NEW HORIZON
COLLEGE OF ENGINEERING

Board of Studies

Evidence Submission

Detail	Link
Presence of BOS - Details of the committee with roles and responsibilities of the BOS members	https://department-of-electrical-and-electronics-engineering.newhorizoncollegeofengineering.in/bos-boe-constitution/
Teaching enhancement and curriculum development	https://newhorizoncollegeofengineering.in/wp-content/uploads/2022/07/New-Microsoft-Word-Document-2.pdf
Faculty participation in BOS	https://newhorizoncollegeofengineering.in/academic-council/ https://department-of-computer-science-engineering.newhorizoncollegeofengineering.in/wp-content/uploads/2023/10/CSE-BOS-Minutes-2023-Updated-13th-Oct-2023.pdf

NEW HORIZON COLLEGE OF ENGINEERING
Autonomous College Permanently Affiliated to VTU, Approved by AICTE & UGC
Accredited by NAAC with 'A' Grade, Accredited by NBA

Academic Council

Sl No.	Council Name	Structure / Constitution	Functionalities / Responsibilities	Frequency of Meetings
1	Academic Council	Institution's distinguished Principal as council Chairman Dean – Academic affair as Member Secretary All Heads of the Departments as Council Memebers 1-Professor, 1-Associate Professor or 1-Assistant Professor (as per seniority in institution) from each department as representing council members (for a period of 2 years) 4 (Min) – External expert from engineering education or industry as council members nominated by board governors (B.O.G) 1 – External expert for each major engineering discipline nominated by vice chancellor, VTU, Belagaum as council member Institution's Controller of Examinations (COE) as council member	1. Scrutinize and approve the proposals of BOS 2. Recommend and approve faculty boards. Academic regulations, curriculum – scheme and syllabi, teaching and learning practices. 3. Frame regulations regarding students admission into programmes and to conduct of examinations. 4. Suggest and recommend proposed teaching methods / techniques (LCD projector, smartboard, online etc.,) and student performance evaluation matrics to enhance quality education 5. Approve the list of successful candidates for conferment of degrees, diplomas, or certificates and forward the same to GC 6. Encourage faculty members to undertake collaborative research, industrial consultancy, continuing the education & related activities. 7. Recommend to the B.O.G for about a. Institute new programs of study b. Student scholarships, fellowships, medals, prizes with the guideline of relevance. 8. Perform such other functions as may be assigned by governing body	Twice in a year

NEW HORIZON
COLLEGE OF ENGINEERING
New Horizon Knowledge Park, Ring Road, Marathalli
Autonomous College Permanently Affiliated to VTU, Approved by AICTE & UGC
Accredited by NAAC with 'A' Grade. Accredited by NBA

25th Academic Council Meeting

18th October, 2023

Minutes of the Meeting

VENUE: Discussion Room, Chatrapathi Shivaji Block

TIME: 02:00 PM

NEW HORIZON COLLEGE OF ENGINEERING

ACADEMIC COUNCIL MEETING –AY 2023-2024

NEW HORIZON COLLEGE OF ENGINEERING

ACADEMIC COUNCIL MEETING –AY 2023-2024

AGENDA

Date: 18/10/2023

Venue: Discussion Room, Chatrapathi Shivaji Block**/Blended Mode**

Time: 02.00 pm

AGENDA Points:

1. Welcome address
2. Discussion of Scheme of Study for 2022-26 Batch Scheme (3rd to 8th Semesters) based on revised VTU guidelines
3. Proposal and Approval of Scheme of Study for 2022-26 Batch Scheme (3rd to 8th Semesters)
4. Outcome of Board of Studies for 2022-26 Batch Scheme (3rd to 8th Semesters)
5. Proposal and Approval of Scheme of Study for 2021-25 Batch Scheme (5th to 8th Semesters)
6. Outcome of Board of Studies for 2021-25 Batch Scheme (5th to 8th Semesters)
7. Proposal and Approval of Scheme of Study for PG programs
8. Minor Degree Program Regulations
9. Discussion on Honours Degree Rules and Regulations
10. Result Analysis of VI, VIII Semester BE and IV Semester PG
11. Discussion on successive failure for 2021 batch
12. Any other points with Approval of Chairman

Members of the Academic Council

Sl No.	Category	Sl No.	Name
I	Principal of the College - Chairman	1	Dr. Manjunatha
II	All Deans and Heads of the Dept. - Members	1	Dr. Sanjeev Sharma
		1	Dr. Revathi V
		2	Dr. Anitha Rai
		3	Dr. Sowmya Narayanan
		4	Dr. Niranjan P S
		5	Dr. B Rajalakshmi
		6	Dr. Vandana C P
		7	Dr. Aravinda K
		8	Dr. Uma Reddy N V
		9	Dr. S P Manikandan
		10	Dr. Sakthivel Aruchamy
		11	Dr. Swathi Basawaraju
		12	Dr. Anusuya Devi V S
		13	Dr. Srinivasa G
		14	Dr. K A Jayasheel Kumar
		15	Prof. Rakesh C
		16	Dr. Asha V
		17	Dr. Guru Basava Aradhya S
		18	Dr. Sanjeev Sharma
III	Controller of Examination	1	Dr. Vijilius H Raj
IV	Faculty of the College representing different level of Teaching Staff	1	Dr. Nagendra.J, Associate Professor
		2	Dr. Srinath M K , Associate Professor
		3	Dr. Prashanth K S, Associate Professor
		4	Prof. Asha Rani Borah, Sr AssistantProfessor
		5	Prof. J Karthiyayini, Sr Assistant Professor
		6	Dr. Vinoth Kumar, Professor
		7	Dr. Surendra B V, Associate Professor
		8	Dr. Priyameet Keer Kaur, Associate Professor
		9	Dr. B Meenakshi Sundaram, Professor
V	Expert from outside the college representing areas such as industry R&D, Tech Edu.	1	Mr. Sandeep Jain Founder & CEO, GeeksforGeeks
		2	Mr. Ananthamani, Vice President – PLM & Mech/Elec, Capgemini Engineering
		3	Dr. K N Subramanya, Principal, R V College of Engineering
VI	Nominees of University (VTU)	1	Dr. Shadashivegowda, Principal- Vidya Vardhaka College of Engineering, Mysuru

		2	Dr. Shivyoginath, Prof., Dept. of Civil Engineering, Basaveswara Engineering College, Bagalkot
VII	Dean Academics – Member Secretary	1	Dr. R. J. Anandhi

NEW HORIZON COLLEGE OF ENGINEERING

Office of Dean Academics

Academic Council Meeting for AY 2023-24

Date: 18 OCT 2023
Timings: 2 PM
Venue: Placement Discussion Room

Category	Sl No.	Member Name	Signature
Principal of the College – Chairman	1	Dr. Manjunatha	
All Deans & Heads of the Dept. – Members	1	Dr. Sanjeev Sharma	
	2	Dr. Revathi V	
	3	Dr. Anitha Rai	
	4	Dr. Sowmya Narayanan	
	5	Dr. Niranjan P S	
	6	Dr. B Rajalakshmi	
	7	Dr. Vandana C P for Dr. Rajalakshmi G	
	8	Dr. Aravinda K	
	9	Dr. Uma Reddy N V	
	10	Dr. S P Manikandan	
	11	Dr. Sakthivel Aruchamy	
	12	Dr. Swathi Basawaraju	
	13	Dr. Anusuya Devi V S	
	14	Dr. Srinivasa G	
	15	Dr. K A Jayasheel Kumar	
	16	Prof. Rakesh C	
	17	Dr. Asha V	
	18	Dr. Guru Basava Aradhya S	
Controller of Examination	1	Dr. Vijilius H Raj	
Teachers of the College representing different level of teaching staff	1	Dr. Nagendra.J, Associate Professor	
	2	Dr. Srinath M K , Associate Professor	
	3	Dr. Prashanth K S, Associate Professor	
	4	Ms. Asha Rani Borah, Sr Assistant Professor	
	5	Prof. J Karthiyayini, Sr Assistant Professor	
	6	Dr.Vinoth Kumar, Professor	
	7	Mr. Surendra B V, Associate Professor	
	8	Dr. Priyameet Keer Kaur, Associate Professor	
	9	Dr. B Meenakshi Sundaram, Professor	

Category	Sl No.	Member Name	Signature
Experts from outside the college representing areas such as industry, R&D, Tech. Edn	1	Mr. Sandeep Jain, Founder & CEO, GeeksforGeeks	ONLINE
	2	Mr. Ananthamani, Vice President – PLM & Mech/Elec Capgemini Engineering	ONLINE
	3	Dr. K N Subramanya, Principal, R V College of Engineering	ONLINE
Nominees of University (VTU)	1	Dr. Shadashive Gowda, Principal- Vidya Vardhaka College of Engineering, Mysuru	ONLINE
	2	Dr. Shivyogimath, Prof., Dept. of Civil Engineering, Basaveswara Engineering College, Bagalkot	ONLINE
Dean Academics – Member Secretary	1	Dr. R. J.Anandhi	Anandhi 18/7/23

Anandhi 18/7/23

Dean Academics

Principal

Principal
New Horizon College of Engineering
Ring Road, Bellandur Post, Near Marathalli
Bangalore - 560103

MINUTES OF THE MEETING

Welcome address by the Principal of NHCE. ThePrincipal of the college formally welcomed all the members and informed them that the meeting is being conducted blended mode (offline & online). Alsowelcomed VTU nominees: Dr. Shadashive Gowdaand Dr. Shivyoginath. The member secretary extended hearty welcome to Honorable Chairman for his support. ThePrincipal requested Dean Academics to present the ACM agenda to all ACM members.

AGENDA 1

Discussion of Scheme of Study for 2022-26 Batch Scheme(3rd to 8th Semesters) based on revised VTU guidelines

A) VTU Salient Features incorporated in 2022-26 batch scheme:

- PLC and AEC courses introduced from 3rd to 6th semesters depending upon current market requirements and upcoming technologies.
- Social Connect and Responsibility course (3^{rd} / 4^{th} Sem) will be conducted as practical (Activity Based).
- Universal Human Values Course is added in 3^{rd} / 4^{th} Sem semester as per AICTE guidelines
- Yoga / NSS / Physical Education as mandatory course (0 Credits) to be conducted from 3rd to 6th semester.
- Bio Inspired Design and Innovation course of 3rd Semester is introduced to make student to familiar with optimal solutions for nature-based problems and design.
- Research Methodology and IPR course introduced in 5th Semester.
- Management and Entrepreneur Course included in 5th Sem.

B) Curriculum has been planned and uniquely framed for 3 different streams:

- **Computer Science and Engineering Allied Stream**
  - Artificial Intelligence and Machine Learning Program
  - Computer Science and Engineering Program
  - Computer Science and Engineering (Data Science) Program
  - Computer Engineering Program
  - Information Science and Engineering Program
- **Electrical and Electronics Engineering Allied Stream**
  - Electronics and Communications Engineering Program
  - Electrical and Electronic Engineering Program

- **Mechanical Engineering Stream**
  - Mechanical Engineering Program

C) Mathematics Courses offered based on Stream:

Stream	Semester	Mathematics Course Name	Course Code	L:T:P:S
CSE Allied Stream	III	Mathematical Foundation for Computing Sciences		3:0:0:0
	IV	Discrete Mathematics and Graph Theory		3:0:0:0
Electrical and Electronics Engineering Allied Stream & Mechanical Engineering Stream	III	Numerical Methods and Transforms		3:0:0:0
	IV	Numerical, Complex Analysis and Probability Theory		3:0:0:0

AGENDA 2

Proposal and Approval of Scheme of Study for 2022-26 Batch Scheme (3rd to 8th Semesters)

- General Scheme for 3rd to 8th semester for 2022-26 batch was discussed in details. The following points were discussed:
  - HoD- Mathematics highlighted the mathematics course of 3rd and 4th are designed based of VTU guidelines stream wise
  - Also, the mathematics syllabus discussed and approved in the department BoS
  - Course code for mathematics need to be discussed and decided by COE and Principal
  - PLC and AEC courses are decided by individual department based on skills set required for placement and higher education with minimum 4 to maximum 5 choices
  - Director – CLSSD presented the Universal Human Value & Life skills syllabus for 3rd / 4th sem as UHV mandatory course
  - UHV part of the UHV&LS syllabus is designed based on guidelines of AICTE and VTU
  - Life Skills part of UHV&LS syllabus is added to develop 21stcentury skills set of

students for better employability. The Syllabus is approved by the department BoS

- Non Credit Mandatory Course (NCMC): NSS / PE / Yoga courses implementation and course code will be discussed by the Principal with other colleges and VTU before commencement of 3rd Sem and will be decided soon.
- NCMC courses should be the last course in the scheme of 3rd to 6th semester
- Social Connect and Responsibility course(3rd / 4thSem) will be conducted as practical (Activity based). The course will be handled by the Mentors (giving task on Saturdays to students online).

AGENDA-3

Outcome of Board of Studies for 2022-26 Batch Scheme (3rd to 8th Semesters)

- Scheme for 2022-26 Batch (3rd to 8th Semesters) and 2nd Year Syllabus of AIML was proposed for approval by Dean Academics
- Scheme for 2022-26 Batch (3rd to 8th Semesters)and 2nd Year Syllabus ofCSE-DSwas proposed for approval by HOD-CSE(DS)
  - HOD-CSE(DS) informed the members that the courses are designed with alignment with VTU and other eminent university.
  - The core courses are based on Computer science engineering and AEC/PLC/Professional Electives are based on Data science engineering.
- Scheme for 2022-26 Batch (3rd to 8th Semesters)and 2nd Year Syllabus ofECEwas proposed for approval by HOD-ECE
- Scheme for 2022-26 Batch (3rd to 8th Semesters) and 2nd Year Syllabus ofCEwas proposed for approval by Dean Academics
- Scheme for 2022-26 Batch (3rd to 8th Semesters)and 2nd Year Syllabus ofCSEwas proposed for approval by Dean Academics
- Scheme for 2022-26 Batch (3rd to 8th Semesters)and 2nd Year Syllabus ofISEwas proposed for approval by Dean Academics
- Scheme for 2022-26 Batch (3rd to 8th Semesters)and 2nd Year Syllabus ofEEEwas proposed for approval by Dean Academics
- Scheme for 2022-26 Batch (3rd to 8th Semesters)and 2nd Year Syllabus ofMEEwas proposed for approval by Dean Academics

All proposed Scheme and Syllabusfor 2022-26 batch approved by all members.

AGENDA-4

Proposal and Approval of Scheme of Study for 2021-25 Batch Scheme (5th to 8th Semesters)

A) VTU Salient Features incorporated in 2021-25 batch scheme:

- Research Methodology and IPR course introduced in 5th Semester.

- ❖ Innovation and Design Thinking course added in 5th semester.
- ❖ Social Connect and Responsibility course(6th Sem) will be conducted as practical. The course will be handled by the Mentors (giving task on Saturdays to students online)
- ❖ Management and Entrepreneur Course included in 6th Sem.
- ❖ Three Internships:
    - Internship-1: Intra college internship which is already concluded during 2nd year.
    - Internship -2: Innovation/Entrepreneurship/ Societal based Internship which is scheduled after 4th semester SEE.
    - Internship-3: Research Internship/ Industry Internship /Rural Internship which will be conducted during 8th Semester
- ❖ Yoga / NSS / Physical Education as mandatory course (0 Credits) to be conducted from 5th to 8th semester.

B) General Scheme for 5thto 8th semester for 2021-25 batch was discussed in details. The following points were discussed:

- ❖ Research Methodology and IPR course of 5th semester has common syllabus across all programs. The teaching – learning and evaluation will be taken care by the department. The case study, numerical or any other methods of teaching- learning can be based on department requirement.
- ❖ Innovative and Design Thinking course to be handled by the department faculty. The case study, numerical or any other methods of teaching- learning can be based on department requirement.
- ❖ Non-Credit Mandatory Course (NCMC): NSS / PE / Yoga courses implementation and course code will be discussed by the Principal with other colleges and VTU before commencement of 5th Sem and will be decided soon.
- ❖ Social Connect and Responsibility course(6th Sem) will be conducted as practical (Activity based). The course will be handled by the Mentors (giving task on Saturdays to students online).
- ❖ Industrial Open Elective-1 (L:T:P:S:: 3:0:0:0): The teaching and learning of these Courses will be based on hands-on. The Course Assessment will be based on CIE and SEE in practical mode. This Courses will be offered by Centre of Excellence to students of all the branches. Registration to Industrial open electives shall be documented and monitored on college level.

AGENDA-5

Outcome of Board of Studies for 2021-25 Batch Scheme (5th to 8th Semesters)

- Scheme for 2021-25 Batch (5th to 8th Semesters)and 3rd Year syllabus ofISEwas proposed for approval by Dr. Rajlakshmi, Associate Professor, ISE
- Scheme for 2021-25 Batch (5th to 8th Semesters) and 3rd Year syllabus of MEE was proposed for approval by HOD-MEE.
- Scheme for 2021-25 Batch (5th to 8th Semesters) and 3rd Year syllabus ofCIVILwas proposed for approval by Dean Academics
- Scheme for 2021-25 Batch (5th to 8th Semesters) and 3rd Year syllabus ofCEwas proposed for approval by Dean Academics
- Scheme for 2021-25 Batch (5th to 8th Semesters) and 3rd Year syllabusofCSEwas proposed for approval by Dean Academics
- Scheme for 2021-25 Batch (5th to 8th Semesters) and 3rd Year syllabus ofAIMLwas proposed for approval by Dean Academics
- Scheme for 2021-25 Batch (5th to 8th Semesters) and 3rd Year syllabus ofEEEwas proposed for approval by Dean Academics
- Scheme for 2021-25 Batch (5th to 8th Semesters) and 3rd Year syllabus ofMEEwas proposed for approval by Dean Academics

All proposed Scheme and Syllabus for 2021-25 batch was approved by all members.

AGENDA-6

Proposal and Approval of Scheme of Study for PG programs

- Scheme and Syllabus for 2022-24 Batch (3rd and 4thSemesters) ofMTech- CSEwas proposed for approval by Prof. Asha Rani Borah, Senior AP, CSE
- Scheme and Syllabus for 2022-24 Batch (3rd and 4thSemesters) ofMCA was proposed for approval by Dr Nirmala, Associate Professor, MCA
- Scheme and Syllabus for 2022-24 Batch (3rd and 4thSemesters) ofMBA was proposed for approval by Dr Dhanalakshmi, Associate Professor, MCA

All proposed Scheme and Syllabus for 2022-24 batch of PG was approved by all members.

AGENDA-7

Minor Degree Program Regulations

- Minor Degree Program Objectives was presented by Dean Academics to all members
- Minor Degree Program - VTU Regulations were discussed by Dean Academics. The important regulations are:
    - A Minor Degree will carry 18-20 credits essential for obtaining the UG degree in Major Discipline
    - A student can opt for **only one** minor program along with the major (degree) program.
    - The student can register if he/she **has permissible backlogs up to the third semester** and provided that the student's CGPA **after the third semester does not**

fall below 5.0.

- Recommended mode for minor degree will be **ONLINE**.
- The list of the courses that are included in each track will form a syllabus for minor degree programs.
- The minor degree courses are offered between fourth to eighth semester for all branches.
- Students must register for a minor degree program within the 15 working days from the date of announcement.
- The students shall pay a **one-time non-refundable registration fee** as prescribed by the University to confirm the registration.
- **No course** should be **identical** to that of the regular B.E course.
- **At any stage, if it is found that the course is repeated, the registration will be cancelled.**
- If a student is unable to earn all the required 18 credits in a specified duration, he/she shall **NOT** be awarded a Minor degree.
- However, if the student earns all the required 160 credits of B.E, he/she will be awarded only B.E degree in the concerned branch.
- All the students who complete the course and submit their certificates in time before the closure of the 8th Semester as per the academic calendar shall be eligible for the "Minors" qualification.
- The "Minors" qualification shall be suffixed to the respective degrees and shown in the Degree certificate as a recognition of higher achievement by the student concerned

❖ All BoS chairman's were requested to give their opinion on Minor degree implementations

AGENDA-8

Discussion on Honours Degree Rules and Regulations

❖ Honours Degree Rules and Regulationswas put forward by Dean Academics to all members

❖ The important changes in rules and regulations proposed by VTU are:

- Registration to 'Honours' qualification shall start from **fifth semester** onwards.
- The Registrants shall have obtained a **grade > D** in all the courses in the first attempt only, in the semesters until this stage.
- The Registrants shall have obtained a **CGPA > 7.50** at the end of the fourth semester.
- The lateral entry Diploma students shall have completed Additional Mathematics I and II during 3rd and 4th semesters in first attempt only.
- Students shall maintain a **grade $\geq$ D** in all the courses of fifth to eight semesters in first attempt only.
- Students shall choose, online courses **totalling to 18 or more credits** from the bouquet of **approved online courses, by institution/University.**

- Students failing to maintain a **grade ≥ D** in all the courses of fifth to eight semesters in first attempt only shall discontinue the attempt to earn additional credits, for Honours degree.
- Additional credits earned through NPTEL shall not be considered for the calculation of CGPA as well as rank declaration.
- The Award of the HONOURS degree shall be recommended by the Academic council and approved by the Governing Council of the Institution.

AGENDA-9

Result Analysis of VI, VIII Semester BE and IV Semester PG

- The overall program wise results of VI and VIII Semesters UG was presented by COE
- The course wise results of all programs of VI and VIII Semesters UG was presented byCOE
- The overall program wise results of IV semester of PG were presented by COE
- The course wise results of all programs of IV semester of PGwere presented by COE

AGENDA-10

Discussion on successive failure for 2021 batch

- The regulations for students with F grade for 2021 batch was presented by COE.
- Students are allowed to retake the examination three times only, with the CIE from the first attempt being considered. Absence from an exam after registering is also considered as an attempt.
- If the student fails after the third attempt, he or she will be awarded NE grade. In that case, the student must re-register for the course during supplementary semester and attend all classes to ensure that they satisfy the attendance (Minimum 85%), CIE (minimum 40%), and other eligibility requirements as specified by the regulations.
- The student must complete the course with a F grade within two academic years, otherwise, the course will be graded as NE.

