineering)
The Programme Educational Objectives & Programme Specific Outcomes for M.E. were discussed and finalised. The same are attached herewith as Enclosure-II.

Item no 3: To review of Vision, Mission statement of Department

Vision and Mission statements were discussed. Minor corrections were suggested. These are enclosed as Enclosure-III.

Item no 4: To review of Program Educational Objectives (PEOs) and Program Specific Objectives (PSOs) of programs B.Tech. Computer Science and Engineering

PEOs & PSOs were discussed. Some minor corrections were suggested which were incorporated. Final PEOs & PSOs are enclosed herewith as Enclosure -IV.

Item no 5: Inclusion of elective subjects in M.E. Scheme

Two elective subjects, HU_____: Basics of Entrepreneurship and HU_____: Advanced Entrepreneurship, have been added in Elective I and Elective-III respectively of ME Computer Engineering attached herewith as Enclosure-V.

The meeting ended with vote of thanks to the chair.

Signatures of members:-

1. Dr. Urjita Thakar (Chairperson)

2. Mr. V.R. Sathe (External Expert)   Attended online

3. Prof. B.K. Joshi (External Expert)   Attended online

4. Prof. D A Mehta (Member)

5. Mr. Surendra Gupta(Member)

6. Dr.Vandan Tewari(Member)

7. Dr.Anuradha Purohit (Member)

8. Ms. Priyanka Bamne (Invitee)

9. Ms. Neha Mehra (Invitee)

10. Ms. Jyoti Tiwari (Invitee)

Shri. G.S. Institute of Technology & Science

Department of Computer Engineering

B.E./B.Tech. IV YEAR COMPUTER SCIENCE &ENGINEERING

B.E. | B.Tech.
B.Tech,

SEMESTER 'A'

S. No.	Category	Code No.	Subject Nomenclature	Hours Per Week			No. of Credits		Total	Maximum Marks				Total
				L	T	P	L	P		Th.	CW	SW	Pr.	
1.	PEC		Elective – II	3	-	2	3	1	4	70	30	60	40	200
2.	PEC		Elective – III	3	-	2	3	1	4	70	30	60	40	200
3.	PEC		Elective -IV	3	-	2	3	1	4	70	30	60	40	200
4.	LC	CO 44401	System Operations Lab	-	-	2	-	1	1	-	-	40	60	100
5.	PROJ	CO44998/ CO44499	Project Phase-II/ Project Phase-III	-	-	6	-	3	3	-	-	80	120	200
6.	SI	CO44481	Internship Evaluation - II	-	-	-	-	2	2	-	-	100	-	100
			Total	9	-	14	9	9	18	210	90	400	300	1000
7.	OC ✗	OC___	Open Category Subject V	-	-	-	-	-	-	-	-	-	-	-

SEMESTER 'B'

S. No.	Category	Code No.	Subject Nomenclature	Hours Per Week			No. of Credits		Total	Maximum Marks				Total
				L	T	P	L	P		Th.	CW	SW	Pr.	
1.	PEC		Elective –V	2	-	2	2	1	3	70	30	40	60	200
2.	PEC		Elective – VI	2	-	-	2	-	2	70	30	-	-	100
3.	PROJ	CO44498/ CO44999	Project Phase - III / Project Phase - II	-	-	4	-	2	2	-	-	80	120	200
4.	SI	CO____	Internship Evaluation – III	-	-	-	-	4	4	-	-	100	-	100
			Total	4	-	6	4	7	11	140	60	220	180	600
5.	OC ✗	OC___	Open Category Subject VI	-	-	-	-	-	-	-	-	-	-	-

List of Electives

Elective-I

1	CO	Data Science & Engineering
2	CO	Compiler Construction
3	CO	Wireless & Mobile Networks
4	CO	Object Oriented Software Engineering
5	CO	Computer Graphics
6	CO	Embedded Systems

Elective-III

1	CO	Deep Learning
2	CO	Advanced Algorithms
3	CO	Big Data
4	CO	Human Computer Interaction
5	CO	Real Time Systems
6	CO	Software Verification

Elective-V

1.	CO	Bioinformatics Computing
2.	CO	High Performance Computing
3.	CO	Machine learning for Security
4.	CO	Game design
5.	CO	Digital Signal Processing
6.	CO	Security in Resource Constrained Environment

Elective-II

1.	CO	Computational Intelligence
2.	CO	Advanced Data Structures
3.	CO	Cloud Computing
4.	CO	Software Architecture
5.	CO	Multimedia System
6.	CO	VLSI System Design

Elective-IV

1.	CO	Reinforcement Learning
2.	CO	Advanced Databases
3.	CO	Cyber Security and Forensics
4.	CO	Web Technologies
5.	CO	Virtual Reality
6.	CO	Robotics

Elective-VI

1.	CO	Natural Language Processing
2.	CO	Advanced Operating Systems
3.	CO	Network Management & Maintenance
4.	CO	Software Project Management
5.	CO	Image Processing and Computer Vision
6.	CO	Block Chain Technology

List of Open Category-I Subjects		List of Open Category-II Subjects	
1.	Artificial Intelligence	1.	Android Application Development
2.	IT Act	2	Open Source Technology

* Common question paper can be set for these subjects, for students under this scheme and under the B.E. scheme of IV yr. B.E.

M.E. Computer Engineering

Program Educational Objectives

PEO1   To prepare post graduates with strong theoretical fundamentals and practical skills to take up technical challenges.

PEO2   To equip post graduates with skill and attitude for research and development towards solving real life socio-economic problems.

PEO3   To develop good team builders with competency to become entrepreneurs in line with national mission of self-reliant India.

Program Specific Outcomes

PSO1:   To gain ability to use knowledge to identify research gaps and provide new ideas and innovative solutions to meet needs of industry and society.