The proposed regulations were approved by all BOS members.

AGENDA-11

Any other points with Approval of Chairman

- The Principalinformed all the membersthe plan for AY 2023-24:
  - Technical Advisory Committee at College level is formed for all major recruiters
  - After the successful completion of International conference on Multi-Disciplinary Research in Technology and Management (MRTM)-2023, NHCE will be conducting International Conference on Multi-Disciplinary Research in Technology and Management (MRTM)-2024.
  - Awareness about OBE through workshops based on NBA team observations.

- The student must complete the failed course (awarded as F grade) within two academic years.

The proposed regulations were approved by all ACM members.

AGENDA-11

Any other points with Approval of Chairman

- The Principalinformed all the membersthe plan for AY 2023-24:
  - Technical Advisory Committee at College level is formed for all major recruiters
  - After the successful completion of International conference on Multi-Disciplinary Research in Technology and Management (MRTM)-2023, NHCE will be conducting International Conference on Multi-Disciplinary Research in Technology and Management (MRTM)-2024.
  - Awareness about OBE through workshops based on NBA team observations.
  - NBA Tier-1 accreditation:
    - EEE and ISE programs underwent First cycle in Sept 2023. The results of which yet to be announced
    - CSE, ECE, ME programs will apply for Second cycle in next year.
  - Awareness programs will be conducted for Internships, Honours degree and Minor Degree program for 5th Sem students by all HoDs on 25th Oct 2023.

Vote of Thanks by Member Secretary

The Dean Academics-Member Secretary of the Academic Council thanked all the members of ACM for active participation in designing of scheme and syllabus for 2022-2026 batch and 2021-25 batch for AY 2022-2023. She thanked the VTU nominees: Dr. Shadashive Gowda and Dr. Shivyoginath for their valuable suggestions. She also thankedthe experts: Mr. Sandeep Jain, Founder & CEO, GeeksforGeeks, Mr. Ananthamani, Vice President – PLM & Mech/Elec, Capgemini Engineering and Dr. K N Subramanya, Principal, R V College of Engineering. She also expressed her heartfelt thanks to Honorable Chairman and Principal for their support.

28/10/23.

Dean-Academics

Principal

Principal
New Horizon College of Engineering
Ring Road, Bellandur Post, Near Marathalli
Bangalore - 560103

BOARD OF STUDIES / BOARD OF EXAMINATIONS

S. No.	Academic Board	Structure/Constitution	Functions/Responsibilities	Frequency of Meeting
1	Board of Studies(BOS) ***BOS Members List**	BOS Constituted with • Head of the Department as Chairman • 5-Faculty members at different level with different specialization • 2-Subject experts from outside the college nominated by academic council • 1-Academic Expert from outside the college nominated by VTU • 2-Representatives from Industry / Corporate sector / allied area related to placements, nominated by academic council • 1-Meritorious alumni nominated by Principal • 3-Co-opted members with academic & research expertise • 1- Training & Placement Officer from the college • 1- Department R&D Coordinator	• Recommendation and approval of curriculum-Scheme & Syllabus • Suggestions for incorporating new technologies / course • Removal of obsolete topics • To bridge the gap between industry and academia with supportive instructions and relevance • Validation and approval of course objectives and outcomes • Module-wise recommendations/discussions/ suggestions for each proposed course of curriculum • Recommendations and approval of rubrics for evaluation	• Once in a year
2	Board of Examinations(BOE) ***BOE Members List**	BOE Constituted with • Head of the Department as Chairman • 7-Experienced faculty members with different specialization • 2-Academic experts from outside the college	• Scrutiny of SEE-Questions papers as received from Internal and External paper setters, along with scheme & solutions • Validation on mapping of questions (in each Question paper) as per Blooms' Taxonomy • Acceptance/Rejection of SEE-questions papers and record of deviations • Handing over of accepted and rejected • question papers to Office of the CoE	• Twice in a year

MATHS

NEW HORIZON
COLLEGE OF ENGINEERING
Autonomous College Permanently Affiliated to VTU, Approved by AICTE & UGC
Accredited by NAAC with 'A' Grade, Accredited by NBA

Department of Applied Sciences

Mathematics-BOARD OF STUDIES MEETING

DATE: 9th September 2023

VENUE: VMWARE IT ACADEMY, C 514, CS Block, NHCE.

TIME: 9.30 am onwards

Chairman - BOS - Mathematics
New Horizon College of Engineering(Autonomous)
Bangalore - 560103

CONTENTS

NEW HORIZON COLLEGE OF ENGINEERING

DEPARTMENT OF APPLIED SCIENCES

Mathematics-BOARD OF STUDIES (BoS) MEETING

- **Agenda 1:** Discussion on syllabus for

1. **MATHEMATICAL FOUNDATION FOR COMPUTING SCIENCES (IT Stream-AIM, CEE, CSE (DS), CSE & ISE)**
2. **DISCRETE MATHEMATICS AND GRAPH THEORY (IT Stream-AIM, CEE, CSE (DS), CSE & ISE)**
3. **NUMERICAL METHODS AND TRANSFORMS (Non IT Stream-ECE, EEE & MEE)**
4. **COMPLEX ANALYSIS AND PROBABILITY (Non IT Stream-ECE, EEE & MEE)**
5. **BASIC APPLIED MATHEMATICS-I (Common for all Streams)**
6. **BASIC APPLIED MATHEMATICS-II (Common for all Streams)**

   (Including discussion on Course Outcomes, RBT levels, Programme Outcomes and Reference Books).

- **Agenda 2:** Syllabus finalization and approval
- **Agenda 3:** Discussion on CIE and SEE

DATE: 9th September 2023
VENUE: VMWARE IT ACADEMY, C 514, CS Block, NHCE.
TIME: 9.30 am Onwards
MODE: Offline and Online

NEW HORIZON COLLEGE OF ENGINEERING

DEPARTMENT OF APPLIED SCIENCES

Mathematics-BOARD OF STUDIES MEETING

MEMBERS OF THE BOARD OF STUDIES

Sl No.	Category	Nomination of the Committee	Name of the Person
1	Head of the Dept.- Mathematics	Chair Person	Dr.Srinivasa G, Professor and HOD, NHCE
2	Faculty Members at different level veering different specializations	1	Dr. Ananda K., Senior Assistant Professor, Department of Mathematics, NHCE.
		2	Dr. Padma Priya D. D., Senior Assistant Professor, Department of Mathematics, NHCE.
3	Subjects Experts from outside the College nominated by Academic Council	1	Dr. Dinesh P. A., Professor, Department of Mathematics, Ramaiah Institute of Technology, Bengaluru-54
		2	Dr. G. Jayalatha Professor and Head-Department of Mathematics, R V College of Engineering, R V Vidyanikethana Post, 8th Mile, Mysore Road, Bengaluru – 560059.
4	Expert from outside college, nominated by Vice-Chancellor	Member	Dr. S. Manjunath Professor and COE, R V University, R V Vidyanikethana Post, 8th Mile, Mysore Road, Bengaluru – 560059.
5	Representative from Industry/corporate sector/ allied area relating to placement nominated by Academic Council	Member	Mr. Sandeep Lugani Practice Head-Next Gen Enterprise Operations, WIPRO Ltd., Bengaluru.
6	Meritorious alumnus nominated by Principal	Member	Mr. Prajwal T. J., 1NH16EC076, ECE 2016-2020 Batch Graduate Student, Asics Corporation, Tokyo, Japan.
7	Co-opted member		Ms. Rashi Khubnani Senior Assistant Professor, Department of Mathematics, New Horizon College of Engineering, Bengaluru-560103.
8	Special Invitee		Dr. Manjunatha, Principal, NHCE.
9.	Special Invitee		Dr. R J Anandhi, Dean-Academics, NHCE.

WELCOME ADDRESS BY THE CHAIRMAN OF THE BOS AND INTRODUCTION OF MEMBERS

Minutes:

Dr. Srinivasa G, HOD, Dept. of Mathematics, Chairman BOS-Mathematics warmly welcomed all the internal and external members of Mathematics Board. While expressing the purpose and significance of the meeting in their address, they introduced Dr. Manjunatha, Principal, New Horizon College of Engineering, Dr. R J Anandhi, Dean-Academics to all members. The meeting was conducted both offline and online platforms. The invited members both from academic and industry, alumini were also introduced to the Board members.

Chairman BOS-Mathematics gave a brief introduction on leadership at NHEI and NHCE; and presented the dynamics of Applied Sciences through its Vision, Mission and Goals.

NEW HORIZON COLLEGE OF ENGINEERING

DEPARTMENT OF APPLIED SCIENCES

Mathematics - BOARD OF STUDIES MEETING

TITLE OF AGENDA:

Discussion and Scrutinization of II year BE Mathematics syllabus 2023-24.

Minutes:

Welcome and Introduction session of members was followed by introducing the Scheme of III & IV Semesters BE Mathematics.

Thereafter, the meet was opened individually for discussing the syllabus for the academic year 2023-24 under Mathematics Courses (for BE III & IV Semesters, IT and Non IT Streams).

Minutes of Meeting Mathematics

Agenda: Syllabus finalization and approval.

The following suggestions were given by BOS – Mathematics members, based on the changes done in the VTU Engineering Mathematics, in the proposed year 2023-24, MATHEMATICAL FOUNDATION FOR COMPUTING SCIENCES (IT Stream-AIM, CEE, CSE (DS), CSE & ISE), DISCRETE MATHEMATICS AND GRAPH THEORY (IT Stream-AIM, CEE, CSE (DS), CSE & ISE), NUMERICAL METHODS AND TRANSFORMS (Non IT Stream-ECE, EEE & MEE), COMPLEX ANALYSIS AND PROBABILITY (Non IT Stream-ECE, EEE & MEE), BASIC APPLIED MATHEMATICS-I (Common for all Streams) and BASIC APPLIED MATHEMATICS-II (Common for all Streams).

1. **MATHEMATICAL FOUNDATION FOR COMPUTING SCIENCES (IT Stream-AIM, CEE, CSE(DS), CSE & ISE):**
   In proposed syllabus asked to mention the concept in Module 3. include Orthogonal and orthonormal bases.

2. **DISCRETE MATHEMATICS AND GRAPH THEORY (IT Stream-AIM, CEE, CSE (DS), CSE & ISE):**
   In proposed syllabus asked to mention the concept in Module 5. specify Kruskal's algorithm.

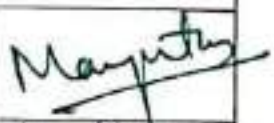
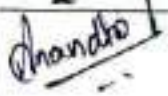
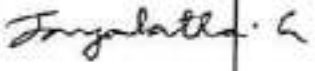
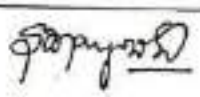
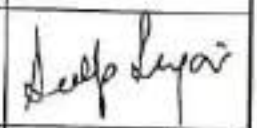
3. **NUMERICAL METHODS AND TRANSFORMS (Non IT Stream-ECE, EEE & MEE):**
   In proposed syllabus asked to remove Regula-Falsi method from Module 1 and in Module 2 include Trapezoidal Rule in place of Simpson's 3/8 and Weddle's rule.

4. **COMPLEX ANALYSIS AND PROBABILITY (Non IT Stream-ECE, EEE & MEE):**
   In proposed syllabus, asked to change the title of the course as Numerical, Complex Analysis and Probability Theory, Also name Module 4 as Probability Theory by removing the concept moment generating function and including Joint Probability Distribution. In Module 5. include the name Chi-square Test of goodness of fit.

5. **BASIC APPLIED MATHEMATICS-I (Common for all Streams):**
   No changes, proposed syllabus retained.

6. **BASIC APPLIED MATHEMATICS-II (Common for all Streams):**
   No changes, proposed syllabus retained.

MEMBERS PRESENT

SL.NO.	NAME	DESIGNATION AND AFFILIATION	PHONE NO.	SIGNATURE
01	Dr. Srinivasa G	Professor and Head, Department of Mathematics, New Horizon College of Engineering Bengaluru-560103	9449817583	
02	Dr. Manjunatha	Principal, NHCE	9901916000	
03	Dr. R.J.Anandhi	Dean – Academics NHCE	9845705705	
04	Dr. Ananda K.,	Senior Assistant Professor, Department of Mathematics, New Horizon College of Engineering, Bengaluru-560103.	9945373291	
05	Dr. Padma Priya D. D.,	Senior Assistant Professor, Department of Mathematics, New Horizon College of Engineering, Bengaluru-560103.	9449271414	
06	Dr. Dinesh P. A.	Professor, Department of Mathematics, Ramaiah Institute of Technology, Bengaluru-54	9845483563	
07	Dr. G. Jayalatha	Professor and Head-Department of Mathematics, R V College of Engineering, R V Vidyanikethana Post, 8th Mile, Mysore Road, Bengaluru – 560059.	9880693238	
08	Dr. S Manjunath	Professor and Head – Mathematics and COE, BNMIT, BSK II Stage Bengaluru-560070	9845420712	
09	Mr. Sandeep Lugani	Practice Head-Next Gen Enterprise Operations, WIPRO Ltd., Bengaluru.	9810040819	
10	Ms. Rashi Khubnani	Senior Assistant Professor, Department of Mathematics, New Horizon College of Engineering, Bengaluru-560103.	9980619825	
11	Mr. Prajwal T. J.	ECE 2016-2020 Batch Graduate Student, Asics Corporation, Tokyo, Japan.	8792898505	

VOTE OF THANKS BY THE CHAIRMAN-BOS

Chairman BOS-Mathematics Dr. Srinivasa G acknowledged the presence of each of the members. He thanked all members from academic and industry and faculty members under BOS for their useful suggestions and active participation in the BOS meeting in spite of their busy schedule.

The presence of alumini member Mr. Prajwal T. J., (2016-2020 Batch,' Electronics and Communication Engineering Student) was greatly acknowledged for his insightful inputs by the Chairman BOS.

Chairman BOS-Mathematics applauded the valuable inputs in deliberation in the meeting and appreciated their contribution of worthy suggestions.

Chairman - BOS - Mathematics
New Horizon College of Engineering(Autonomous)
Bangalore - 560103

LIST OF MEMBERS- BOARD OF STUDIES

DEPARTMENT OF ARTICIAL INTELLIGENCE & MACHINE LEARNING

A.Y: 2023-24

S. No	Category	Nomination of the committee	Name of the person	Designation & Affiliation
1	**Head of the Department**	Chairperson	**Dr. N V Uma Reddy**	Professor & Head of the Department, Dept of AI & ML, NHCE hod_aiml@newhorizonindia.edu 9972047259
2	**Special Invitees (one academician from Institution of National Eminence, IIT,NIT,IIM,IISC)**	1	**Dr. Manjunatha**	Head of the Institution, New Horizon College of Engineering, principal@newhorizonindia.edu +91-80-662977 Extn: 5002
		2	**Dr. R J Anandhi**	Professor & Dean Academics, New Horizon College of Engineering, dean.academics@newhorizonindia.edu 91-80-66297777 Extn: 2026
		3	**Dr. Shyam Lal**	Assistant Professor, Department of Electronics & Communication Engineering, National Institute of Technology Karnataka (NITK), Surathkal , Mangalore –575025 , Karnataka , India.
3	**Faculty member at different level with different specialization**	**Members**		
		1	**Dr. Rajalakshmi**	Professor & Head of the Department, Dept of CSE, NHCE hod_cse@newhorizonindia.edu 9841711347
		2	**Dr. Umamaheswaran**	Associate Professor , NHCE dr.umamaheswaran.nhce@newhorizonindia.edu 9677726319
		3	**Dr. Sreejith S**	Associate Professor , NHCE dr.sreejiths.nhce@newhorizonindia.edu 8547919798
		4	**Ms. Manisha Joshi**	Sr. HR- Manager, NHCE cr@newhorizonindia.edu 990007804

4	Experts from outside the college nominated by VTU	Member		
		1	Dr. Indiramma	Professor, Dept of CSE, BMSCE Bangalore. Indira.cse@bmsce.ac.in 9663376002
5	Representative from Industry / Corporate sector / allied area related to placements, nominated by Academic Council	1	Mr. Prasad Chitta	Practice Lead, machine Intelligence, BFSI Technology Advisory Group. TCS Prasad.chitta@tcs.com 9886789545
6	Co-opted members	Members		
		1	Dr. Sowmya H K	Sr. Assistant Professor, NHCE, Bangalore Sowmyahk.nhce@newhorizonindia.edu 9448060784
		2	Dr.Prianka RR	Sr. Assistant Professor, NHCE, Bangalore dr.priankarr.nhce@newhorizonindia.edu 9176056014
		3	Ms.Shasikala K S	Sr. Assistant Professor, NHCE, Bangalore shashikalaks.nhce@newhorizonindia.edu 9790849215
		4	Ms. Rajasree R S	Sr. Assistant Professor, NHCE, Bangalore rajasreers.nhce@newhorizonindia.edu 7768008244
		5	Mr. Manjunatha H R	Sr. Assistant Professor, NHCE, Bangalore manjunathahr_aiml_nhce@newhorizonindia.edu 8867158206

HOD-AIML

DR.N.V. UMA REDDY
HOD
Department of
Artificial Intelligence and Machine Learning
New Horizon College of Engineering
Ring Road, Bellandur Post, Bangalore - 560 103

DEAN ACADEMICS

Dr R U Anandhi
DR. ANANDHI R J
Professor and Dean Academics
New Horizon College of Engineering
Ring Road Bellandur Post
Bengaluru 560 103

PRINCIPAL

DR. MANJUNATHA

AIML

NEW HORIZON COLLEGE OF ENGINEERING

Autonomous College Permanently Affiliated to VTU, Approved by AICTE & UGC
Accredited by NAAC with 'A' Grade, Accredited by NBA

DEPARTMENT OF ARTICIAL INTELLIGENCE & MACHINE LEARNING

ATTENDANCE SHEET

ACADEMIC YEAR 2023 -2024

LIST OF MEMBERS- BOARD OF STUDIES

DATE: 01 /09/ 2023 TIME - **10.30am tom 1.00pm**

S.No	Category	Nomination of the committee	Name of the person	Designation & Affiliation	
1	Head of the Department	Chairperson	Dr. N V Uma Reddy	Professor & Head of the Department, Dept of AI & ML, NHCE hod_aiml@newhorizonindia.edu 9972047259	
2	Special Invitees (one academician from Institution of National Eminence, IIT,NIT,IIM,IISC)	Principal	Dr. Manjunatha	Head of the Institution, New Horizon College of Engineering. principal@newhorizonindia.edu +91-80-662977 Extn: 5002	
		Dean Academics	Dr. R J Anandhi	Professor & Dean Academics, New Horizon College of Engineering, dean.academics@newhorizonindia.edu 91-80-66297777 Extn: 2026	
		1	Dr. Shyam Lal	Assistant Professor, Department of Electronics & Communication Engineering, National Institute of Technology Karnataka (NITK), Surathkal , Mangalore –575025 , Karnataka , India.	on-line
3	Faculty member at different level with different specialization	Members			
		1	Dr. Rajalakshmi	Professor & Head of the Department, Dept of CSE, NHCE hod_cse@newhorizonindia.edu 9841711347	01-sep-23
		2	Dr. Umamaheswaran S	Associate Professor , NHCE dr.umamaheswaran.nhce@newhorizonindia.edu 9677726319	
		3	Dr. Sreejith S	Associate Professor , NHCE dr.sreejiths.nhce@newhorizonindia.edu 8547919798	

4	Experts from outside the college nominated by VTU	Member			
		1	Dr. Indiramma	Professor, Dept of CSE, BMSCE Bangalore. Indira.cse@bmsce.ac.in 9663376002	01/09/23
5	Representative from Industry / Corporate sector / allied area related to placements, nominated by Academic Council	1	Mr. Prasad Chitta	Practice Lead , machine Intelligence , BFSI Technology Advisory Group . TCS Prasad.chitta@tcs.com 9886789545	
6	Co-opted members	Members			
		1	Dr. Sowmya H K	Sr. Assistant Professor, NHCE, Bangalore Sowmyahk.nhce@newhorizonindia.edu 9448060784	
		2	Dr.Prianka RR	Sr. Assistant Professor, NHCE, Bangalore dr.priankarr.nhce@newhorizonindia.edu 9176056014	
		3	Ms.Shasikala K S	Sr. Assistant Professor, NHCE, Bangalore shashikalaks.nhce@newhorizonindia.edu 9790849215	
		4	Ms. Rajasree R S	Sr. Assistant Professor, NHCE, Bangalore rajasreers.nhce@newhorizonindia.edu 7768008244	
		5	Mr. Manjunatha H R	Sr. Assistant Professor, NHCE, Bangalore manjunathahr_aiml_nhce@newhorizonindia.edu 8867158206	

DEP'

7	Faculty member at different level with different specialization	Members			
		1	Dr . Rajalakshmi	Professor & Head of the Department, Dept of CSE, NHCE hod_cse@newhorizonindia.edu 9841711347	01.Sep23
		2	Dr. Mohan H S	Professor & Head of the Department, Dept of ISE, NHCE hod_ise@newhorizonindia.edu	
		3	Dr .S P Manikandan	Professor & Head of the Department, Dept of CE, NHCE hod_ce@newhorizonindia.edu	S.P.Mani
		4	Ms. Manisha Joshi	Sr. HR- Manager, NHCE cr@newhorizonindia.edu 990007804	

NEW HORIZON COLLEGE OF ENGINEERING

Autonomous College Permanently Affiliated to VTU, Approved by AICTE & UGC
Accredited by NAAC with 'A' Grade, Accredited by NBA

Department of Artificial Intelligence and Machine Learning

3rd BOARD OF STUDIES MEETING

Minutes of the Meeting

Academic year 2023 -2024

DATE: 01 / 09 / 2023

VENUE: A006 Class room NSB Block, NHCE

MODE: Blended

TIME: 10 .30 am to 1 pm

CONTENTS

AGENDA FOR THE MEETING

1. Welcome address by the chairman BoS
2. Presentation of draft of Scheme from 3rd to 8th (Revised NEP 160 Credit Course), Presentation draft of Scheme from 5th to 8th NEP 160 Credit Course and 7thand 8th Semester (175 Credit Course)
3. Proposed course details for the academic year 2023-2024 (175)
4. Proposed course details for the academic year 2023-2024 (NEP)
5. Proposed course details for the academic year 2023-2024 (Revised NEP)
6. Presentation of Syllabus of Fourth Year (175 Credit Course) in detail
7. Presentation of Syllabus of Third Year (NEP Course 160) in detail
8. Presentation of Syllabus of Second Year (Revised NEP Course 175 Credit Course) in detail.
9. Recommendations / Suggestions of BOS members.
10. Implementation of recommendation of BOS MEMBERS
11. Approval of scheme & Syllabus of Second Year / Third Year / Fourth Year AI & ML Engineering Subjects
12. Vote of Thanks by the chairman of BOS

LIST OF MEMBERS- BOARD OF STUDIES

DEPARTMENT OF ARTICIAL INTELLIGENCE & MACHINE LEARNING

A.Y: 2023-24

S. No	Category	Nomination of the committee	Name of the person	Designation & Affiliation
1	**Head of the Department**	Chairperson	**Dr. N V Uma Reddy**	Professor & Head of the Department, Dept of AI & ML, NHCE hod_aiml@newhorizonindia.edu 9972047259
2	**Special Invitees (one academician from Institution of National Eminence, IIT,NIT,IIM,IISC)**	1	**Dr. Manjunatha**	Head of the Institution, New Horizon College of Engineering, principal@newhorizonindia.edu +91-80-662977 Extn: 5002
		2	**Dr. R J Anandhi**	Professor & Dean Academics, New Horizon College of Engineering, dean.academics@newhorizonindia.edu 91-80-66297777 Extn: 2026
		3	**Dr. Shyam Lal**	Assistant Professor, Department of Electronics & Communication Engineering, National Institute of Technology Karnataka (NITK), Surathkal , Mangalore –575025 , Karnataka , India.
3	**Faculty member at different level with different specialization**	**Members**		
		1	**Dr. Rajalakshmi**	Professor & Head of the Department, Dept of CSE, NHCE hod_cse@newhorizonindia.edu 9841711347
		2	**Dr. Umamaheswaran**	Associate Professor , NHCE dr.umamaheswaran.nhce@newhorizonindia.edu 9677726319
		3	**Dr. Sreejith S**	Associate Professor , NHCE dr.sreejiths.nhce@newhorizonindia.edu 8547919798
		4	**Ms. Manisha Joshi**	Sr. HR- Manager, NHCE cr@newhorizonindia.edu 990007804

4	Experts from outside the college nominated by VTU	**Member**		
		1	Dr. Indiramma	Professor, Dept of CSE, BMSCE Bangalore. Indira.cse@bmsce.ac.in 9663376002
5	Representative from Industry / Corporate sector / allied area related to placements, nominated by Academic Council	1	**Mr. Prasad Chitta**	Practice Lead , machine Intelligence , BFSI Technology Advisory Group . TCS Prasad.chitta@tcs.com 9886789545
6	Co-opted members	**Members**		
		1	**Dr. Sowmya H K**	Sr. Assistant Professor, NHCE, Bangalore Sowmyahk.nhce@newhorizonindia.edu 9448060784
		2	**Dr.Prianka RR**	Sr. Assistant Professor, NHCE, Bangalore dr.priankarr.nhce@newhorizonindia.edu 9176056014
		3	**Ms.Shasikala K S**	Sr. Assistant Professor, NHCE, Bangalore shashikalaks.nhce@newhorizonindia.edu 9790849215
		4	**Ms. Rajasree R S**	Sr. Assistant Professor, NHCE, Bangalore rajasreers.nhce@newhorizonindia.edu 7768008244
		5	**Mr. Manjunatha H R**	Sr. Assistant Professor, NHCE, Bangalore manjunathahr_aiml_nhce@newhorizonindia.edu 8867158206

AGENDA 1

Welcome Address by the Chairman of BoS

The 3rd Board of Studies meeting for Department of AI&ML was scheduled on 01.09.2023 at Subash Chandra Bose Block, Hall N: A006, NHCE.

At the outset. Chairperson Dr.N V Uma Reddy , Professor & Head- Department of AI & ML, welcomed the members for attending the 3rd Board of studies meeting held in Subash Chandra Bose Block, Hall No.006, NHCE as a blended mode.

The chair person introduced Dr. Manjuntha, Principal, NHCE and Dr.Anandhi R J Professor & Dean-Academics, NHCE to the members of Board of Studies and welcomed them for the ensuing proceedings.

The chairperson further expressed special thanks to, an expert Dr.Indiramma, nominated by VTU., Dr. Shyam Lal, expert from NITK, Surathkal, Karnataka, for sparing the time from their busy schedule to attend the meeting.

The chairperson also expressed his gratitude to industrial nominees, Mr. Prasad Chitta, Practice lead, Machine Learning, BFSI Technology advisory group, TCS, Bangalore.
The meeting was also attended by Co-opted members **Ms. Manisha Joshi,** Sr. HR- Manager, NHCE and NHCE Internal faculty members Dr.Rajalakshmi, Dr.Umamaheswaran S, Dr.Sreejith S, Dr.Sowmya HK, Dr.Prianka R R, Ms.Shasikala K S, Ms.Rajashree R S, Ms.Jimsha K Mathew.

AGENDA 2

Presentation by Chairman of Bos About Department Scheme and Syllabus

The chairman of BOS Dr. N V Uma Reddy, Professor & Head, Department of AI&ML, presented draft of Scheme (175 credits) from 3rd to 8th semester & Syllabus of 7th and 8th semester and presented draft od scheme(160 credit NEP) from 3rd to 8th semester & Syllabus of 5th and 6th semester then presented Scheme (160 Credit Revised NEP) from 3rd to 8th Semester & Syllabus of 3rd and 4th Semester in the current academic year 2023-2024.

AGENDA 3

Proposed course for the academic year 2023-2024(7th and 8th semester, 175 credit-2018 Scheme)

VII SEMESTER												
S. No	Course Code	Course	BOS	Credit Distribution				Overall Credits	Contact Hours	Marks		
				L	T	P	S			CIE	SEE	Total
1	20AIM71A	Cloud Computing	AI&ML	3	0	0	0	3	4	50	50	100
2	20AIM72A	Web Technology	AI&ML	3	0	0	0	3	4	50	50	100
3	20AIM73A	Natural Language processing	AI&ML	3	0	0	0	3	4	50	50	100
4	20AIM74X	Professional Elective - V	AI&ML	3	0	0	0	3	4	50	50	100
5	20AIM75X	Professional Elective - VI	AI&ML	3	0	0	0	3	4	50	50	100
6	20AIM76A	Cloud Computing Laboratory	AI&ML	3	0	0	0	2	4	25	25	50
7	20AIL77A	Web Technology Lab	AI&ML	0	0	2	0	2	4	25	25	50
8	20AIL78A	Project Phase – I	AI&ML	0	0	2	0	2	4	25	25	50
9	20NHOPX X	Open Elective - II	AI&ML	3	0	0	0	3	0	50	50	100
Total								24	32	375	375	750

VIII SEMESTER

S.No	Course Code	Course	BOS	Credit Distribution				Overall Credits	Contact Hours	Marks		
				L	T	P	S			CIE	SEE	Total
1	20AIM81A	Reinforcement learning	AI&ML	3	0	0	0	3	4	50	50	100
2	20AIM82A	Internship Viva	AI&ML	0	0	4	0	4	0	50	50	100
3	20AIM83A	Project Phase - II	AI&ML	0	0	12	0	12	0	100	100	200
Total								**19**	**04**	**200**	**200**	**400**

AGENDA 9

Recommendations/Suggestions of BOS members

The agenda was already circulated among the committee members and the following discussions were made based on the agenda.

Dr. Indramma, Professor, BMSCE, Bengaluru, Dr. Shyam Lal, Assistant Professor, Dept. of ECE, NITK, Surathkal and Mr.Prasad Chitta, Practice Lead, Machine Intelligence, BFSI, Technology Advisory Group, Bengaluru, Dr. R J Anandhi, Dean Academics, NHCE. The members appreciated the curriculum and syllabi.

175 Credit 2018 Scheme

- 20AIM71A Cloud Computing: suggested to include more than one textbook of recent year. Introduce Google Colab for the experiments of cloud computing.
- 20AIM72AA Web Technology: Suggestions were given to update the reference books.
- 20AIM73A Natural Language Processing: Add one module related to application/implementation of NLP. Also, tutorial classes with hands-on sessions can be incorporated.
- 20AIM743A Information Security Include year for the references book.
- 20AIM744A Human Computer Interaction: One tutorial class with lab exposure can be incorporated.
- Suggestion was given to convert all elective course to [L:2 T:1 P:0 P:0] credit distribution.
- It was suggested to push the eighth semester course to seventh semester or provide an option of MOOC course or give an option of online mode, so that students can dedicate their time for internship.
- Provide MOOC Course/ Online course as references in the syllabus.

160 Credit 2021 Scheme

- In Ability Enhancement Courses, add Fundamentals of Digital Signal and Image Processing to make the students understand about data.
- 21AIM545 Parallel Processing: Include Case study assignments / practical in openmp.
- 21AIL553 Data Visualization Using PowerBI: Remove the tool name PowerBI and make it generalized.
- 21AIK57 research Methodology can be provided as a MOOC course. It was suggested by Dr.Shyam Lal that making Research methodology as a MOOC course will promote self-study (NEP-2020).
- 21AIM61 Software Engineering and Project Management: In module 3, include the topic Software metrics.
- 21AIL62 Deep Learning Lab: Rearrange the assignments of part B and part A. Assignment no. 1 and 3 of part B can be moved to Part A.
- 21AIM63 Web Technology: More Serverside Programming topics can be done.
- 21AIM642 Human Computer Interaction: Include topics of Augmented reality, Virtual Reality, Metaverse, Extended Reality.

- 21AIM643 Cyber security: In the last module, add topics of 5G networks, Applications.
- 21AIM645 Soft Computing: Remove module 2 and include topics like metaheuristic algorithms etc.

160 Credit 2022 Scheme

- 22RMK55 Research Methodology and IPR: Credits may be reduced to 2 or 1
- 22AIM32 Advanced Data structure and Algorithms: It can be renamed as Data structure and Algorithms II.
- 22AIL351 Problem Solving using Prolog: It is not widely used in industry. So, this subject may be removed.
- 22AIL354 Exploratory Data Analysis: can be provided with R Language and can be given one credit and can be taught in lab.
- 21AIM451 Ruby Programming: Instead of ruby Scala can be given.

Seventh and Eighth Semester-175 Credits:

Year	Semester	Current Subject Code/Subject Name(Before BOS)	Proposed Subject code/Subject Name(After BOS)	% Change of Syllabus	Remarks if any
VI	VII	20AIM73A	20AIM73A	5%	Added Application of NLP in Module 5

Fifth and Sixth Semester -160 Credits-NEP:

Year	Semester	Current Subject Code/Subject Name(Before BOS)	Proposed Subject code/Subject Name (After BOS)	% Change of Syllabus	Remarks if any
III	V	-	21AIL555- Basics for Digital and Image Processing	100%	New Subject Added in AEC as per suggestion
III	V	21AIM545	21AIM545	5%	Case Studies added as per suggestions.
III	VI	21AIM61	21AIM61	5%	New topic was

					introduced as per suggestions.
III	VI	21AIM63	21AIM63	5%	New topic was introduced as per suggestions
III	VI	21AIM643	21AIM643	5%	New topic was introduced as per suggestions
III	VI	21AIM645	21AIM645	20%	New topic was introduced as per suggestions

Third and Fourth Semester -160 Credits-NEP Updated:

Year	Semester	Current Subject Code/Subject Name (Before BOS)	Proposed Subject code/Subject Name (After BOS)	% Change of Syllabus	Remarks if any
II	III	22AIM32/ Advanced Data Structures and Algorithms	22AIM32/Data Structures and Algorithms II	-	Changed as per Suggestions.

BoS Chairman

Dr.Uma Reddy N V

Dean-Academics

Dr. R. Anandhi
Professor and Dean-Academics
Dr. Anandhi R

Principal

Dr.Manjunatha

NEW HORIZON
COLLEGE OF ENGINEERING
Autonomous College, Affiliated to VTU | Approved by AICTE New Delhi & UGC
Accredited by NAAC with 'A' Grade & Accredited by NBA

DEPARTMENT OF COMPUTER ENGINEERING

3rd BOARD OF STUDIES MEETING

Minutes of the meeting

Academic year 2023-2024

DATE	**:**	**09.09.2023**
VENUE	**:**	**Eurofins Lab 5th Floor, C Block, NHCE**
TIME	**:**	**11:00 am – 03:00 pm**

CONTENTS

AGENDA FOR THE MEETING

1. Welcome address by the chairman of BOS
2. Presentation of draft of Scheme from 1st year and 3rd to 8th semester (Revised NEP-160 Credits)
3. Presentation of draft of Scheme from 5th to 6th semester(NEP-160 Credits)
4. Presentation of draft of Scheme from 7th to 8th semester175 Credits)
5. Proposed course details for the academic year 2023-2024
6. Presentation of Syllabus of Second year in detail
7. Recommendations/ Suggestions of BOS members.
8. Implementation of recommendation of BOS members
9. Approval of Scheme & Syllabus of NEP 160 & 175 Credit Computer Engineering Subjects
10. Vote of Thanks by the chairman of BOS

LIST OF BOS MEMBERS

S.No	Category	Nomination of the committee	Name of the person	Designation & Affiliation
1.	**Head of the Department**	**Chairperson**	**Dr.S.P. Manikandan**	HOD/CE
2.	**Special Invitees (one academician from Institution of National Eminence, IIT,NIT,IIM,IISC)**	1	**Dr. Manjunatha**	Principal/NHCE
		2	**Dr. R.J.Anandhi**	Dean Academics/NHCE
		3	**Dr. Sanjeev Sharma**	Dean_QASDC_NHCE
		4	**Dr. Channappa B Akki**	Registrar IIIT Dharwad
3.	**Faculty member at different level with different specialization**	**Members**		
		1	**Dr. Rajalakshmi B**	HOD/CSE
		2	**Dr. Aravinda K**	HOD/ECE
		3	**Dr. Uma Reddy N V**	HOD/AI&ML
		4	**Dr. Asha V**	HOD/MCA
		5	**Dr.T.Kavitha**	Professor
		6	**Dr. C.R.Rathish**	Associate Professor/CE
		7	**Mr.Rahul B**	Assistant Professor/CE
		8	**Ms.Neera Chaudhary**	Assistant Professor/CE
		9	**Ms.Anjali Vyas**	Assistant Professor/CE
4.	**Subject expert from outside the college nominated by Academic Council**	**Members**		
		1	**Dr. Mohana Kumar**	Associate Professor, Department of CSE MSIRT, Bengaluru – 560082.
5.	**Experts from outside the college nominated by VTU**	**Members**		
		1	**Dr. Cauvery N K**	Professor & Asst.Director SAP,RVCE Bengaluru - 560059
6.	**Representative from Industry / Corporate sector / allied area related to placements, nominated by Academic Council**	**Members**		
		1	**Dr. Kanagasundaram K**	Principal Technical Specialist, NOKIA NETWORKS, Bengalur
7.	**Co-opted members**	**Members**		
		1	**Mr.Anis Mirza**	Director -Corporate Relations, Learning and Development, Placements & IIIC

Annexure A

LIST OF MEMBERS PRESENT IN 3RD MEETING

NEW HORIZON COLLEGE OF ENGINEERING

AUTONOMOUS COLLEGE Permanently Affiliated to VTU, Approved by AICTE & UGC
Accredited by NAAC with 'A' Grade

Department of Computer Engineering

Attendance sheet Academic Year: 2023-24

DATE OF BOS MEETING: 09/09/2023 LIST OF MEMBER

S.NO	Category	Nomination of the committee	Name of the person	Designation & Affiliation	Signature
1	Head of the Department	Chairperson	Dr.S.P Manikandan	Professor & HoD , Dept. of CE	
2	Faculty member at different level with different specialization	Member			
		1	Dr.Rajalakshmi	Professor & HoD, Dept. of CSE, NHCE, Bangalore	
		2	Dr.Aravinda K	Professor & HoD, Dept. of ECE, NHCE, Bangalore	
		3	Dr.Umareddy N V	Professor & HoD, Dept. of AI&ML, NHCE, Bangalore	
		4	Dr.Asha V	Professor & HoD, Dept. of MCA, NHCE, Bangalore	
		5	Dr.T.Kavitha	Professor Dept. of CE,NHCE, Bangalore	
		6	Dr.C.R.Rathish	Associate Professor Dept. of CE,NHCE, Bangalore	
		7	Mr. Rahul B	Assistant Professor Dept. of CE,NHCE, Bangalore	
		8	Ms.Neeru Chaudhary	Assistant Professor Dept. of CE,NHCE, Bangalore	
		9	Ms.Anjali Vyas	Assistant Professor Dept. of CE,NHCE, Bangalore	
3	Special Invitees(one from academician Institution of National Eminence(IIT,NIT, IIM, IISC)	External member	Dr.Channappa B Akki	Registrar ,IIT Dharwad	
4	Subject expert from outside the college	External Member	Dr.Mohana Kumar S	Associate Professor, Dept. of CSE, MSRIT, Bangalore	On Line
5	Experts from outside the college nominated by VTU	External Member	Dr.Cauvery N K	Professor & Asst. Director, SAP,RVCE Bangalore	On Line
4	Representative from Industry / Corporate sector / allied area related to placements, nominated by Academic Council	External Member	Dr. kanagavalaram K	Principal Technical Specialist, Nokia Networks, Bangalore	

HOD-CE
Dr.S.P.Manikandan

DEAN ACADEMICS
Dr.R.J.Anandhi

PRINCIPAL
Dr.Manjunatha

AGENDA -1

WELCOME ADDRESS BY THE CHAIRMAN OF BOS

The 3rd Board of Studies meeting for Department of Computer Engineering was scheduled on 09.09.2023 at Eurofins Lab 5th floor, NHCE.

At the outset, Chairperson **Dr. Manikandan S P** Professor & Head – Department of Computer Engineering, welcomed the Members for attending the 3rd Board of studies meeting held in Eurofins Lab 5th floor, NHCE.

The chairperson introduced **Dr. R.J.Anandhi, Professor & Dean–Academics** New Horizon College of Engineering to the members of Board of Studies and welcomed him for the ensuing proceedings.

The chairperson further expressed special thanks to**,** an expert **Dr. Cauvery N K,** nominated by VTU **Dr. Mohana Kumar,** expert, nominated by Academic Council for sparing the time from their busy schedule to attend the meeting.

The chairperson also expressed his gratitude to **Industrial nominee, Dr. K. Kanagasundaram, Principal Technical Specialist, Nokia Networks**, Bengaluru.

The meeting was also attended Co-opted members **Mr.Anis Mirza** , Director -Corporate Relations, Learning and Development, Placements & IIIC and Internal faculty members **Dr. Rajalakshmi B, Dr. Aravinda K, Dr. Uma Reddy N V, Dr. Asha V, Dr.T.Kavitha, Mr.Rahul B.Ms Neera Chaudhary and Ms Anjali Vyas.**

AGENDA -2

Presentation by Chairman of BOS about Department scheme & Syllabus

The Chairman of BOS **Dr. S.P. Manikandan**, Professor & Head, Department of Computer Engineering, presented draft of Scheme from 3rd to 8th semester & Syllabus of 3rd and 4th semester, 5th and 6th semester 7th and 8th in the current academic year 2023-24.

AGENDA -3

Proposed course details for the academic year 2023-24, 3rd to 8th Semester Scheme (Revised NEP) 160 Credit.