PSO2:   To be able to take up higher studies, research and development, and entrepreneurships in the contemporary computing environment.

PSO3:   To inculcate professional ethics, communication abilities and quest for continuous learning.

Vision

To become strong centre of excellence for creating competent human resource in the field of Computer Science and Engineering meeting the dynamic societal and industrial needs.

Mission

M1: To produce technically competent professionals in Computer Science and Engineering having a blend of theoretical knowledge and practical skills.

M2: To encourage innovation, research and analytical activities with professional ethics and responsibilities through quality education.

M3: To provide learning ambience in collaboration with industries to keep pace with dynamic technological advancements and promote spirit of entrepreneurship.

M4: To motivate students to apply knowledge to resolve societal and environmental challenges and engage in continuous learning towards sustainable development.

B. TECH. Computer Science and Engineering

Program Educational Objectives (PEOs)

PEO1: To inculcate self-assurance, integrity, technical, collaborative and communication abilities (Leadership) in students, to be able to inspire and guide the team they work in.

PEO2: To equip students with theoretical knowledge and practical skills to take on the challenges in the industries or research organizations.

PEO3: To promote among graduates, the quest for lifelong learning to remain professionally more efficient.

PEO4: To sensitize students towards professional ethics and practices to take up and resolve socially relevant challenges.

PEO5: To encourage graduates to gain multi-disciplinary knowledge leading to innovation, research and sustainable development to achieve the goal of self-reliant India.

Program Specific Outcomes

PSO 1: To develop conceptual understanding and application of learned concepts to different domains and build entrepreneurial attitude.

PSO 2: To imbibe professional ethics, communication abilities and quest for continuous learning.

PSO 3: To gain capability to use state of art techniques, skills and tools with mind-set inclined towards innovation and research.

SCHEME OF EXAMINATION 2020 - 21 - 22

M.E. COMPUTER ENGINEERING

SEMESTER - I

S. No.	Subject	Subject	No. of Hours			No. of Credits			Maximum Marks				
			L	T	P	Th.	Pr.	Total	Th	CW	Pr.	SW	Total
1.	CO 71016	Programming Systems	3	-		3	-	3	70	30	-		100
2.	CO71017	Modern Computer Networks	3			3		3	70	30			100
3.	CO71018	Advances in Operating Systems	3			3		3	70	30			100
4.	CO___	Elective-I	3			3		3	70	30			100
5.	CO___	Elective – II	3			3		3	70	30			100
6.	CO71455	Laboratory-I			4		2	2	-	-	60	40	100
7.	CO71456	Laboratory-II			4		2	2	-	-	60	40	100
8.	CO71499	Comprehensive Viva			-	-	-	-			Grade		Grade
		Total	15	-	8	15	4	19	350	150	120	80	700

SEMESTER - II

S. No.	Subject	Subject	No. of Hours			No. of Credits			Maximum Marks				
			L	T	P	Th.	Pr.	Total	Th.	CW	Pr.	SW	Total
1.	CO71511	Database Engineering	3	-		3	-	3	70	30			100
2.	CO71512	Algorithmics	3			3	-	3	70	30	-		100
3.	CO71513	Agile Software Development	3			3		3	70	30			100
4.	CO___	Elective – III	3	-	-	3		3	70	30			100
5.	CO___	Elective –IV	3			3		3	70	30	-		100
6.	CO71882	Seminar		-	2		1	1	-	-		100	100
7.	CO71856	Laboratory-III			2	-	1	1			60	40	100
8.	CO71857	Laboratory-IV			4		2	2			60	40	100
9.	CO71899	Comprehensive Viva			-	-					Grade		Grade
		Total	15	-	8	15	04	19	350	150	120	180	800

STER - III

S. No	Subject Code	Subject	No. of Periods			No. of Credits			Maximum Marks				
			L	T	P	Th	Pr.	Total	Th.	CW	Pr.	SW	Total
1.		Industrial Training /Term Paper	-	-	8	-	4	4	-	-	-	100	100
2.	CO	Dissertation Phase-I	-	-	20	-	10	10	-	-	60	40	100
3.	MA	Research Methodology & IPR	2	-	-	2	-	2	70	30	-	-	100
		Total	-	-	28	2	14	16	70	30	60	140	300

SEMESTER - IV

S. No.	Subject	Subject	No. of Periods			No. of Credits			Maximum Marks				
			L	T	P	Th	Pr.	Total	Th.	CW	Pr.	SW	Total
1.	CO 7194	Dissertation Phase-II	-	-	32	-	16	16	-	-	120	80	200
		Total	-	-	32	-	16	16	-	-	120	80	200

LIST OF ELECTIVES

Elective-I	
1.	CO 71221 Machine Learning
2.	CO 71222 Information Security
3.	CO 71223 Web based Apps Development
4.	CO 71224 Augmented Reality and Virtual Reality
5.	CO 71225 Multimedia System
6.	HU___ Basics of Entrepreneurship

Elective-II		
1.	CO 71311	Computational Intelligence
2.	CO 71312	Cloud Computing
3.	CO 71313	Object Oriented Software Engineering
4.	CO 71314	Robotics
5.	CO 71315	Game Design

Elective-III	
1.	CO 71721 Deep and Reinforcement Learning
2.	CO 71722 Machine Learning for Security
3.	CO 71723 Software Architecture
4.	CO 71724 Embedded Systems and Internet of Things
5.	CO 71724 Human Computer Interaction
6.	HU___ Advanced Entrepreneurship

Elective-IV	
1.	CO 71764 Data Science & Analytics
2.	CO 71765 Cyber Security and Forensics
3.	CO 71766 Big Data
4.	CO 71767 Block Chain
5.	CO 71768 High Performance Computing