III SEMESER SCHEME

S. No	Course Code	Course	BOS	Credit Distribution				Overall Credits	Contact Hours	Marks		
				L	T	P	S			CIE	SEE	TOTAL
1	22CEE31	Mathematical Foundation for Computing Sciences	CEE	3	0	0	0	3	3	50	50	100
2	22CEE32	Digital Logic Design	CEE	3	0	0	0	3	3	50	50	100
3	22CEL32	Digital Logic Design Lab	CEE	0	0	1	0	1	2	50	50	100
4	22CEE33	Advanced Data Structures	CEE	3	0	0	0	3	3	50	50	100
5	22CEL33	Advanced Data Structures Lab	CEE	0	0	1	0	1	2	50	50	100
6	22CEE34X	Programming Language Course	CEE	2	0	1	0	3	3	50	50	100
7	22CEL35X	Ability Enhancement Course – III	CEE	0	0	1	0	1	2	50	50	100
8	22BIK36	Bio Inspired Design	CEE	3	0	0	0	3	3	50	50	100
9	22NSK37	National Service Scheme (NSS)	NSS	0	0	0	0	0	2	50	--	50
	22PEK37	Physical Education (PE) (Sports and Athletics)	PED									
	22YOK37	Yoga	Yoga Teacher									
10	22SCK38	Social Connect and Responsibility	Any Dept	0	0	1	0	1	2	50	--	50
Total								**19**	**25**	**500**	**400**	**900**

12	22DMAT311*	Diploma Mathematics -1	BS	0	0	0	0	0	2	50	--	50

Programming Language Course (PLC)			
22CEE341	Linux System Programming	22CEE343	Python for Data Analytics
22CEE342	PHP Programming	22CEE344	Pearl Programming

Ability Enhancement Course – III			
22CEL351	Advance Office Automation	22CEL353	Ruby Programming
22CEL352	GoLang Programming	22CEL354	Haskell Programming

IV SEMESER SCHEME

S. No	Course Code	Course	BOS	Credit Distribution				Overall Credits	Contact Hours	Marks		
				L	T	P	S			CIE	SEE	TOTAL
1	22CEE41	Discrete Mathematics and Graph Theory	BS	3	0	0	0	3	3	50	50	100
2	22CEE 42	Object Oriented Programming using Java	CEE	3	0	0	0	3	3	50	50	100
3	22CEL42	Object Oriented Programming using Java Lab	CEE	0	0	1	0	1	2	50	50	100
4	22CEE43	Design and Analysis of Algorithm Using C	CEE	3	0	0	0	3	3	50	50	100
5	22CEL43	Design and Analysis of Algorithm Using C Lab	CEE	0	0	1	0	1	2	50	50	100
6	22CEE44	Data Base Management Systems	CEE	3	0	0	0	3	3	50	50	100
7	22CEL44	Data Base Management Systems Lab	CEE	0	0	1	0	1	2	50	50	100
8	22CEE45X	Programming Language Course	CEE	2	0	1	0	3	3	50	50	100
9	22CEL46X	Ability Enhancement Course – IV	CEE	0	0	1	0	1	2	50	50	100
10	22NSK37	National Service Scheme (NSS)	NSS	0	0	0	0	0	2	50	--	50
	22PEK37	Physical Education (PE) (Sports and Athletics)	PED									
	22YOK37	Yoga	Yoga Teacher									
11	22UHK48	Universal Human Values Course	Any Dept	1	0	0	0	1	2	50	--	50
12	22CEE49	Mini Project	CEE	0	0	1	0	1	0	50	50	100
Total								**21**	**27**	**600**	**500**	**100**

13	22DMAT411*	Diploma Mathematics -2	BS	0	0	0	0	0	2	50	--	50

Programming Language Course (PLC)			
22CEE451	C# and .NET	22CEE453	Elastic Search
22CEE452	Programming for UI and UX design	22CEE454	Introduction to R Programming

Ability Enhancement Course – IV			
22CEL461	Micro Controller and Embedded Systems	22CEL463	App development using Kotlin
22CEL462	Digital Systems Modelling Using Verilog	22CEL464	Cloud based collaborative tools

V SEMESER SCHEME

S. No	Course Code	Course	BOS	Credit Distribution				Overall Credits	Contact Hours	Marks		
				L	T	P	S			CIE	SEE	TOTAL
1	22CEE51	Software Engineering and Project Management	CEE	3	0	0	0	3	3	50	50	100
2	22CEE52	Operating systems	CEE	3	0	0	0	3	3	50	50	100
3	22CEL52	Operating systems Lab	CEE	0	0	1	0	1	2	50	50	100
4	22CEE53	Web Design Technology	CEE	3	0	0	0	3	3	50	50	100
5	22CEL53	Web Design Technology Lab	CEE	0	0	1	0	1	2	50	50	100
6	22CEE54X	Professional Elective Course-1	CEE	3	0	0	0	3	3	50	50	100
7	22RMK55	Research Methodology and IPR	CEE	2	1	0	0	3	4	50	50	100
8	22ESK56	Environmental Studies	Any Dept	2	0	0	0	2	2	50	50	100
9	22NSK37	National Service Scheme (NSS)	NSS	0	0	0	0	0	2	50	--	50
	22PEK37	Physical Education (PE) (Sports and Athletics)	PED									
	22YOK37	Yoga	Yoga Teacher									
10	22SCK38	Social Connect and Responsibility	Any Dept	0	0	1	0	1	2	50	--	50
Total								**19**	**25**	**500**	**400**	**900**

Professional Elective Course-1			
22CEE541	Modern Cryptography	22CEE543	User Interface Design
22CEE542	Data Mining & Ware Housing	22CEE544	Big Data Analytics

VI SEMESER SCHEME

S. No	Course Code	Course	BOS	Credit Distribution				Overall Credits	Contact Hours	Marks		
				L	T	P	S			CIE	SEE	TOTAL
1	22CEE61	Computer Networks	CEE	3	0	0	0	3	3	50	50	100
2	22CEL61	Computer Networks Lab	CEE	0	0	1	0	1	2	50	50	100
3	22CEE62	Machine Learning	CEE	3	0	0	0	3	3	50	50	100
4	22CEL62	Machine Learning Lab	CEE	0	0	1	0	1	2	50	50	100
5	22CEE63	Essentials of Cyber Security	CEE	3	0	0	0	3	3	50	50	100
6	22CEE64X	Professional Elective Course-II	CEE	3	0	0	0	3	3	50	50	100
7	22CEE65	Project Phase I	CEE	0	0	2	0	2	0	50	50	100
8	22NHOP6XX	Industrial Open Elective Course-I	Offering Dept.	3	0	0	0	3	3	50	50	100
9	22CEL66X	Ability Enhancement Course – V	CEE	0	0	1	0	1	2	50	50	100
10	22NSK37	National Service Scheme (NSS)	NSS	0	0	0	0	0	2	50	--	50
	22PEK37	Physical Education (PE) (Sports and Athletics)	PED									
	22YOK37	Yoga	Yoga Teacher									
Total								**20**	**23**	**500**	**450**	**50**

Professional Elective Course-II			
22CEE641	Cellular and Mobile Computing	22CEE643	Game Development
22CEE642	Cloud Computing	22CEE644	Image and Video Analytics

Ability Enhancement Course – V			
22CEL661	Multi Core Architecture	22CEL663	NoSQL
22CEL662	Data Visualization Tools	22CEL664	Introduction to full stack Development tool kit

VII SEMESER SCHEME

S. No	Course Code	Course	BOS	Credit Distribution				Overall Credits	Contact Hours	Marks		
				L	T	P	S			CIE	SEE	TOTAL
1	22CEE71	Internet of Things	CEE	3	0	0	0	3	3	50	50	100
2	22CEL71	Internet of Things Lab	CEE	0	0	1	0	1	2	50	50	100
3	22CEE72	Software Testing	CEE	3	0	0	0	3	3	50	50	100
4	22CEL72	Software Testing Lab	CEE	0	0	1	0	1	2	50	50	100
5	22CEE73	Object Oriented Modelling and Design	CEE	3	1	0	0	4	5	50	50	100
6	22CEE74X	Professional Elective Course-III	CEE	3	0	0	0	3	3	50	50	100
7	22CEE75	Project Phase - II	CEE	0	0	6	0	6	0	50	50	100
8	22NHOP7XX	Industrial Open Elective Course-II	Offering Dept.	3	0	0	0	3	3	50	50	100
Total								**24**	**21**	**400**	**400**	**800**

Professional Elective Course-III			
22CEE741	Mobile Adhoc Network	22CEE743	Multimedia and Animation
22CEE742	Software Defined Network	22CEE744	Text and Speech Analysis

VIII SEMESER SCHEME

S. No	Course Code	Course	BOS	Credit Distribution				Overall Credits	Contact Hours	Marks		
				L	T	P	S			CIE	SEE	TOTAL
1	22CEE81X	Professional Elective Courses -IV	CEE	3	0	0	0	3	3	50	50	100
2	22CEE82X	Professional Elective Courses -V	CEE	3	0	0	0	3	3	50	50	100
3	22CEE83	Internship (Industry/Research/ Rural) (14 - 20 weeks)	CEE	0	0	10	0	10	0	100	100	200
Total								16	6	200	200	400

Professional Elective Course-IV			
22CEE811	Wireless Sensor Network	22CEE813	Multimedia Data Compression and storage
22CEE812	Storage Technologies	22CEE814	Data Visualization

Professional Elective Course-V			
22CEE821	Network Security	22CEE823	Augmented Reality/Virtual Reality
22CEE822	Edge Computing	22CEE824	Data Acquisition & Productization

AGENDA -4

Proposed course details for the academic year 2023-24, 5th to 6th Semester Scheme 160 Credit

V SEMESER SCHEME

S. No	Course Code	Course	BOS	Credit Distribution				Overall Credits	Contact Hours	Marks		
				L	T	P	S			CIE	SEE	TOTAL
1	21CEE51	Computer Organization and Operating Systems	CEE	3	0	0	0	3	3	50	50	**100**
2	21CEL51	Operating Systems Lab	CEE	0	0	1	0	1	2	50	50	**100**
3	21CEE52	Computer Networks	CEE	3	0	0	0	3	3	50	50	**100**
4	21CEL52	Computer Networks Lab	CEE	0	0	1	0	1	2	50	50	**100**
5	21CEE53	Cyber Security	CEE	3	0	0	0	3	3	50	50	**100**
6	21CEE54X	Professional Elective Course-I	CEE	3	0	0	0	3	3	50	50	**100**
7	21CEL55X	Ability Enhancement Course-V	CEE	0	0	1	0	1	2	50	50	**100**
8	21CEE56	Mini Project	CEE	0	0	1	0	1	0	50	50	**100**
9	21CEK57	Research Methodology and IPR	CEE	1	0	0	0	1	2	50	50	**100**
10	21CEK58	Innovation and Design Thinking	CEE	1	0	0	0	1	1	50	50	**100**
Total								**18**	**21**	**500**	**500**	**1000**

Professional Elective Courses-I			
21CEE541	Artificial Intelligence	21CEE544	Data Mining & Ware Housing
21CEE542	Object Oriented Analysis and Design	21CEE545	Computer Graphics
21CEE543	User Interface Design		

Ability Enhancement Course-V			
21CEL551	Software Testing	21CEL554	Web Technology
21CEL552	App Development Using Kotlin	21CEL555	Golang Programming
21CEL553	Ruby Programming		

VI SEMESER SCHEME

S. No	Course Code	Course	BOS	Credit Distribution				Overall Credits	Contact Hours	Marks		
				L	T	P	S			CIE	SEE	TOTAL
1	21CEE61	Software Engineering and Project Management	CEE	3	0	0	0	3	3	50	50	**100**
2	21CEE62	Multi Core Architecture	CEE	3	0	0	0	3	3	50	50	**100**
3	21CEL62	Multi Core Architecture Lab	CEE	0	0	1	0	1	2	50	50	**100**
4	21CEE63	Machine Learning	CEE	3	0	0	0	3	3	50	50	**100**
5	21CEL63	Machine Learning Lab	CEE	0	0	1	0	1	2	50	50	**100**
6	21CEE64X	Professional Elective Course-II	CEE	3	0	0	0	3	3	50	50	**100**
7	21CEE65	Social Connect and Responsibility	CEE	0	0	1	0	1	2	50	-	**50**
8	21CEE66	Innovation/Entrepreneurship/ Societal Internship	CEE	0	0	3	0	3	0	50	50	**100**
9	21CEE67	Mini project	CEE	0	0	1	0	1	0	50	50	**100**
10	21NHOP6XX	Industrial Open Elective Course-I	Offering Dept.	3	0	0	0	3	3	50	50	**100**
Total								**22**	**21**	**500**	**450**	**950**

Professional Elective Courses-II			
21CEE641	Cryptography and Network Security	21CEE644	Big Data Analytics
21CEE642	Cloud Computing	21CEE645	Bio Inspired Design
21CEE643	Natural Language Processing		

AGENDA -4

Proposed course details for the academic year 2023-24, 7th to 8th Semester Scheme 175 Credit

VII SEMESER SCHEME

S. No	Course Code	Course	BOS	Credit Distribution				Overall Credits	Contact Hours	Marks		
				L	T	P	S			CIE	SEE	TOTAL
1	20CEE71A	Internet of Things	CEE	3	0	0	0	3	3	50	50	100
2	20CEE72A	Software Testing	CEE	3	0	0	0	3	3	50	50	100
3	20CEE73XA	Professional Elective-V	CEE	3	0	0	0	3	3	50	50	100
4	20CEE74XA	Professional Elective-VI	CEE	3	0	0	0	3	3	50	50	100
5	20CEL75A	Internet of Things Lab	CEE	0	0	2	0	2	4	25	25	50
6	20CEL76A	Software Testing Lab	CEE	0	0	2	0	2	4	25	25	50
7	20CEE77A	Project Phase-1	CEE	0	0	3	0	3	-	50	50	100
8	20NHOPxx	Open Elective	CEE	3	0	0	0	3	3	50	50	100
Total								**22**	**23**	**350**	**350**	**700**

Professional Elective Courses-V		Professional Elective Course- VI	
20CEE731A	Distributed Computing	20CEE741A	Software Quality Assurance
20CEE732A	Cyber Security	20CEE742A	Penetration Testing
20CEE733A	Advanced Microprocessor	20CEE743A	Biometrics Systems
20CEE734A	Data Acquisition and Productization	20CEE744A	HDL-Based Digital Systems Design

VIII SEMESER SCHEME

S. No	Course Code	Course	BOS	Credit Distribution				Overall Credits	Contact Hours	Marks		
				L	T	P	S			CIE	SEE	TOTAL
1	20CEE81A	Computer Vision	CEE	3	0	0	0	3	3	50	50	100
2	20CEE82A	Internship Viva	CEE	0	0	4	0	4	-	50	50	100
3	20CEE83A	Project Phase 2	CEE	0	0	12	0	12	-	150	150	300
Total								**19**	**3**	**250**	**250**	**500**

Course Code	Course	BOS
20NHOP701	Big Data Analytics using HP Vertica- 1	CSE
20NHOP702	VM Ware Virtualization Essentials-1	ISE
20NHOP704	Big Data Analytics using HP Vertica – 2	CSE
20NHOP707	SAP	ME
20NHOP708	Schneider - Industrial Automation	EEE
20NHOP709	CISCO - Routing & Switching - 1	ECE
20NHOP712	CISCO - Routing & Switching -2	ECE
20NHOP714	Blockchain	CSE
20NHOP715	Product Life Cycle Management	ME
20NHOP720A	Robotic Process Automation	CSE
20NH0P721A	Industry 4.0	ME
20NHOP722A	Programming of Industrial Robot	ECE
20NHOP723A	5G Communication	ECE
20NHOP725A	VLSI Physical Design-I	ECE
20NHOP726A	VLSI Physical Design-2	ECE
20NHOP727A	Juniper Network Operating System	ECE
20NHOP728A	Database Administration using DB2	AI&ML

AGENDA -5

Recommendations/ Suggestions of BOS members

The agenda was already circulated among the committee members and the following discussions were made based on the agenda.

Dr. Cauvery, Assistant Director – SAP, RVCE, Dr. Mohana Kumar, Associate Professor, Department of CSE, MSRIT, Bengaluru, and Dr. Kanagasundaram K, Principal Technical Specialist, NOKIA NETWORKS, Bengaluru, attended the meeting and appreciated the curriculum and syllabi.

The following suggestions were given by the BOS members:

Course Code Allocation

Dr. Cauvery suggested checking for the course code like the number of the code should be mapped with the regulations and policies of NEP. She also advised verifying the same like 0 to 100 for the bridge course etc.,

Subject Implementation

Dr. Mohan Kumar S suggested including Digital Electronics in Computer Organization. So that one more subject can be added in the particular semester.

Syllabus updation for Linux

Dr. Kanagasundaram. K Industry expert suggested adding an Introduction about open source in Linux and Linux kernel in the programming language course for Linux.

Subject Reframing

Dr. Kanagasundaram. K Industry expert suggested instead of Perl programming, Nvdia and Game processing subjects can be included since there are huge demand in the market. He also suggested including MS Office Outlook in the syllabus of the Advanced Office Automation for Ability Enhancement Course (AEC). Dr. Mohana Kumar S suggested instead of NLP programming subjects like VR and Augmentation can be provided in consultation with the respective dean and he also suggested instead of Multicore Architecture subjects like Big Data analysis can be provided as they have huge demand in the market.

Subject Renaming

Dr. Kanagasundaram. K. and Dr. Mohana Kumar S. suggested renaming the subject Object Oriented Programming using Java as Object Oriented Programming.

Laboratory Syllabus Updation

Dr. Mohana Kumar S suggested reframing the syllabus content by incorporating words like analysis instead of writing a program so that in the NBA aspect corresponding courses can be mapped as per the criteria. Dr. Kanagasundaram. Suggested incorporating modules like Virtual N/W in the computer networks laboratory and he suggested including IPV6 in the theory.

Approval of Scheme and Syllabi

Dr. Channappa B Akki, Dr. Mohana Kumar and Dr. Kanagasundaram appreciated the contents and endorsed the views of BoS members. The BoS members unanimously approved the scheme and syllabi for III and IV semesters for 2022 batch (NEP) and V and VI semester for 2021 batch and VII and VIII Semester of 2020 Batch

AGENDA -6

Implementation of recommendation of BOS members

The chairperson reviewed the curriculum and implemented the recommendations of the BOS members in the scheme and syllabus of the curriculum and affected the changes regarding issues raised by external BOS members.

AGENDA -7

Approval of Scheme & Syllabus of Second Year Computer Engineering Subjects

The Board of Studies members reviewed the modified draft of the scheme & syllabus with their recommendations/suggestions being incorporated appropriately.

Finally, the members approved the draft of the same with the modifications for final implementation.

AGENDA -8

Vote of Thanks by the chairman of BOS

The Chairman thanked all the members for having participated in the meeting and contributed to framing the curriculum and syllabi (III and IV semester, 160 Credits) for Revised NEP and (V and VI semester 160 Credit, VII & VIII Semester 175 Credits scheme)

NEW HORIZON
COLLEGE OF ENGINEERING
Autonomous College Permanently Affiliated to VTU, Approved by AICTE & UGC
Accredited by NAAC with 'A' Grade, Accredited by NBA

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

9th BOARD OF STUDIES MEETING

Minutes of Meeting

ACADEMIC YEAR 2023-24

DATE : 28-08-2023

VENUE : A104 – Netaji Subhash Chandra Bose Block, NHCE

TIME : **10.30 AM-1:30 PM**

CONTENTS

AGENDA FOR THE MEETING

1. **Welcome address by the chairman of BOS**
2. **Presentation by chairman of BOS about department achievements**
3. **Presentation of proceedings of the previous BOS meeting by chairman of BOS**
4. **Proposed course details of 2021-scheme (5th to 8th), 2022-scheme (3rd to 8th) & syllabus for the academic year 2023-24**
5. **Presentation of draft scheme & syllabus for the commencement semesters of (Agenda-4) schemes for ratification**
6. **Recommendations/ suggestions of BOS members**
7. **Implementation of recommendation of BOS members**
8. **Approval of scheme & syllabus (Agenda 6 & 7)**
9. **Proposed course details of 3rd & 4th M. Tech (CSE) of 2022-scheme**
10. **Presentation of draft scheme & syllabus for the commencement semesters of (Agenda-9) schemes for ratification.**
11. **Recommendations/ suggestions of BOS members.**
12. **Implementation of recommendation of BOS members**
13. **Approval of scheme & syllabus (Agenda 11 & 12)**
14. **Vote of Thanks**

LIST OF MEMBERS-BOARD OF STUDIES

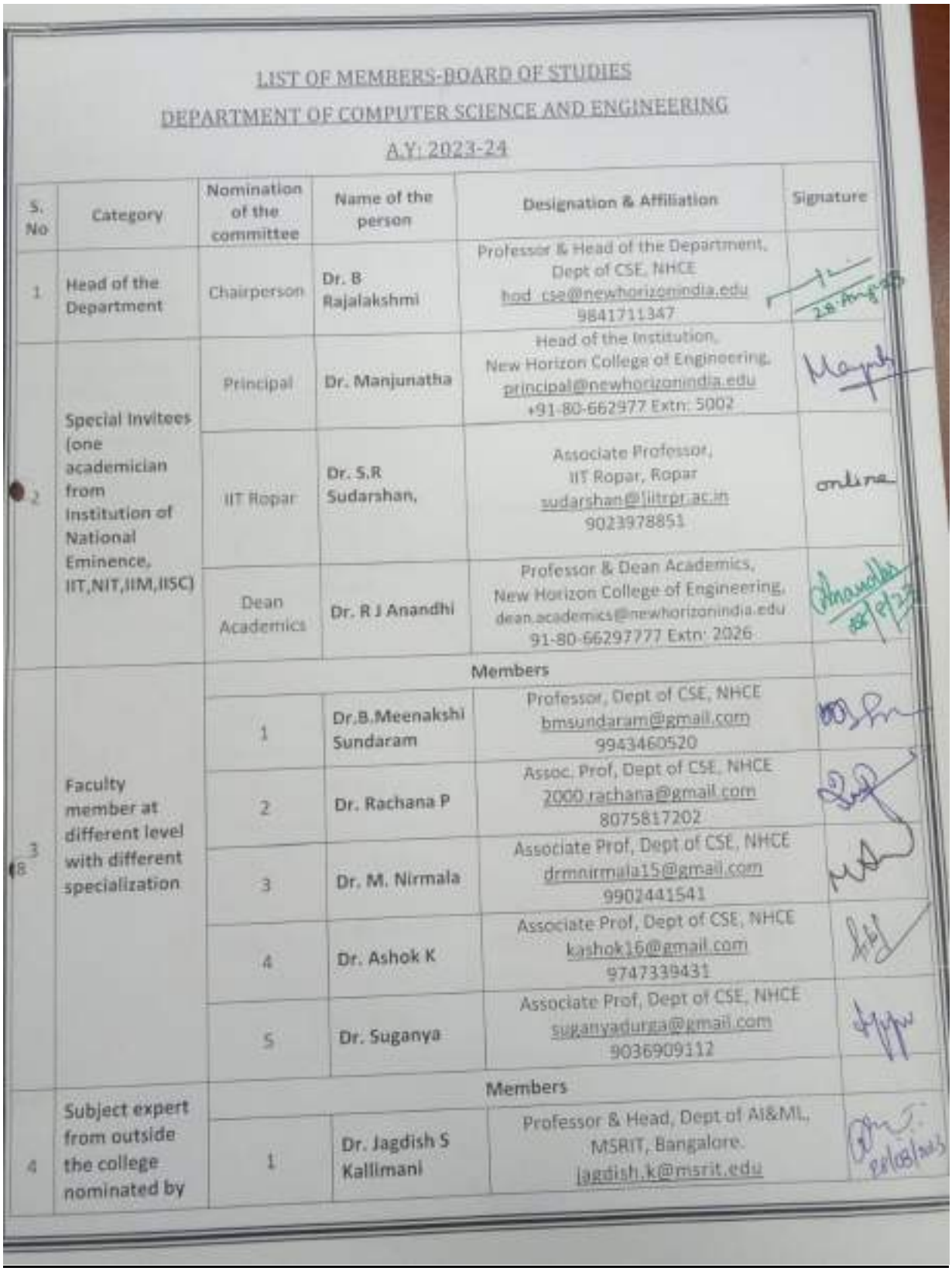
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

A.Y: 2023-24

S. No	Category	Nomination of the committee	Name of the person	Designation & Affiliation
1	**Head of the Department**	Chairperson	**Dr. B Rajalakshmi**	Professor & Head of the Department, Dept of CSE, NHCE hod_cse@newhorizonindia.edu 9841711347
2	**Special Invitees (one academician from Institution of National Eminence, IIT,NIT,IIM,IISC)**	Principal	**Dr. Manjunatha**	Head of the Institution, New Horizon College of Engineering, principal@newhorizonindia.edu +91-80-662977 Extn: 5002
		IIT Ropar	**Dr. S.R Sudarshan,**	Associate Professor, IIT Ropar, Ropar sudarshan@]iitrpr.ac.in 9023978851
		Dean Academics	**Dr. R J Anandhi**	Professor & Dean Academics, New Horizon College of Engineering, dean.academics@newhorizonindia.edu 91-80-66297777 Extn: 2026
3	**Faculty member at different level with different specialization**	**Members**		
		1	**Dr.B.Meenakshi Sundaram**	Professor, Dept of CSE, NHCE bmsundaram@gmail.com 9943460520
		2	**Dr. Rachana P**	Assoc. Prof, Dept of CSE, NHCE 2000.rachana@gmail.com 8075817202
		3	**Dr. M. Nirmala**	Associate Prof, Dept of CSE, NHCE drmnirmala15@gmail.com 9902441541
		4	**Dr. Ashok K**	Associate Prof, Dept of CSE, NHCE kashok16@gmail.com 9747339431
		5	**Dr. Suganya**	Associate Prof, Dept of CSE, NHCE suganyadurga@gmail.com 9036909112
4	**Subject expert from outside the college nominated by Academic Council**	**Members**		
		1	**Dr.Jagdish S Kallimani**	Professor & Head, Dept of AI&ML, MSRIT, Bangalore. hod_aiml@msrit.edu 9844094962

5	**Experts from outside the college nominated by VTU**	**Member**		
		1	**Dr. Thippeswamy**	Professor, Dept. of CSE BMSITM – Bengaluru gt_swamy@bmsit.in 9448864856
6	**Representative from Industry / Corporate sector / allied area related to placements, nominated by Academic Council**	**Members**		
		1	**Mr Mohammed Anvar**	Senior Technical Lead, Happiest Minds, Bangalore mohammed.anvar@happiestminds.com
7	**Meritorious alumni nominated by Principal**	**Members**		
		1	**Mr. Rahul M Dinesh**	Associate Software Engineer, Oracle Cerner, Bangalore. rahulmdinesh@yahoo.com +91 8197004171
8	**Co-opted members**	**Members**		
		1	**Dr. B V Santosh Krishna**	Associate Prof, Dept of CSE, NHCE santhoshkrishna1987@gmail.com 8610196443
		2	**Ms.Soja Rani S**	Sr. Asst. Professor, Dept of CSE, NHCE sojars@newhorizonindia.edu 9482598037
		3	**Ms. Srividhya**	Sr. Asst. Professor, Dept of CSE, NHCE v.vidhya8@gmail.com 9566507553
		4	**Dr. Manikanda Kumar**	Sr. Asst. Professor, Dept of CSE, NHCE manikandakumar.nhce@gmail.com 9943124384
		5	**Ms. Chitra**	Sr. Asst. Professor, Dept of CSE, NHCE chitra.014c@gmail.com 9738789080
		6	**PROF. ANIS MIRZA**	Head- IIIC & Corporate Relations Department of HRD tpo@newhorizonindia.edu 9900072558

LIST OF MEMBERS PRESENT

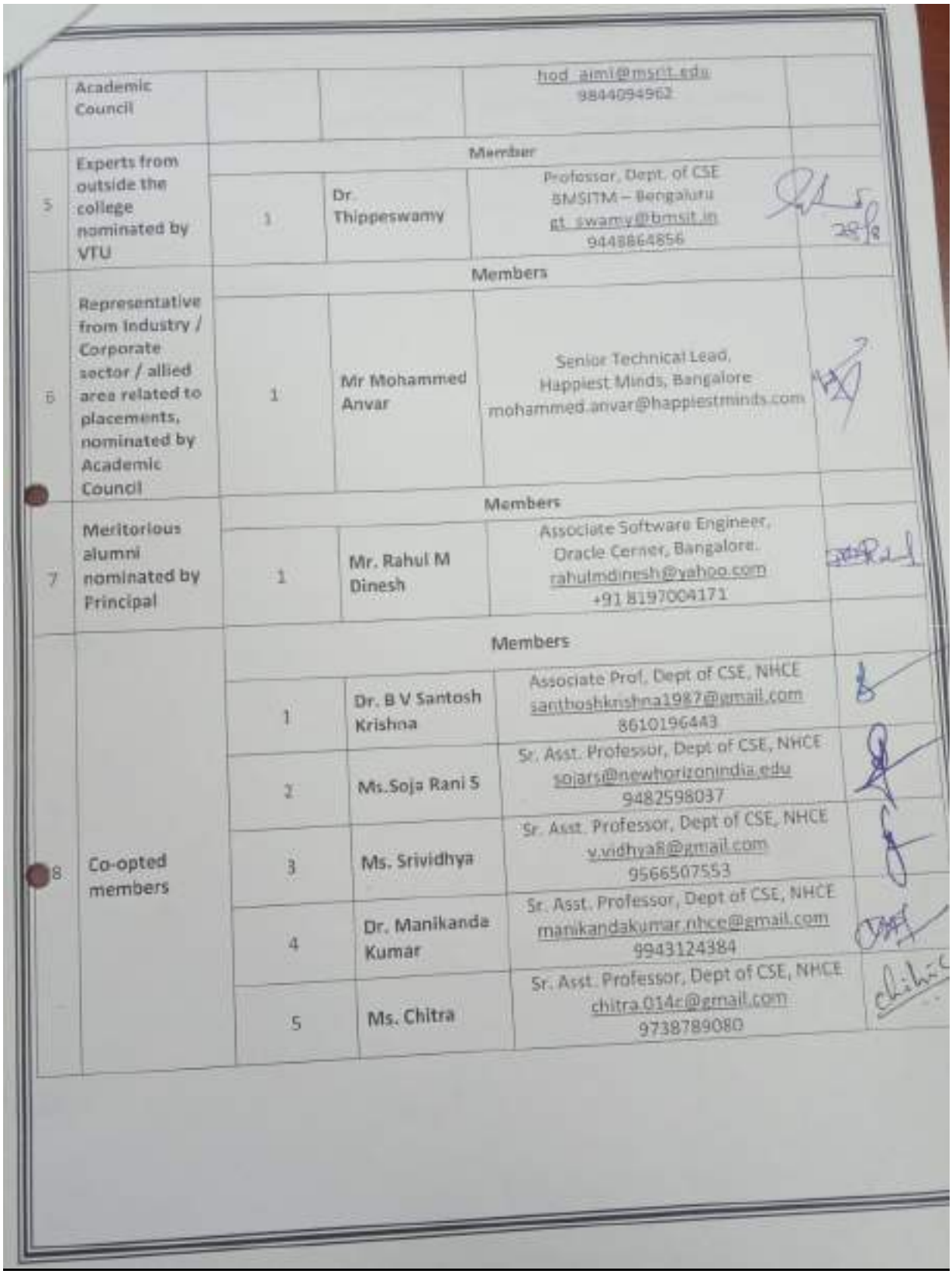


LIST OF MEMBERS-BOARD OF STUDIES

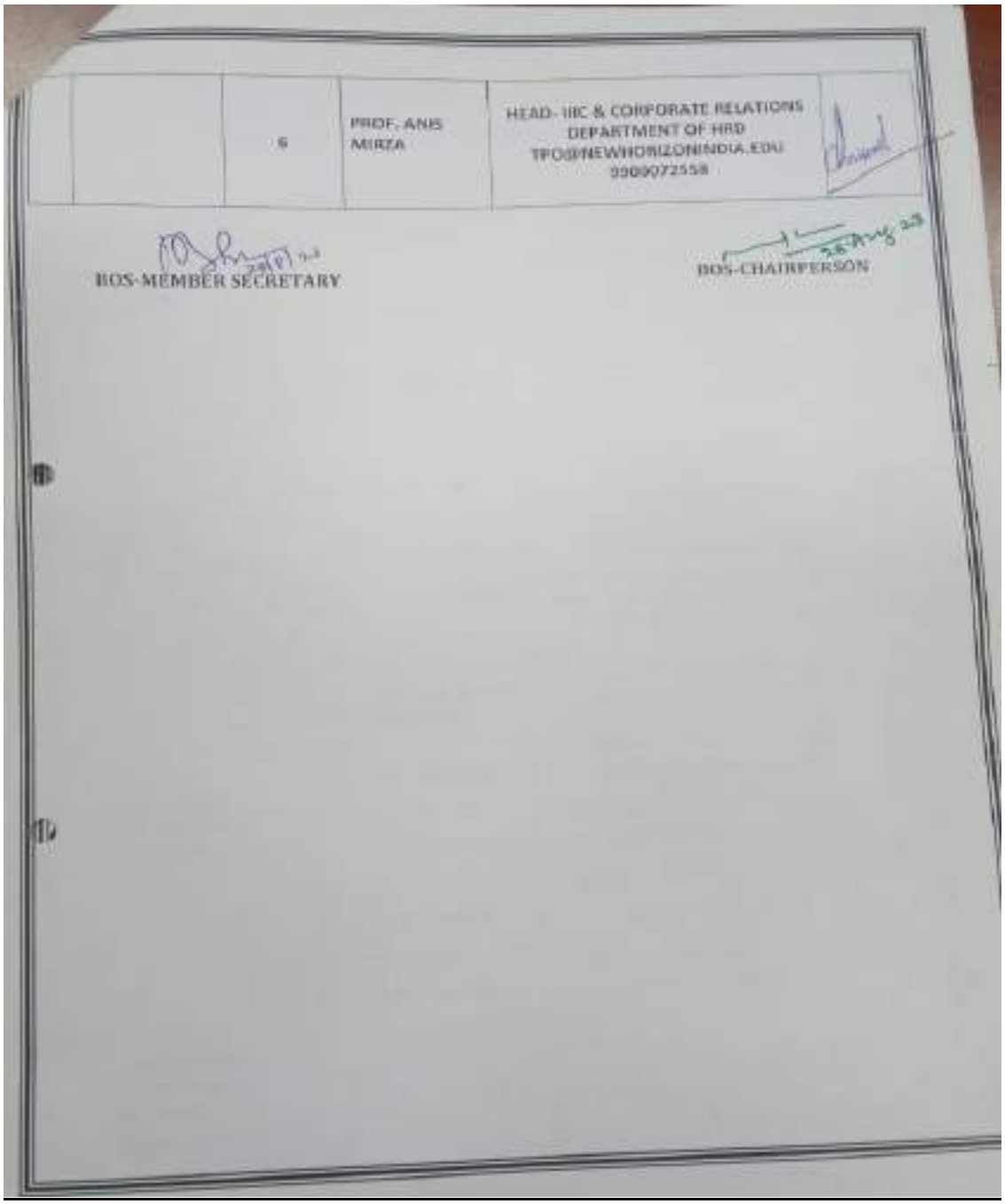
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

A.Y: 2023-24

S. No	Category	Nomination of the committee	Name of the person	Designation & Affiliation	Signature
1	Head of the Department	Chairperson	Dr. B Rajalakshmi	Professor & Head of the Department, Dept of CSE, NHCE hod_cse@newhorizonindia.edu 9841711347	28-Aug-23
2	Special Invitees (one academician from Institution of National Eminence, IIT,NIT,IIM,IISC)	Principal	Dr. Manjunatha	Head of the Institution, New Horizon College of Engineering. principal@newhorizonindia.edu +91-80-662977 Extn: 5002	
		IIT Ropar	Dr. S.R Sudarshan,	Associate Professor, IIT Ropar, Ropar sudarshan@iitrpr.ac.in 9023978851	online
		Dean Academics	Dr. R J Anandhi	Professor & Dean Academics, New Horizon College of Engineering. dean.academics@newhorizonindia.edu 91-80-66297777 Extn: 2026	
3	Faculty member at different level with different specialization	Members			
		1	Dr.B.Meenakshi Sundaram	Professor, Dept of CSE, NHCE bmsundaram@gmail.com 9943460520	
		2	Dr. Rachana P	Assoc. Prof, Dept of CSE, NHCE 2000.rachana@gmail.com 8075817202	
		3	Dr. M. Nirmala	Associate Prof, Dept of CSE, NHCE drmnirmala15@gmail.com 9902441541	
		4	Dr. Ashok K	Associate Prof, Dept of CSE, NHCE kashok16@gmail.com 9747339431	
		5	Dr. Suganya	Associate Prof, Dept of CSE, NHCE suganyadurga@gmail.com 9036909112	
4	Subject expert from outside the college nominated by	Members			
		1	Dr. Jagdish S Kallimani	Professor & Head, Dept of AI&ML, MSRIT, Bangalore. jagdish.k@msrit.edu	28/08/2023



	Academic Council			hod_aiml@msrit.edu 9844094962	
5	Experts from outside the college nominated by VTU	Member			
		1	Dr. Thippeswamy	Professor, Dept. of CSE BMSITM – Bengaluru gt_swamy@bmsit.in 9448864856	
6	Representative from Industry / Corporate sector / allied area related to placements, nominated by Academic Council	Members			
		1	Mr Mohammed Anvar	Senior Technical Lead, Happiest Minds, Bangalore mohammed.anvar@happiestminds.com	
7	Meritorious alumni nominated by Principal	Members			
		1	Mr. Rahul M Dinesh	Associate Software Engineer, Oracle Cerner, Bangalore. rahulmdinesh@yahoo.com +91 8197004171	
8	Co-opted members	Members			
		1	Dr. B V Santosh Krishna	Associate Prof, Dept of CSE, NHCE santhoshkrishna1987@gmail.com 8610196443	
		2	Ms.Soja Rani S	Sr. Asst. Professor, Dept of CSE, NHCE sojars@newhorizonindia.edu 9482598037	
		3	Ms. Srividhya	Sr. Asst. Professor, Dept of CSE, NHCE v.vidhya8@gmail.com 9566507553	
		4	Dr. Manikanda Kumar	Sr. Asst. Professor, Dept of CSE, NHCE manikandakumar.nhce@gmail.com 9943124384	
		5	Ms. Chitra	Sr. Asst. Professor, Dept of CSE, NHCE chitra.014c@gmail.com 9738789080	



		6	PROF. ANIS MIRZA	HEAD- IIIC & CORPORATE RELATIONS DEPARTMENT OF HRD TPO@NEWHORIZONINDIA.EDU 9969072558	

BOS-MEMBER SECRETARY

BOS-CHAIRPERSON

AGENDA -1

Welcome Address by the Chairman of BOS

*****

The 9th Board of Studies meeting for Department of Computer Science andEngineering was scheduled on 28thAugust 2023 at 10.30 AM.

At the outset, Chairperson **Dr. B. Rajalakshmi**– Professor & Head – Department of Computer Science and Engineering, welcomed all the members to the 9th Board ofStudies meeting.

The Chairperson introduced **Dr. R. J. Anandhi**, Prof & Dean–Academics, New Horizon College of Engineering to the members of Board of Studies and welcomed her for the ensuing proceedings.

The Chairperson further expressed special thanks to **Dr. Thippeswamy,** an expert, nominated by VTU, Special Invitees from IIT Ropar**, Dr. S.R Sudarshan** and a subject expert from outside the college nominated by Academic Council **Dr.Jagdish S Kallimani**, Professor & Head, Department of AI &ML, MSRIT, Bangalore.

The chairperson also expressed her gratitude to industrial nomineeby Academic Council,**Mr.Mohammed Anvar**, Senior Technical Lead, Happiest Minds, Bangalore, for sparing the time from his busy schedule to attend the meeting.

The meeting was also attended by meritorious alumnus **Ms. Rahul M Dinesh,** Associate Software Engineer, Oracle Cerner, Bengaluru, nominated by the Principal, Co-opted members**Dr. B V Santosh Krishna, Ms. Soja Rani S, Ms. Srividhya, Dr. Manikanda Kumar, Ms. Chitra, Prof. Anis Mirza – Head IIC, HRD,** and internal faculty members**Dr. B. Meenakshi Sundaram, Dr. Rachana, Dr. M Nirmala, Dr. Ashok K, Dr. Suganya R** with different specialization.

AGENDA -2

Presentation by chairman of BOS about department achievements

*****

Chairperson of BOSDr. B. Rajalakshmi, Professor & Head, Department of Computer Science and Engineering, presented the achievements of the department in the current academic year 2022-23.

AGENDA -3

Presentation of proceedings of the previous BOS meeting by chairman of BOS

*****

Chairperson of BOSDr. B. Rajalakshmi, Professor & Head, Department of Computer Science and Engineering, briefed the proceedings of previous BOS meeting acknowledging their contribution for betterment in framing the scheme & syllabus.

AGENDA -4

Proposed course details of 2021-scheme (5th to 8th), 2022-scheme (3rd to 8th) & syllabus for the academic year 2023-24

*****

NEW HORIZON COLLEGE OF ENGINEERING

B. E. in Computer Science and Engineering

Scheme of Teaching and Examinations for 2021- 2025 BATCH (2021 Scheme)

V - Semester														
S. No.	**Course and Course Code**		**Course Title**	**BoS**	**Credit Distribution**				**Overall Credits**	**Contact Hours**	**Marks**		
					L	**T**	**P**	**S**			**CIE**	**SEE**	**Total**
1	PCC	21CSE51	Design and Analysis of Algorithms	CS	3	0	0	0	3	3	50	50	**100**
2	PCCL	21CSL51	Design and Analysis of Algorithms Lab	CS	0	0	1	0	1	2	50	50	**100**
3	PCC	21CSE52	Database Management Systems	CS	3	0	0	0	3	3	50	50	**100**
4	PCCL	21CSL52	Database Management Systems Lab	CS	0	0	1	0	1	2	50	50	**100**
5	PCC	21CSE53	Cyber Security Essentials	CS	3	0	0	0	3	3	50	50	**100**
6	PEC	21CSE54X	Professional Elective Course-I	CS	3	0	0	0	3	3	50	50	**100**
7	AEC	21CSL55X	Ability Enhancement Course-V	CS	0	0	1	0	1	2	50	50	**100**
8	MP	21CSE56	Mini Project	CS	0	0	1	0	1	2	50	50	**100**
9	AEC	21CSK57	Research Methodology and IPR	CS	1	0	0	0	1	2	50	50	**100**
10	UHV	21CSK58	Innovation and Design Thinking	CS	1	0	0	0	1	1	50	50	**100**
				Total					**18**	**23**	**500**	**500**	**1000**

NCMC	21NSS84	National Service Scheme (NSS)	NSS coordinator	All students have to register for any one of the courses namely National Service Scheme, Physical Education (PE) (Sports and Athletics) and Yoga with the concerned coordinator of the course during the first week of V semester. The activities shall be carried out from (for 4 semesters) between V semester to VIII semester. SEE in the above courses shall be conducted during VIII semester examinations and the accumulated CIE marks shall be added to the SEE marks. Successful completion of the registered course is mandatory for the award of the degree. The events shall to be reflected in the calendar prepared for the NSS, PE and Yoga activities.
	21PES84	Physical Education (PE) (Sports and Athletics)	Physical Education Director	
	21YOG84	Yoga	Yoga Teacher	

PCC: Professional Core Course, **PCCL**: Professional Core Course laboratory, **UHV**: Universal Human Value Course, **NCMC**: Non-Credit Mandatory Course, **AEC**: Ability Enhancement Course, **PEC**: Professional Elective Course, **PROJ**: Mini Project work **L:** Lecture, **T**: Tutorial, **P**: Practical **S: SDA**: Self Study for Skill Development, **CIE**: Continuous Internal Evaluation, **SEE**: Semester End Evaluation

Professional Elective Courses (PEC): A professional elective (PEC) course is intended to enhance the depth and breadth of educational experience in the Engineering and Technology curriculum. Multidisciplinary courses that are added supplement the latest trend and advanced technology in the selected stream of engineering.

Professional Elective Course-I			
21CSE541	Finite Automata and Compiler Design	21CSE544	Web of Things and IoT
21CSE542	Software Testing	21CSE545	Advanced Java
21CSE543	Social Network Analysis		

Ability Enhancement Course-V			
21CSL551	Mobile App Development	21CSL554	IoT deployment
21CSL552	VR App Development	21CSL555	Web scraping for data analysis
21CSL553	Wearable Technology Programming		

Mini-project work: Mini Project is a laboratory-oriented/hand on course that will provide a platform to students to enhance their practical knowledge and skills by the development of small systems/applications etc. Based on the ability/abilities of the student/sandrecommendationsofthementor. A student can do mini project as

(i) A group of 2 if mini project work is single discipline (applicable to all IT allied branches)

(ii) A group of 2-4 if mini project work is single discipline (applicable to all Core Branches)

(iii)A group of 2 -4 students if the Mini Project work is a multidisciplinary(Applicable to all Branches)

CIE procedure for Mini-project:

(i) Single discipline: The CIE marks shall be awarded by a committee consisting of the Head of the concerned Department and two faculty members of the Department, one of them being the Guide. The CIE marks awarded for the Mini-project work shall be based on the evaluation of the project report, project presentation skill, and question and answer session in the ratio of 50:25:25. The marks awarded for the project report shall be the same for all the batches mates.

(ii) Interdisciplinary: Continuous Internal Evaluation shall be group-wise at the college level with the participation of all the guides of the project. The CIE marks awarded for the Mini-project, shall be based on the evaluation of the project report, project presentation skill, and question and answer session in the percentage ratio of 50:25:25. The marks awarded for the project report shall be the same for all the batch mates

Credit Definition: 1-hour Lecture (L) per week=1Credit	03-Credits courses are to be designed for 40 hours in Teaching-Learning Session
2-hoursTutorial(T) per week=1Credit	02- Credits courses are to be designed for 25 hours of Teaching-Learning Session
2-hours Practical / Drawing (P) per week=1Credit	01-Credit courses are to be designed for 15 hours of Teaching-Learning Sessions
2-hous Self Study for Skill Development (SDA) per week = 1 Credit	

NEW HORIZON COLLEGE OF ENGINEERING

B. E. in Computer Science and Engineering

Scheme of Teaching and Examinations for 2021- 2025 BATCH (2021 Scheme)

VI - Semester													
S. No.	**Course and Course Code**		**Course Title**	**BoS**	**Credit Distribution**				**Overall Credits**	**Contact Hours**	**Marks**		
					L	**T**	**P**	**S**			**CIE**	**SEE**	**Total**
1	HSMC	21CSE61	Software Engineering and Project Management	CS	3	0	0	0	3	3	50	50	**100**
2	PCC	21CSE62	Data Mining and Machine Learning	CS	3	0	0	0	3	3	50	50	**100**
3	PCCL	21CSL62	Data Mining and Machine Learning Lab	CS	0	0	1	0	1	2	50	50	**100**
4	PCC	21CSE63	Computer Networks	CS	3	0	0	0	3	3	50	50	**100**
5	PCCL	21CSL63	Network Simulation Lab	CS	0	0	1	0	1	2	50	50	**100**
6	PEC	21CSE64X	Professional Elective Course-II	CS	3	0	0	0	3	3	50	50	**100**
7	UHV	21CSK65	Social Connect and Responsibility	CS	0	0	1	0	1	2	50	-	**50**
8	INT	21CSE66	Innovation/Entrepreneurship/ Societal Internship	CS	0	0	3	0	3	0	50	50	**100**
9	MP	21CSE67	Mini project	CS	0	0	1	0	1	2	50	50	**100**
10	OEC	21NHOP6XX	Industrial Open Elective Course-I	Offering Dept.	3	0	0	0	3	3	50	50	**100**
Total									**22**	**23**	**500**	**450**	**950**

HSMC: Humanity and Social Science & Management Course, **PCC**: Professional Core Course, **PCCL**: Professional Core Course laboratory, **NCMC:** Non-Credit Mandatory Course, **AEC**: Ability Enhancement Course, **PEC**: Professional Elective Course, **OEC**: Open Elective Course, **PROJ**: Project work**, L:** Lecture, **T**: Tutorial, **P**: Practical **S: SDA**: Self Study for Skill Development, **CIE**: Continuous Internal Evaluation, **SEE**: Semester End Evaluation.

Industrial Open Elective Course (OEC): Credit for OEC is 03 (L: T: P:S) can be considered as(3: 0:0 : 0). The teaching and learning of these Courses will be based on hands-on. The Course Assessment will be based on CIE and SEE in practical mode. This Courses will be offered by Centre of Excellence to students of all the branches. Registration to Industrial open electives shall be documented and monitored on college level.

Professional Elective Courses (PEC): A professional elective (PEC) course is intended to enhance the depth and breadth of educational experience in the Engineering and Technology curriculum. Multidisciplinary courses that are added supplement the latest trend and advanced technology in the selected stream of engineering.

21XXX61 (HSMC)- This course must be pertaining to economics and management of the concerned degree program. The course syllabus should have both economics and management topics and the course title should bear the word Management.

For IT allied Branches: Software Product Management

For Core Branches: Engineering Economics and Management / Industrial Management/ Construction Management

Professional Elective Course-II			
21CSE641	Computational Intelligence	21CSE644	Embedded Programming
21CSE642	Cloud Computing	21CSE645	Advanced Databases
21CSE643	Bio Inspired Design and Innovation		

NEW HORIZON COLLEGE OF ENGINEERING

B. E. in Computer Science and Engineering

Scheme of Teaching and Examinations for 2021- 2025 BATCH (2021 Scheme)

VII - Semester														
S. No.	**Course and Course Code**		**Course Title**	**BoS**	**Credit Distribution**				**Overall Credits**	**Contact Hours**	**Marks**			
					L	**T**	**P**	**S**			**CIE**	**SEE**	**Total**	
1	PCC	21CSE71	Full Stack Technologies	CS	3	0	0	0	3	3	50	50	**100**	
2	PCC	21CSE72	Deep Learning	CS	3	0	0	0	3	3	50	50	**100**	
3	PEC	21CSE73X	Professional Elective Course-III	CS	3	0	0	0	3	3	50	50	**100**	
4	PROJ	21CSE74	Project Work	CS	0	0	10	0	10	10	100	100	**200**	
5	OEC	21NHOP7XX	Industrial Open Elective Course-II	Offering Dept.	3	0	0	0	3	3	50	50	**100**	
								Total	**22**	**22**	**300**	**300**	**600**	

PCC: Professional Core Course, **PCCL**: Professional Core Course laboratory, **PEC**: Professional Elective Course, **OEC**: Open Elective Course, **PROJ**: Project work**, L:** Lecture, **T**: Tutorial, **P**: Practical **S: SDA**: Self Study for Skill Development, C**IE**: Continuous Internal Evaluation, **SEE**: Semester End Evaluation.

Industrial Open Elective Course (OEC): Credit for OEC is 03 (L: T: P: S) can be considered as(3: 0: 0: 0). The teaching and learning of these Courses will be based on hands-on. The Course Assessment will be based on CIE and SEE in practical mode. This Courses will be offered by Centre of Excellence to students of all the branches. Registration to Industrial open electives shall be documented and monitored on college level.

ProfessionalElectiveCourse-III			
21CSE731	Fundamentals of Data Science	21CSE734	Industrial Robotics and Applications
21CSE732	Cloud Architecture Design & Security	21CSE735	Advanced Data Structures
21CSE733	Green IT and Sustainability		

Project Work:

The objective of the Project work is

(i) To encourage independent learning and the innovative attitude of the students.
(ii) To develop interactive attitude, communication skills, organization, time management, and presentation skills.
(iii) To impart flexibility and adaptability.
(iv) To inspire team working.
(v) To expand intellectual capacity, credibility, judgment and intuition.
(vi) To adhere to punctuality, setting and meeting deadlines.
(vii) To install responsibilities to oneself and others.
(viii) To train students to present the topic of project work in a seminar without any fear, face the audience confidently, enhance communication skills, involve in group discussion to present and exchange ideas.

CIE procedure for Project Work:

(1) Single discipline: The CIE marks shall be awarded by a committee consisting of the Head of the concerned Department and two senior faculty members of the Department, one of whom shall be the Guide.

The CIE marks awarded for the project work shall be based on the evaluation of the project work Report, project presentation skill, and question and answer session in the percentage ratio of50:25:25. The marks awarded for the project report shall be the same for all the batchmates.

(2) Interdisciplinary: Continuous Internal Evaluation shall be group-wise at the college level with the participation of all guides of the college. Participation of external guide/s, if any, is desirable. The CIE marks awarded for the project work, shall be based on the evaluation of project work Report, project presentation skill, and question and answer session in the percentage ratio of 50:25:25. The marks awarded for the project report shall be the same for all the batch mates.

SEE procedure for Project Work: SEE for project work willbeconductedbythetwoexaminersappointedbytheUniversity.TheSEEmarksawardedfor the project work shall be based on the evaluation of project work Report, project presentation skill, and question and answer session in the percentage ratio of 50:25:25.

NEW HORIZON COLLEGE OF ENGINEERING

B. E. in Computer Science and Engineering

Scheme of Teaching and Examinations for 2021- 2025 BATCH (2021 Scheme)

VIII - Semester													
S. No.	**Course and Course Code**		**Course Title**	**BoS**	**Credit Distribution**				**Overall Credits**	**Contact Hours**	**Marks**		
					L	**T**	**P**	**S**			**CIE**	**SEE**	**Total**
1	SEM	21CSE81	Technical Seminar	CS	0	0	1	0	1	0	100	-	**100**
2	INT	21CSE82	Research Internship/ Industry Internship /Rural Internship	CS	0	0	14	0	14	0	100	100	**200**
3	AEC	21CSK83	Scientific Foundations of Health	CS	1	0	0	0	1	1	50	50	**100**
4	NCMC	21NSS84	National Service Scheme (NSS)	NSS coordinator	0	0	0	0	0	0	50	50	**100**
		21PES84	Physical Education (PE) (Sports and Athletics)	Physical Education Director									
		21YOG84	Yoga	Yoga Teacher									
Total									**16**	**1**	**300**	**200**	**500**

NCMC: Non-Credit Mandatory Course, **AEC**: Ability Enhancement Course, **SEM**: Seminar, **INT**: Industry Internship/Research Internship / Rural Internship, **L:** Lecture, **T**: Tutorial, **P**: Practical **S: SDA**: Self Study for Skill Development, ,**CIE**: Continuous Internal Evaluation, **SEE**: Semester End Evaluation.

Elucidation:

Research/Industry Internship/ Rural Internship / Innovation - Incubation Center Internship / Start-up Internship shall be carried out at an Industry, NGO, MSME, Innovation center, Incubation center, Start-up, center of Excellence (CoE), Study Centre established in the parent institute and/or at reputed research organizations/institutes.

The mandatory Research internship /Industry internship / Rural Internship is for **24 weeks**. The internship shall be considered as a head of passing and shall be considered for the award of a degree. Those, who do not take up/complete the internship shall be declared to fail and shall have to complete it during the subsequent SEE examination after satisfying the internship requirements.

Research internship: A research internship is intended to offer the flavour of current research going on in the research field. It helps students get familiarized with the field and imparts the skill required for carrying out research.

Industry internship: Is an extended period of work experience undertaken by students to supplement their degree for professional development. It also helps them learn to overcome unexpected obstacles and successfully navigate organizations, perspectives, and cultures. Dealing with contingencies helps students recognize, appreciate, andadapt to organizational realities by tempering their knowledge with practical constraints.

The faculty coordinator or mentor has to monitor the student's internship progress and interact with them to guide for the successful completion of the internship.

The students are permitted to carry out the internship anywhere in India or abroad. University shall not bear any expenses incurred in respect of the internship.

With the consent of the internal guide and Principal of the Institution, students shall be allowed to carry out the internship at their hometown (**within or outside thestateorabroad**),provided favourable facilitiesareavailablefortheinternshipandthestudentremainsregularlyincontactwiththeinternalguide.

TECHNICAL SEMINAR(21XXX81): The objective of the seminar is to inculcate self-learning, present the seminar topic confidently, enhance communication skill, involve in group discussion for exchange of ideas. Each student, under the guidance of a Faculty, shall choose, preferably, a recent topic of his/her interest relevant to the programme of specialization.

(i) Carry out literature survey, systematically organize the content.
(ii) Prepare the report with own sentences, avoiding a cut and paste act.
(iii) Type the matter to acquaint with the use of Micro-soft equation and drawing tools or any such facilities.
(iv) Present the seminar topic through PowerPoint slides.
(v) Answer the queries and involve in debate/discussion.
(vi) Submit a typed report with a list of references.

The participants shall take part in the discussion to foster a friendly and stimulating environment in which the students are motivated to reach high standards and become self-confident.

Evaluation Procedure:

The CIE marks for the seminar shall be awarded (based on the relevance of the topic, presentation skill, participation in the question andanswer session, and quality of report) by the committee constituted for the purpose by the Head of the Department. The committee shall consist of three teachers from the department with the senior-most acting as the Chairman.

Marks distribution for CIE of the course:

Seminar Report:50 marks

Presentation skill:25 marks

Question and Answer: 25 marks.

Non– credit mandatory courses(NCMC):

National Service Scheme/ Physical Education(Sport and Athletics)/Yoga:

(1)Securing 40 % or more in CIE,35 % or more marks in SEE and 40 % or more in the sum total of CIE + SEE leads to successful completion of the registered course.

(2) In case, students fail to secure 35 % marks in SEE, they have to appear for SEE during the subsequent examinations conducted by the University.

(3) In case, any student fails to register for NSS, PE or Yoga / fails to secure the minimum 40 % of the prescribed CIE marks, he/she shall be deemed to have not completed the requirements of the course. In such a case, the student has to fulfil the course requirements during subsequently to earn the qualifying CIE marks subject to the maximum programme period.

(4) Successful completion of the course shall be indicated as satisfactory in the grade card. Non-completion of the course shall be indicated as Unsatisfactory.

(5)These courses shall not be considered for vertical progression as well as for the calculation of SGPA and CGPA, but completion of the courses shall be mandatory for the award of degree.

VII semester Class work and Research Internship/IndustryInternship(21INT82)

Swapping Facility:

(1) Institutions can swap VII and VIII Semester Scheme of Teaching and Examinations to accommodate research internship/ industry internship after the VI semester.

(2) Credits earned for the courses of VII and VIII Semester Scheme of Teaching and Examinations shall be counted against the corresponding semesters whether VII or VIII semester is completed during the beginning of IV year or later part of IV year of the program.

Elucidation:

At the beginning of IV year of the programme i.e., after VI semester, VII semester class work and VIII semester Research Internship /Industrial Internship shall be permitted to be operated simultaneously by the University so that students have ample opportunity for internship.

In other words, a good percentage of the class shall attend VII semester class work and similar percentage of others shall attend to Research Internship or Industrial Internship.

Research/Industrial Internship shall be carried out at an Industry, NGO, MSME, Innovation centre, Incubation centre, Start-up, Centers of Excellence (CoE), Study Centre established in the parent institute and /or at reputed research organizations / institutes. The internship can also be rural internship.

The mandatory Research internship /Industry internship is for **24 weeks.** The internship shall be considered as a head of passing and shall be considered for the award of degree. Those, who do not take up/complete the internship shall be declared fail and shall have to complete during the subsequent University examination after satisfying the internship requirements.

Professional Elective Tracks – Summary (2021 Scheme)

SNO	TRACK	DEFINITION	PE-1 in 5th Sem	PE-2 in 6th Sem	PE-3 in 7th Sem	Aspiring Roles
1	**Advanced Computing and Data Science Specialization**	Explores advanced computational techniques with in-depth data science skills, equipping students for the complex challenges of modern data-driven industries	Finite Automata and Compiler Design	Computational Intelligence	Fundamentals of Data Science	**Data Science Architect**
2	**Cloud Computing and Software Testing Pathway**	Approach by integrating cloud technologies and robust software testing methodologies, preparing professionals for reliable and scalable software solutions in cloud environment	Software Testing	Introduction to cloud computing	Cloud Architecture Design & Security	**Cloud Quality Assurance Engineer**
3	**Sustainable Innovation and Network Analysis**	Explores the synergy between eco-friendly innovation and comprehensive network analysis, fostering solutions that balance environmental responsibility with effective network optimization	Social Network Analysis	Bio Inspired Design and Innovation	Green IT and sustainability	**Sustainable Network Strategist**
4	**IoT and Robotics Integration**	Enabling students to design intelligent, interconnected systems that bridge the physical and digital worlds.	Web of Things and IoT	Embedded Programming	Industrial Robotics and Applications	**IoT Robotics Integration Specialist**
5	**Advanced Software Development Technologies**	Emerging software development paradigms, tools, and methodologies, equipping professionals to lead innovation in the software industry	Advanced Java Programming	Advanced Databases	Advanced Data Structures	**Software Technology Innovator**

NEW HORIZON COLLEGE OF ENGINEERING

B. E. in Computer Science and Engineering

Scheme of Teaching and Examinations for 2022- 2026 BATCH (2022 Scheme)

III - Semester														
S. No.	Course and Course Code		Course Title	BoS	Credit Distribution				Overall Credits	Contact Hours	Marks		
					L	T	P	S			CIE	SEE	Total
1	BSC	22CSE31	Mathematical Foundation for Computing Sciences	BS	3	0	0	0	3	3	50	50	**100**
2	PCC	22CSE32	Digital Logic Design	CS	3	0	0	0	3	3	50	50	**100**
3	PCCL	22CSL32	Digital Logic Design Laboratory	CS	0	0	1	0	1	2	50	50	**100**
4	PCC	22CSE33	Problem Solving using Data Structures	CS	3	0	0	0	3	3	50	50	**100**
5	PCCL	22CSL33	Problem Solving using Data Structures Lab	CS	0	0	1	0	1	2	50	50	**100**
6	PLC	22CSE34X	Programming Language Course	CS	2	0	1	0	3	3	50	50	**100**
7	AEC	22CSE35X	Ability Enhancement Course - III	CS	0	0	1	0	1	2	50	50	**100**
8	BSC	22BIK36	Bio Inspired Design and Innovation	MECH	3	0	0	0	3	3	50	50	**100**
9	NCMC	22NSK37	National Service Scheme (NSS)	NSS coordinator	0	0	0	0	0	2	50	--	**50**
		22PEK37	Physical Education (PE) (Sports and Athletics)	Physical Education Director									

		22YOK37	Yoga	Yoga Teacher									
10	UHV	22SCK38	Social Connect and Responsibility	Any Dept	0	0	1	0	1	2	50	--	**50**
Total									**19**	**25**	**500**	**400**	**900**
11	NCMC	22DMAT311*	Diploma Mathematics -1	BS	0	0	0	0	0	2	50	--	50

BSC: Basic Science Course, **PCC**: Professional Core Course, **PCCL**: Professional Core Course laboratory, **UHV**: Universal Human Value Course, **NCMC:** Non-Credit Mandatory Course, **AEC**: Ability Enhancement Course, **L:** Lecture, **T**: Tutorial, **P**: Practical **S: SDA**: Self Study for Skill Development, **K:**This letter in the course code indicates common to all the stream of engineering. **ESC:** Engineering Science Course, **ETC**: Emerging Technology Course, **PLC**: Programming Language Course, **CIE**: Continuous Internal Evaluation, **SEE**: Semester End Evaluation.

22DMAT311*: This non-credit mandatory course to be offered with only CIE and no SEE to Lateral entry students.

Engineering Science Course / Emerging Technology Course / Programming Language Course(ESC/ETC/PLC)			
22CSE341	Linux System Programming	22CSE344	Programming for IoT
22CSE342	Advanced Excel for Data Analysis	22CSE345	Ruby Programming
22CSE343	Prompt Engineering		

Ability Enhancement Course–III(For IT allied Branches, all are Laboratory Courses 0-0-1-0) (Other branches can have 1-0-0-0 or 0-0-1-0)			
22CSE351	Web Design Technologies	22CSE354	NLP toolkit
22CSE352	Game Development Libraries	22CSE355	Web Analytics Tools
22CSE353	Data Analytics Tools and Libraries		

National Service Scheme /Physical Education/Yoga: All students have to register for any one of the courses namely National Service Scheme (NSS), Physical Education (PE)(Sports and Athletics), and Yoga(YOG) with the concerned coordinator of the course during the first week of III semesters. Activities shall be carried out between III semester to the VI semester (for 4 semesters). Successful completion of the registered course and requisite CIE score is mandatory for the award of the degree. The events shall be appropriately scheduled by the colleges and the same shall be reflected in the calendar prepared for the NSS, PE, and Yoga activities. These courses shall not be considered for vertical progression as well as for the calculation of SGPA and CGPA, but completion of the course is mandatory for the award of degree.

Credit Definition: 1-hour Lecture (L) per week=1Credit 2-hoursTutorial(T) per week=1Credit 2-hours Practical / Drawing (P) per week=1Credit 2-hous Self Study for Skill Development (SDA) per week = 1 Credit	03-Credits courses are to be designed for 40 hours in Teaching-Learning Session 02- Credits courses are to be designed for 25 hours of Teaching-Learning Session 01-Credit courses are to be designed for 15 hours of Teaching-Learning Sessions

NEW HORIZON COLLEGE OF ENGINEERING

B. E. in Computer Science and Engineering

Scheme of Teaching and Examinations for 2022- 2026 BATCH (2022 Scheme)

IV - Semester														
S. No.	**Course and Course Code**		**Course Title**	**BoS**	**Credit Distribution**				**Overall Credits**	**Contact Hours**	**Marks**		
					L	**T**	**P**	**S**			**CIE**	**SEE**	**Total**
1	BSC/PCC	22CSE41	Discrete Mathematics and Graph Theory	BS	3	0	0	0	3	3	50	50	**100**
2	PCC	22CSE42	Computer Architecture with ARM	CS	3	0	0	0	3	3	50	50	**100**
3	PCCL	22CSL42	ARM Processor Lab	CS	0	0	1	0	1	2	50	50	**100**
4	PCC	22CSE43	Object-Oriented Programming	CS	3	0	0	0	3	3	50	50	**100**
5	PCCL	22CSL43	Object-Oriented Programming Lab	CS	0	0	1	0	1	2	50	50	**100**
6	PCC	22CSE44	Operating System	CS	3	0	0	0	3	3	50	50	**100**
7	PCCL	22CSL44	Operating System Lab	CS	0	0	1	0	1	2	50	50	**100**
8	PLC	22CSE45X	Programming Language Course	CS	2	0	1	0	3	3	50	50	**100**
9	AEC	22CSE46X	Ability Enhancement Course – IV	CS	0	0	1	0	1	2	50	50	**100**
10	NCMC	22NSK47	National Service Scheme (NSS)	NSS coordinator	0	0	0	0	0	2	50	--	**50**
		22PEK47	Physical Education (PE) (Sports and Athletics)	Physical Education Director									

		22YOK47	Yoga	Yoga Teacher									
11	UHV	22UHK48	Universal Human Values	Any Dept	1	0	0	0	1	2	50	--	**50**
12	PROJ	22CSE49	Mini Project	CS	0	0	1	0	1	2	50	50	**100**
Total									**21**	**29**	**600**	**500**	**1100**

13	NCMC	22DMAT411*	Diploma Mathematics -2	BS	0	0	0	0	0	2	50	--	50

BSC: Basic Science Course, **PCC**: Professional Core Course, **PCCL**: Professional Core Course laboratory, **UHV**: Universal Human Value Course, **NCMC:** Non-Credit Mandatory Course, **AEC**: AbilityEnhancement Course, **PROJ**: Mini Project work, **L:** Lecture, **T**: Tutorial, **P**: Practical **S: SDA**: Self Study for Skill Development, **K:**Thisletterinthecoursecode indicatescommontoall the stream of engineering. **ESC:**EngineeringScience Course, **ETC**:Emerging TechnologyCourse,**PLC**:ProgrammingLanguage Course, **CIE**: Continuous Internal Evaluation, **SEE**:SemesterEndEvaluation.

22DMAT411*: This non-credit mandatory course to be offered with only CIE and no SEE to Lateral entry students.

Engineering Science Course / Emerging Technology Course / Programming Language Course(ESC/ETC/PLC)			
22CSE451	C# and .NET	22CSE454	Typescript Programming
22CSE452	PHP Programming	22CSE455	Web Scraping and Data Analysis
22CSE453	Haskell programming		

Ability Enhancement Course–IV(For IT allied Branches, all are Laboratory Courses 0-0-1-0) (Other branches can have 1-0-0-0 or 0-0-1-0)			
22CSE461	UI / UX Toolkit	22CSE464	Tools for Hosting platform
22CSE462	Cloud based collaborative tools	22CSE465	Search Engine Optimization Techniques
22CSE463	Graphics design and photo editing tools		

Mini-project work: Mini Project is a laboratory-oriented/hands-on course that will provide a platform to students to enhance their practical knowledge and skills by the development of small systems/applications etc. Based on the ability/abilities of the student/s and recommendations of the mentor. A student can do mini project as

(i) A group of 2 if mini project work is single discipline (applicable to all IT allied branches)

(ii) A group of 2-4 if mini project work is single discipline (applicable to all Core Branches)

(iii)A group of 2 -4 students if the Mini Project work is a multi-disciplinary(Applicable to all Branches)

CIE procedure for Mini-project:

(i) Single discipline: The CIE marks shall be awarded by a committee consisting of the Head of the concerned Department and two faculty members of the Department, one of them being the Guide. The CIE marks awarded for the Mini-project work shall be based on the evaluation of the project report, project presentation skill, and question and answer session in the ratio of 50:25:25. The marks awarded for the project report shall be the same for all the batches mates.

(ii) Inter-disciplinary: Continuous Internal Evaluation shall be group-wise at the college level with the participation of all the guides of the project.

The CIE marks awarded for the Mini-project, shall be based on the evaluation of the project report, project presentation skill, and question and answer session in the percentage ratioof50:25:25.The marks awarded for the project report shall be the same for all the batch mates

National Service Scheme /Physical Education/Yoga: All students have to register for any one of the courses namely National Service Scheme (NSS), Physical Education (PE) (Sports and Athletics), and Yoga(YOG) with the concerned coordinator of the course during the first week of III semesters. Activities shall be carried out between III semester to the VI semester (for 4 semesters). Successful completion of the registered course and requisite CIE score is mandatory for the award of the degree. The events shall be appropriately scheduled by the colleges and the same shall be reflected in the calendar prepared for the NSS, PE, and Yoga activities. These courses shall not be considered for vertical progression as well as for the calculation of SGPA and CGPA, but completion of the course is mandatory for the award of degree.

NEW HORIZON COLLEGE OF ENGINEERING

B. E. in Computer Science and Engineering

Scheme of Teaching and Examinations for 2022- 2026 BATCH (2022 Scheme)

V - Semester														
S. No.	Course and Course Code		Course Title	BoS	Credit Distribution				Overall Credits	Contact Hours	Marks		
					L	T	P	S			CIE	SEE	Total
1	HSMS	22CSE51	Software Engineering and Project Management	CS	3	0	0	0	3	3	50	50	**100**
2	PCC	22CSE52	Design and Analysis of Algorithms	CS	3	0	0	0	3	3	50	50	**100**
3	PCCL	22CSL52	Design and Analysis of Algorithms Lab	CS	0	0	1	0	1	2	50	50	**100**
4	PCC	22CSE53	Database Management Systems	CS	3	0	0	0	3	3	50	50	**100**
5	PCCL	22CSL53	Database Management Systems Lab	CS	0	0	1	0	1	2	50	50	**100**
6	PEC	22CSE54X	Professional Elective Course-I	CS	3	0	0	0	3	3	50	50	**100**
7	AEC	22RMK55	Research Methodology and IPR	CS	2	1	0	0	3	4	50	50	**100**
8	UHV	22ESK56	Environmental Studies	Any Dept	2	0	0	0	2	2	50	50	**100**
9	NCMC	22NSK57	National Service Scheme (NSS)	NSS coordinator	0	0	0	0	0	2	50	--	**50**
		22PEK57	Physical Education (PE) (Sports and Athletics)	Physical Education Director									

		22YOK57	Yoga	Yoga Teacher									
10	PROJ	22CSE58	Mini Project	CS	0	0	1	0	1	2	50	50	**100**
Total									**20**	**26**	**500**	**450**	**950**

PCC: Professional Core Course, **PCCL**: Professional Core Course laboratory, **UHV**: Universal Human Value Course, **NCMC:** Non-Credit Mandatory Course, **AEC**: Ability Enhancement Course, **PEC**: Professional Elective Course, **PROJ**: Mini Projectwork **L:** Lecture, **T**: Tutorial, **P**: Practical **S: SDA**: Self Study for Skill Development, **CIE**: Continuous Internal Evaluation, **SEE**: Semester End Evaluation

Professional Elective Course-I			
22CSE541	Finite Automata and Compiler Design	22CSE544	Web of Things and IOT
22CSE542	Introduction to Cloud Computing	22CSE545	Advanced Java Programming
22CSE543	R-Statistical Analysis		

22XXX51(HSMS)- This course must be pertaining to economics and management of the concerned degree program. The course syllabus should have both economics and management topics and the course title should bear the word Management.

For IT allied Branches: Software Product Management

For Core Branches: Engineering Economics and Management / Industrial Management and Entrepreneurship

Mini-project work: Mini Project is a laboratory-oriented/hands on course that will provide a platform to students to enhance their practical knowledge and skills by thedevelopmentofsmallsystems/applicationsetc.Basedontheability/abilitiesofthestudent/sandrecommendationsofthementor. A

student can do mini project as

- A group of 2 if mini project work is single discipline (applicable to all IT allied branches)
- A group of 2-4 if mini project work is single discipline (applicable to all Core Branches)
- A group of 2 -4 students if the Mini Project work is a multi-disciplinary(Applicable to all Branches)

CIE procedure for Mini-project:

(iii)Single discipline: The CIE marks shall be awarded by a committee consisting of the Head of the concerned Department and two faculty members of the Department, one of them being the Guide. The CIE marks awarded for the Mini-project work shall be based on the evaluation of the project report, project presentation skill, and question and answer session in the ratioof50:25:25.Themarksawardedfortheprojectreport shall be the same for all the batches mates.

(iv) Inter-disciplinary: ContinuousInternalEvaluationshallbegroup-wiseatthecollegelevelwiththeparticipationofalltheguidesofthe project.

The CIE marks awarded for the Mini-project shall be based on the evaluation of the project report, project presentation skill, and question and answer session in the percentage ratio of 50:25:25. The marks awarded for the project report shall be the same for all the batch mates.

Professional Elective Courses (PEC):A professional elective (PEC) course is intended to enhance the depth and breadth of educational experience in the Engineering and Technology curriculum. Multidisciplinary courses can be added to supplement the latest trend and advanced technology in the selected stream of engineering.

National Service Scheme /Physical Education/Yoga: All students have to register for any one of the courses namely National Service Scheme (NSS), Physical Education (PE)(Sports and Athletics), and Yoga(YOG) with the concerned coordinator of the course during the first week of III semesters. Activities shall be carried out between III semester to the VI semester (for 4 semesters). Successful completion of the registered course and requisite CIE score is mandatory for the award of the degree. The events shall be appropriately scheduled by the colleges, and the same shall be reflected in the calendar prepared for the NSS, PE, and Yoga activities. These courses shall not be considered for vertical progression, as well as for the calculation of SGPA and CGPA, but completion of the course is mandatory for the award of degree.

NEW HORIZON COLLEGE OF ENGINEERING

B. E. in Computer Science and Engineering

Scheme of Teaching and Examinations for 2022- 2026 BATCH (2022 Scheme)

VI - Semester														
S. No.	Course and Course Code		Course Title	BoS	Credit Distribution				Overall Credits	Contact Hours	Marks		
					L	T	P	S			CIE	SEE	Total
1	PCC	22CSE61	Data Mining and Machine Learning	CS	3	0	0	0	3	3	50	50	**100**
2	PCCL	22CSL61	Data Mining and Machine Learning Lab	CS	0	0	1	0	1	2	50	50	**100**
3	PCC	22CSE62	Computer Networks	CS	3	0	0	0	3	3	50	50	**100**
4	PCCL	22CSL62	Network Simulation Lab	CS	0	0	1	0	1	2	50	50	**100**
5	PCC	22CSE63	Cyber Security Essentials	CS	3	0	0	0	3	3	50	50	**100**
6	PEC	22CSE64X	Professional Elective Course-II	CS	3	0	0	0	3	3	50	50	**100**
7	PROJ	22CSE65	Project Phase-I	CS	0	0	2	0	2	0	50	50	**100**
8	OEC	22NHOP6XX	Industrial Open Elective Course-I	Offering Dept.	3	0	0	0	3	3	50	50	**100**
9	AEC	22CSE66X	Ability Enhancement Course – V	CS	0	0	1	0	1	2	50	50	**100**
10	NCMC	22NSK67	National Service Scheme (NSS)	NSS coordinator	0	0	0	0	0	2	50	--	**50**
		22PEK67	Physical Education (PE) (Sports and Athletics)	Physical Education Director									

		22YOK67	Yoga	Yoga Teacher									
Total									**20**	**23**	**500**	**450**	**950**

PCC: Professional Core Course, **PCCL**: Professional Core Course laboratory, **NCMC:** Non-Credit Mandatory Course, **AEC**: Ability Enhancement Course, **PEC**: Professional Elective Course, **OEC**: Open Elective Course, **PROJ**: Project work**, L:** Lecture, **T**: Tutorial, **P**: Practical **S: SDA**: Self Study for Skill Development, C**IE**: Continuous Internal Evaluation, **SEE**: Semester End Evaluation.

Professional Elective Course-II			
22CSE641	Artificial Intelligence Fundamentals	22CSE644	Embedded Programming
22CSE642	Cloud Architecture Design & Security	22CSE645	Advanced Data Structures
22CSE643	Fundamentals of Data Science		

Ability Enhancement Course–V			
22CSE661	Mobile App Development	22CSE664	IoT Architect and Security
22CSE662	Data Visualization Tools	22CSE665	Containerization tools
22CSE663	Wearable Technology Programming		

Industrial Open Elective Courses-I:

Credit for OEC is 03 (L: T: P: S) can be considered as(3: 0: 0 : 0). The teaching and learning of these Courses will be based on hands-on. The Course Assessment will be based on CIE and SEE in practical mode. These Courses will be offered by Centre of Excellence to students of all the branches. Registration to Industrial open electives shall be documented and monitored on college level.

Project Phase-I: Students have to discuss with the mentor/guide and with their help he/she has to complete the literature survey and prepare the report and finally define the problem statement for the project work.

Professional Elective Courses (PEC): A professional elective (PEC) course is intended to enhance the depth and breadth of educational experience in the Engineering and Technology curriculum. Multidisciplinary courses can be added to supplement the latest trend and advanced technology in the selected stream of engineering.

National Service Scheme /Physical Education/Yoga: All students have to register for any one of the courses namely National Service Scheme (NSS), Physical Education (PE)(Sports and Athletics), and Yoga(YOG) with the concerned coordinator of the course during the first week of III semesters. Activities shall be carried out between III semester to the VI semester (for 4 semesters). Successful completion of the registered course and requisite CIE score is mandatory for the award of the degree. The events shall be appropriately scheduled by the colleges, and the same shall be reflected in the calendar prepared for the NSS, PE, and Yoga activities. These courses shall not be considered for vertical progression, as well as for the calculation of SGPA and CGPA, but completion of the course is mandatory for the award of degree.

NEW HORIZON COLLEGE OF ENGINEERING

B. E. in Computer Science and Engineering

Scheme of Teaching and Examinations for 2022- 2026 BATCH (2022 Scheme)

VII - Semester														
S. No.	Course and Course Code		Course Title	BoS	Credit Distribution				Overall Credits	Contact Hours	Marks			
					L	T	P	S			CIE	SEE	Total	
1	PCC	22CSE71	Full Stack Technologies	CS	3	0	0	0	3	3	50	50	**100**	
2	PCCL	22CSL71	Full Stack Lab	CS	0	0	1	0	1	2	50	50	**100**	
3	PCC	22CSE72	Deep Learning Techniques	CS	3	0	0	0	3	3	50	50	**100**	
4	PCCL	22CSL72	Deep Learning Lab	CS	0	0	1	0	1	2	50	50	**100**	
5	PCC	22CSE73	Finite Automata and Compiler Design	CS	3	1	0	0	4	5	50	50	**100**	
6	PEC	22CSE74X	Professional Elective Course-III	CS	3	0	0	0	3	3	50	50	**100**	
7	PROJ	22CSE75	Project Phase - II	CS	0	0	6	0	6	0	50	50	**100**	
8	OEC	22NHOP7XX	Industrial Open Elective Course-II	Offering Dept.	3	0	0	0	3	3	50	50	**100**	
								Total	**24**	**21**	**400**	**400**	**800**	

PCC: Professional Core Course, **PCCL**: Professional Core Course laboratory, **PEC**: Professional Elective Course, **OEC**: Open Elective Course, **PROJ**: Project work**, L:** Lecture, **T**: Tutorial, **P**: Practical **S: SDA**: Self Study for Skill Development, **CIE**: Continuous Internal Evaluation, **SEE**: Semester End Evaluation.

Professional Elective Course-III			
22CSE741	Computational Intelligence Paradigms	22CSE744	Industrial Robotics and Applications
22CSE742	Bio Inspired Design and Innovation	22CSE745	Advanced Data Structures
22CSE743	Business Intelligence and Analysis		

Industrial Open Elective Courses-II:

Credit for OEC is 03 (L: T: P: S) can be considered as(3: 0: 0 : 0). The teaching and learning of these Courses will be based on hands-on. The Course Assessment will be based on CIE and SEE in practical mode. This Courses will be offered by Centre of Excellence to students of all the branches. Registration to Industrial open electives shall be documented and monitored on college level.

Project Phase-II:

The objective of the Project work is

(i) To encourage independent learning and the innovative attitude of the students.
(ii) To develop interactive attitude, communication skills, organization, time management, and presentation skills.
(iii) To impart flexibility and adaptability.
(iv) To inspire team working.
(v) To expand intellectual capacity, credibility, judgment and intuition.
(vi) To adhere to punctuality, setting and meeting deadlines.
(vii) To install responsibilities to oneself and others.
(viii) To train students to present the topic of project work in a seminar without any fear, face the audience confidently, enhance communication skills, involve in group discussion to present and exchange ideas.

CIE procedure for Project Work:

(1) Single discipline: The CIE marks shall be awarded by a committee consisting of the Head of the concerned Department and two senior faculty members of the Department, one of whom shall be the Guide.

The CIE marks awarded for the project work, shall be based on the evaluation of the project work Report, project presentation skill, and question and answer session in the percentage ratioof50:25:25. The marks awarded for the project report shall be the same for all the batch mates.

(2)Interdisciplinary: Continuous Internal Evaluation shall be group-wise at the college level with the participation of all guides of the college. Participation of external guide/s, if any, is desirable. The CIE marks awarded for the project work, shall be based on the evaluation of project work Report, project presentation skill, and question and answer session in the percentage ratio of 50:25:25. The marks awarded for the project report shall be the same for all the batch mates.

SEE procedure for Projectwork: SEE for projectwork will be conducted by the two examiners appointed by the University. The SEE marks awarded for the projectwork shall be based on the evaluation of projectwork Report, project presentation skill, and question and answer session in the percentage ratio of 50:25:25.

NEW HORIZON COLLEGE OF ENGINEERING

B. E. in Computer Science and Engineering

Scheme of Teaching and Examinations for 2022- 2026 BATCH (2022 Scheme)

VIII- Semester													
S. No.	Course and Course Code		Course Title	BoS	Credit Distribution				Overall Credits	Contact Hours	Marks		
					L	T	P	S			CIE	SEE	Total
1	PEC	22CSE81X	Professional Elective Course -IV	CS	3	0	0	0	3	3	50	50	**100**
2	PEC	22CSE82X	Professional Elective Course -V	CS	3	0	0	0	3	3	50	50	**100**
3	INT	22CSE83	Internship (Industry/Research/ Rural) (14 - 20 weeks)	CS	0	0	10	0	10	0	100	100	**200**
Total									**16**	**6**	**200**	**200**	**400**

PEC: Professional Elective Course, **L:** Lecture, **T**: Tutorial, **P**: Practical **S: SDA**: Self Study for Skill Development, **INT**: Industry Internship / Research Internship / Rural Internship, **CIE**: Continuous Internal Evaluation, **SEE**: Semester End Evaluation.

Professional Elective Course-IV			
22CSE811	Computer Vision	22CSE814	Green IT and Sustainability
22CSE812	Micro Services Design Pattern	22CSE815	Concurrent Programming
22CSE813	Randomized Algorithms		

Professional Elective Course-V			
22CSE821	Natural Language Processing	22CSE824	Quantum Computing
22CSE822	Ethical Hacking Practices	22CSE825	Mobile Computing
22CSE823	Social Network Analysis		

Elucidation:

Research/Industrial /Rural Internship shall be carried out at an Industry, NGO, MSME, Innovation center, Incubation center, Start-up, center of Excellence (CoE), Study Centre established in the parent institute and/or at reputed research organizations/institutes.

The mandatory Research internship /Industry internship / Rural Internship is for **14 to 20 weeks**. The internship shall be considered as a head of passing and shall be considered for the award of a degree. Those, who do not take up/complete the internship shall be declared to fail and shall have to complete it during the subsequent SEE examination after satisfying the internship requirements.

Research internship: A research internship is intended to offer the flavour of current research going on in the research field. It helps students get familiarized with the field and imparts the skill required for carrying out research.

Industry internship: Is an extended period of work experience undertaken by students to supplement their degree for professional development. It also helps them learn to overcome unexpected obstacles and successfully navigate organizations, perspectives, and cultures. Dealing with contingencies helps students recognize, appreciate, and adapt to organizational realities by tempering their knowledge with practical constraints.

Rural Internship: Rural development internship is an initiative of Unnat Bharat Abhiyan Cell, RGIT in association with AICTE to involve students of all departments studying in differentacademicyearsforexploringvariousopportunitiesintechno-socialfields,to connect and work with Rural India for their upliftment.

Thefacultycoordinatorormentorhastomonitorthestudent'sinternshipprogressandinteractwiththemto guide forthe successful completion of the internship.

The students are permitted to carry out the internship anywhere in India or abroad. University shall not bear any expenses incurred in respect of the internship.

With the consent of the internal guide and Principal of the Institution, students shall be allowed to carry out the internship at their hometown (**within or outside the state or abroad**), provided favorable facilities are available for the internship and the student remains regularly in contact with the internal guide.

Professional Elective Tracks – Summary (2021 Scheme)								
SNO	**TRACK**	**DEFINITION**	**PE-1 in 5**	**PE-2 in 6**	**PE-3 in 7**	**PE-4 in 8**	**PE-5 in 8**	**Aspiring Roles**
1	**INTELLIGENT SYSTEMS DEVELOPMENT**	1. Enabling students to create advanced and adaptable systems that can learn, reason, and make intelligent decisions	Finite Automata and Compiler Design	Artificial Intelligence Fundamentals	Computational Intelligence Paradigms	Computer Vision	Natural Language Processing	**Cognitive Architect**
2	**FUTURE TECH FUSION**	2. A dynamic convergence of emerging technologies and innovative practices to explore the boundless possibilities at its intersection	Introduction to Cloud Computing	Cloud Architecture Design & Security	Bio Inspired Design and Innovation	Micro Services Design Pattern	Ethical Hacking Practices	**Emerging Technology Integrator**
3	**DATA-DRIVEN DECISION SCIENCE AND NETWORK INSIGHTS**	3 Empowers individuals to harness data analytics, business intelligence, and social network analysis to drive informed decision-making and uncover valuable insights within interconnected systems	R - Statistical Analysis	Fundamentals of Data Science	Business Intelligence and Analytics	Randomized Algorithms	Social Network Analysis	**Decision Science Network Analyst**

4	**TECHCONVERGE: BRIDGING TOMORROW'S WORLD**	4. Emphasizes the convergence of different technology domains, ranging from IoT and embedded programming to quantum computing, all while considering sustainability and industrial applications	Web of Things and IoT	Embedded Programming	Industrial Robotics and Applications	Green IT and Sustainability	Quantum Computing	**Technology Convergence Strategist**
5	**ADVANCED SOFTWARE DEVELOPMENT TECHNOLOGIES**	5. Dynamic program delving into cutting-edge software development methodologies, tools, and frameworks to empower students with the skills needed for the ever-evolving tech landscape	Advanced Java Programming	Advanced Databases	Advanced Data Structures	Concurrent Programming	Mobile Computing	**Software Technology Innovator**

AGENDA -5

Presentation of draft scheme & syllabus for the commencement semesters of (Agenda-4) schemes for ratification

The Chairperson presented the draft of scheme and contents of syllabus. The details were scrutinized by the members of the Board.

The presentation for the ratification of a draft scheme and syllabus for semester courses is a crucial step in the academic process. The members formally accepted and appreciated the proposal of new courses. The objective of this presentation is to provide a comprehensive overview of the proposed courses, including their structure, content, assessment methods, and alignment with learning objectives.

In summary, the presentation session for draft scheme and syllabus ratification was very informative aimed at presenting comprehensive details about all intrinsic details of Core (Theory & Lab), Professional Electives, OEC (Open Elective Courses), PLC (Programming Language Courses) and AEC (Ability Enhancement courses). After emphasizing the courses' content, structure, assessment methods, and alignment with learning outcomes, ultimately seeking approval and endorsement from panel of external experts and university nominee.

AGENDA -6

Recommendations/ Suggestions of BOS Members

Board members appreciated the incorporation of advanced courses as electives in the UG curriculum

- The subjects appear well chained with the pre-requisites handled properly.
- Subjects should always have a lab component. It is great to see that the subjects are designed with a separate lab component. This is commendable.
- The Self study (S) part of the LTPS is zero for some reason. It is good to indicate this for the student.
- ACM guideline is in the draft stage and one can take a look at it for better designing of the CSE curriculum.
- Digital Logic Design – verification methods need to be incorporated
- PLC course – 2 0 1 0 (Contact hours to be marked as 2 + 2 = 4 hours)
- Action plan for social connect and responsibility need to be prepared well in advance
- NLP toolkit can be replaced with any other courses, since NLP comes in later semesters
- Operating system T & L and Design and Analysis of Algorithms T & L can be swapped
- List of electives to be put in a track for depth analysis / study of specialized courses by the students
- Mini project contact hours must be included in scheme to reflect on the workload
- Project work contact hours must be included in scheme to reflect on the workload
- AI needs to be included instead of software testing
- Industrial open elective must be opted by other dept students, It can be offered as professional elective for parent department students
- Embedded systems / programming to be included as core
- CO's should not be mapped to module content
- In syllabus template, remove the small box indicating the CO

AGENDA -7

Implementation of Recommendation of BOS Members

The chairperson constituted the following groups to review and implement the recommendations of the BOS members in the scheme and syllabus of the curriculum based on industry needs

5th Semester Courses (2023-24)

DAA (T + L) - Design and Analysis of Algorithms - Ms. Jayasree

DBMS (T + L) - Dr Suganya

Cyber Security Essentials - (Dr. MS and Ms. Naga Manjula)

Adv Java Programming - Prof Elective with hands-on - Dr. Rachana

Software Testing - Prof Elective with hands-on Ms. chitra sekhar

WoT & iot - Prof Elective with hands-on Ms. SriVidya

MAD - AEC - 1 credit - Ms. Lakshmi

6th Semester Courses (2023-24)

SE & PM - Dr. Dhanalakshmi

DM & ML (with lab) - Ms. Soja Rani

Comp Networks (with Lab) - Dr. BVS

3rd Semester Courses (2023-24)

Problem solving using Data structures - Dr. Sonali / Ms. Florance

Digital Logic and Design - Dr BVS

LSP - PLC - Ms. Pramila Rani

WDT - AEC - Mr. Geluvaraj

PLC course contents: (2-0-1-0)

Prompt Engineering - Dr. Manikanda Kumar

Programming for IOT - Mr. Santosh Kumar B

Ruby Programming - Ms. C. Lavanya

AEC course contents: (0-0-1-0)

Game Development Libraries - Ms. Nayana Kumar

Data Analytics Tools and Libraries - Ms. Thanga Subha

NLP toolkit - Ms. Naga Manjula

Web Analytics Tools - Ms. Soja

4th Semester - Syllabus (2023-24)

Computer Architecture with ARM Processor and Lab - Mr. Bhaskar

OOP - Ms. Devi Naveen

Operating System - Ms. Uma

PLC - C#.Net - Dr. Rachana

PLC - PHP programming –Ms. Florance

PLC - Haskell Programming - Ms. Lavanya

PLC - Typescript Programming - Ms. Yogitha

PLC - Web scraping and data analysis - Dr. Roja Ramani

AEC - UI/UX toolkit - Ms.SubhashreeRath

AEC - Google Workspace - Ms. AnuMohan

AEC - Graphics Design and Photo editing tools - Ms. Lakshmi

AEC - Tools for Hosting Platform - version control and collaboration - Mr. Geluvaraj

AEC - Search Engine Optimization - Dr. Nirmala

AGENDA -8

Approval of scheme & syllabus (Agenda 6 & 7)

The Board of Studies members reviewed the modified draft of the scheme & syllabus with their recommendations/suggestions being incorporated appropriately for the following:

1. **Scheme-21 (5th to 8th Semester) and 5th - 6th BE (CSE) scheme & syllabus**
2. **Scheme-22 (3rd to 8th Semester) and 3rd - 4th BE (CSE) scheme & syllabus**

Finally, the members approved the draft of the same with the modifications for final implementation.

AGENDA -9

Proposed course details of 3rd & 4th M.Tech (CSE)

of

2022-scheme

III - Semester (2022 Scheme – 80 Credits)

Sl. No	Course Code	Course Name	Credits distribution				Total Credits	Marks		Remark
			L	T	P	S		CIE	SEE	(LAB/ Hands on Programs)
1.	22SCS31	Advanced computer network & security	3	1	0	0	4	50	50	100
2.	22SCS32X	Professional Elective – 3	3	0	0	0	3	50	50	100
3.	20NHOPXXX	Open Elective Courses – 1	3	0	0	0	3	50	50	100
4.	22SCS34	Project work phase – 1	0	0	3	0	3	100	--	100
5.	22SCS35	Societal Project	0	0	3	0	3	100	--	100
6.	22SCSI36	Internship (6 weeks)	0	0	6	0	6	50	50	100
Total Credits							**22**	**400**	**200**	**600**

SPECIALIZATION ELECTIVE-II		
SNO	**COURSE**	**COURSE NAME**
1	22SCS321	CYBER SECURITY MANAGEMENT
2	22SCS322	DESIGN THINKING
3	22SCS323	ENTREPRENEURSHIP & INNOVATION MANAGEMENT
4	22SCS324	GEOGRAPHIC INFORMATION SYSTEMS
5	22SCS325	BIOINFORMATICS

20NHOPXXX - OpenelectiveCourses-1			
20NHOP601	Big Data Analytics using HP Vertica- 1	20NHOP615	Product Life Cycle Management
20NHOP602	VM Ware Virtualization Essentials-1	20NHOP618A	Physical Design
20NHOP604	Big Data Analytics using HP Vertica – 2	20NHOP619A	AI Data Analysis with Python
20NHOP605	VM WARE Virtualization Essentials -2	20NHOP620A	Robotic Process Automation
20NHOP607	SAP	20NH0P621A	Industry 4.0
20NHOP608	Schneider - Industrial Automation	20NHOP622A	Programming of Industrial Robot
20NHOP609	Cisco - Routing & Switching - 1	20NHOP623A	5G Communication
20NHOP612	Cisco - Routing & Switching - 2	20NHOP624A	C# and .Net
20NHOP614	Blockchain		

IV - Semester (2022 Scheme – 80 Credits)

Sl. No	Course Code	Course Name	Credits distribution				Total Credits	Marks		Remark
			L	T	P	S		CIE	SEE	(LAB/ Hands on Programs)
1.	22SCS41	PROJECT WORK PHASE-2	0	0	18	0	18	100	100	200
2.	22MOOC2	BOS Recommended Online Courses	Classes and evaluation procedures are as per the policy of the on line course providers.							PP
Total Credits							**18**	**100**	**100**	**200**

Note:

ProjectWorkPhase-2: Students in consultation with the guide/co-guide (if any) in disciplinary project or guides/co-guides (if any) of all departments in case of multidisciplinary projects, shall continue to work of Project Work phase -1 to complete the Project work. Each student / batch of students shall prepare project document, and present a seminar.

CIE marks shall be awarded by a committee comprising of HoD as Chairman, all Guide/s and co-guide/s (if any) and a senior faculty of the concerned departments. The CIE marks awarded for project work phase -2, shall be based on the evaluation of Project Report, Project Presentation skill, and performance in the Question and Answer session in the ratio of 50:25:25.

SEE shall be at the end of IV semester. Project work evaluation and Viva-Voce examination (SEE), after satisfying the plagiarism check, shall be as per the University norms.

AGENDA -10

Presentation of draft scheme & syllabus for the commencement semesters of (Agenda-9) schemes for ratification

The Chairperson presented the draft of scheme and Contents of syllabus in each subject for Third & Fourth semester M.Tech (CSE) for scrutiny. The details were scrutinized by the members of the Board.

AGENDA -11

Recommendations/ suggestions of BOS members

Board members appreciated the incorporation of advanced courses as electives in the PG curriculum.

- The subjects appear well chained with the pre-requisites handled properly.
- Subjects should always have a lab component. It is great to see that the subjects are designed with a separate lab component. This is commendable.
- The Self-study (S) part of the LTPS is zero for some reason. It is good to indicate this for the student.
- ACM guideline is in the draft stage and one can take a look at it for better designing of the CSE curriculum.
- Expert member suggested to redefine the PO's, PEO's and PSO's in order to align with updated curriculum.
- Best Practices Adoption - Industry-oriented teaching should be practiced
- Stakeholder Feedbacks - Stakeholder feedback also discussed and incorporated into the curriculum
- MOOC courses may commence during the odd semester, while their assessment will take place during the even semester. Consequently, the Board of Studies has recommended that online courses be scheduled for the 2nd and 4th semesters.

AGENDA -12

Implementation of recommendation of BOS members

The chairperson constituted the following groups to review and implement the recommendations of the BOS members in the scheme and syllabus of the curriculum based on industry needs

MTech - 3rd semester

Advanced Computer Network & Security - Ms. SubhashreeRath

PE's

Internet of Things - Mr. B. Santoshkumar

Geographic Information system - Dr. Nirmala

Bioinformatics - Dr Meenakshi sundaram

Entrepreneurship & Innovation Managment - Dr Tejas

Design Thinking and innovation - Dr Dhanalakshmi

AGENDA -13

Approval of scheme & syllabus (Agenda 11& 12)

The Board of Studies members reviewed the modified draft of the scheme & syllabus with their recommendations/suggestions being incorporated appropriately.

Finally, the members approved the draft of the same with the modifications for final implementation.

AGENDA -14

Vote Of Thanks

The chairman of BOS thanked the external members for their fruitful participation on behalf of the Principal and the Management. She also thanked Dr. S R Sudarshan, Dr. Jagdeesh S Kallimani, Dr. Thippeswamy, Mr. Mohd Anvar and Mr. Rahul M Dinesh and all the other members of the BOS for their active participation.

Dr.B. Rajalakshmi

BOS - Chairman

Prof & Head - CSE

NEW HORIZON
COLLEGE OF ENGINEERING
Autonomous College Permanently Affiliated to VTU, Approved by AICTE & UGC
Accredited by NAAC with 'A' Grade

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING (DATA SCIENCE)

BOARD OF STUDIES MEETING

DATE : 03/10/2023

VENUE : Dept. of ISE, NHCE

TIME : 10.00 am to 1.00pm

CONTENTS

AGENDA FOR THE MEETING

Agenda 1	Approval of Department Vision, Mission, Program Specific Outcomes, Program Educational Objectives.
Agenda 2	Scheme for 2022-2026 Batch (3rd to 8th SEM) – Discussion and Approval. (160 Credits)
Agenda 3	Syllabus for 2022-2026 Batch (3rd to 4th Sem) – Discussion and Approval. (160 Credits)
Agenda 4	Proposed Best Practices
Agenda 5	Suggestions and Recommendations from Board Members
Agenda 6	Concluding Remarks

LIST OF MEMBERS

S. No	Category	Nomination of the committee	Name of the person	Designation & Affiliation
1	**Head of the Department**	**Chairperson**	Dr. Baswaraju Swathi	Associate Professor & HOD, Dept. Of CSE(DS)
2	**Special Invitees**	1	Dr. Manjunatha	Principal, NHCE
		2	Dr. R J Anandhi	Dean Academics, NHCE
3	**Experts from outside the college nominated by VTU (VTU NOMINEE)**	**Member**		
		1	Dr. Ramesh Babu HS	Principal& Professor – Department of AIML,RNSIT,Bengaluru
4	**Special Invitees (one academician from Institution of National Eminence, IIT,NIT,IIM,IISC)**	1	Dr. Anandhi Giridharan	Principal Research Scientist IISc, Bangalore.
5	**Subject expert from outside the college nominated by Academic Council (Academic Technical Expert)**	**Member**		
		1	Dr. Piyush Parekh	Professor & HOD-AIML Nitte Meenakshi Institute of Technology, Bengaluru
		2	Dr.Manjunath TN	Professor & Dean Career Guidance, Department of ISE,BMSIT, Bengaluru
6	**Representative from Industry / Corporate sector / allied area related to placements, nominated by Academic Council (**Industry Technical Expert)	**Member**		
		1	Dr.Thejasvi Nagaraju	Industry Principal Consultant, Enterprise Cloud Packages, Communications Media and Entertainment, Infosys Limited, Mysuru
7	**Faculty member at different level with different specialization**	**Member**		
		1	Dr.J.Joshua Daniel Raj	Associate Professor, Dept. of CSE(DS), NHCE, Bangalore

		2	Mr.Vijay Kumar R	Senior Assistant Professor, Dept. of CSE(DS), NHCE, Bangalore
8	**Post Graduate meritorious alumni nominated by Principal**	**Member**		
		1	Mr.Naveen Kushalappa	Full Stack Developer, Sprinto.
		2	Mr. Sumanth T	Software Engineer, Microsoft, Seattle, United States.
		3	Ms.Roshni	Data Science Engineer, BigHaat India
9		**Member**		
	Co-opted members (Placement)	1	Mr.Anis Mirza	Director - Corporate Relations, Learning &Development, Placements and IIIC-NHCE
	Co-opted members (Academic Technical Expert)	2.	Dr. Vandana CP	Associate Professor, Dept. of ISE, NHCE, Bangalore

WELCOME ADDRESS BY THE CHAIRMAN OF BOS AND INTRODUCTION OF MEMBERS

The BOARD OF STUDIES (2023 – 24) meeting was held on 03/10/2023 in hybrid mode using Google Meet with internal members, few external members (in person) and other external members joined online. Dr. Baswaraju Swathi, Chairperson of BOS, Associate Professor & HOD, Dept. Of CSE (DS) welcomed the BOS Committee members. HOD presented the agenda of the Board of studies meeting to the members. She introduced the Internal and External BOS members. The Scheme of B.E (3rd to 8th) Semester of 2022-2026 batch and syllabus of 3rd and 4th semester B.E (2022-2026) Batch was shared via email to all the board members for effective discussion and recommendations.

AGENDA -1

Approval of Department Vision, Mission, Program Specific Outcomes, Program Educational Outcomes.

- HOD started the presentation by highlighting the College accreditations details, NIRF ranking with members.
- Institute Vision, Mission, Program Specific Outcomes, Program Educational Objectives and Quality Policy were presented to the BOS members.
- The proposed Vision, Mission, Program Specific Outcomes, Program Educational Objectives and Quality Policy of the Department of CSE (DS) were presented and approved by the BOS Members.

AGENDA -2

Scheme for 2022-2026 Batch (3rd to 8th SEM) – Discussion and Approval. (160 Credits)

Salient features as below were highlighted by the BOS chairman:

- Presented the scheme of 2022-2026 batch.
- The Course Category and the credit distribution for the same was discussed.
- The Professional Core Courses, Core Labs and professional Elective Courses were discussed in detail.
- The Programming Language Courses and Ability enhancement courses were highlighted.
- Project based learning through Mini project and Major Project was discussed.
- Research Internship of 10 credits was discussed.

Semester wise scheme was presented to the Board of studies, following are the suggestion and recommendations:-

3rd to 8th Semester:

- Board member Dr. Ramesh Babu HS suggested, confirm of VTU guidelines with NEP for course code, to enable credit transfer possible across colleges.
- Board member Dr. Ramesh Babu HS suggested, including computer organization paper in 4th semester and to allot minimum credits for Digital Logic Design course.
- Board Members appreciated the concept of Mini projects.
- Board member Dr. Anandhi Giridharan suggested including Edge Computing & Signal Processing Papers in the curriculum.
- BOS members suggested, be specific with 3rd to 8th Sem Subject names. (Like fundamentals, advanced, implementation)

AGENDA -3

Syllabus for 2022-2026 Batch (3rd to 4 th Sem) – Discussion and Approval. (160 Credits)

- BOS member Dr.Manjunath TN, suggested to confirm with the mathematics syllabus covered, is in power with Gate Syllabus.
- Board member Dr.Thejasvi Nagaraju suggested mapping industry driven courses in the curriculum, Reasoning is most important to convince students on why they have to focus on Courses and how it helps in solving engineering problems.
- Dr.Thejasvi Nagaraju also suggested to have a mini project of data migration, further emphasized on the Practical knowledge of shell and Perl scripting is very key in engineering world. e.g. scheduling and executing a batch job from shell or Perl scripts. Performing basic file operations using shell scripting is key, concepts of SFTP is very essential while dealing with information exchange between the systems.
- Dr.Thejasvi Nagaraju also emphasized that in programming courses often students miss - BEST PRACTICES, Documentation, or they avoid using best in breed IDE environments - e.g. VSS code with all necessary plug-ins, having static code analysis tools in conjunctions that leads to poor coding practices.
- BOS member Dr.Piyush Kumar Parekh, suggested to have CIE components to be industry driven.
- Mr.Sumanth T, A course on Responsible AI would be a nice addition to help the students understand how to use AI in ethical, safe and secure fashion. When developing AI/Data Science applications, often find spending 90% of the time on analyzing the effects of not using AI the right way and the impact it would cause if it doesn't perform the way it should(and ways to solve them). Since there is pressure on industry from regulators, companies/employees are forced to use AI responsibly and this course could be a good start. He further suggested Course on Natural Language Processing. Industry is focusing a lot on Generative AI currently and even though the course on Deep Learning may cover

Generative AI fundamentals, an NLP course would be a great addition too if students would like to pursue research/projects in NLP.

- Board Member Ms.Roshni recommended using Jupiter, Postgre SQL and Post JS for DBMS.

AGENDA -4

Proposed Best Practices

- CIE Components and Evaluation for the same was discussed in detail and the BOS member Dr. Piyush Kumar Parekh, suggested to have CIE components to be industry driven.
- Dr. Ramesh Babu HS emphasized the Infosys Spring Board Programme and can be incorporated with Assignments.

AGENDA -5

Suggestions and Recommendations from BOS Members

Dr. Ramesh Babu HS, Academic Technical Expert

- Dr. Ramesh Babu H.S, recommended Computer organization course to be included in the curriculum.
- Sir, suggested CIE Component to be industry perspective and should help students for placement.
- The course names need to be specific like Fundamentals of Data Science, Essentials of Machine Learning, as the courses are broad.
- Sir also addressed about the course codes to be in line with vtu.

Dr. Anandhi Giridharan, Academic Technical Expert

- Dr. Anandhi Giridharan recommended upgrading faculty knowledge so that they can frame better syllabus incorporating latest technology. Example, in cloud computing course need to give an in site of edge computing. More Analytical learning and hands on oriented approaches to be used.
- Dr. Anandhi Giridharan emphasized the Outreach programs and to be included in the curriculum and grading, the AICTE Activity points were highlighted and the same was appreciated.
- Board member Dr. Anandhi Giridharan suggested including Edge Computing & Signal Processing Papers in the curriculum.

Dr. Piyush Parekh, Academic Technical Expert

- Dr. Piyush Parekh, suggested that the programming and core Engineering Science courses CIE to include placement oriented questions.
- Sir highlighted the evaluation of Non Credit based courses.
- Sir suggested modifications in syllabus as per the industry standards.

Dr.Manjunath TN, Academic Technical Expert

- Mathematics Syllabus to be in line with GATE Syllabus.
- Sir suggested to verify the syllabus with IITM / IITK Data Science Courses so that the syllabus would be intact.
- Faculty upgrading should be a continuous process, they have to balance between the theoretical and practical approaches.

Dr.Thejasvi Nagaraju, Industry Technical Expert

- Advanced Data Structures: Real-world problem statements that can be quoted so to stress the importance of advanced data structures Reasoning is most important to convince students on why they have to focus on Data structure and how it helps in solving engineering problems.
- Database Management : All the concepts around relational DBMS is covered in your syllabus including Joins, normalization, grouping, foreign key, composite keys, ACID conditions, etc. however from practical adoption - should have a mini project of data migration where students should try Data extraction, data cleansing / uplift (with functions or plsql procedures , etc) and finally load the records into target data schema ensuring all relationships are maintained using vlookup / hlookup having confidence in data migration is the key take-away of learning DBMS concepts as far as industry needs are concerned.
- Linux systems programming: Practical knowledge of shell and Perl scripting is very key in engineering world. e.g. scheduling and executing a batch job from shell or perl scripts. Performing basic file operations using shell scripting is key, concepts of SFTP is very essential while dealing with information exchange between the systems.
- WEB Design: Covering PHP, XHTML, Javascript, HTML5, CSS3 onwards, etc. are all well covered in the syllabus, in continuation students must be thought of using CMS, Caching, AJAX, performance tuning, Node JS, React UI concepts, etc. In industry , React UI, Node JS, Performance, Caching and content management CMS are very important.
- Python for data Analytics: (Also applicable in Java programming): While basic concepts are taught, it is very important to expose students to dozens of pre-built libraries, how to invoke and consume them. More they are aware of building and consuming the libraries, that helps them build real-world solutions, in programming often students miss - BEST PRACTICES, Documentation, or they avoid using best in breed IDE environments - e.g. VSS code with all necessary plug-ins. Having a code smell, static code analysis tools in conjunctions that leads to poor coding practices. Institute must enforce adopting all above norms with strict scoring/evaluation.
- GIT / Version control Applicable to any programming languages - Java, or even COTS based development this is another subject which is very close to any industry any delivery .Students must know fundamentals of version control, how to use it, or even better how to build a branching approach for a mini project simulating multiple team based

development environment. this helps students to ensure they know how to work in collaboration, without code overwriting, and can better visualize the GIT functions.

- Operating Systems: Deadlock, file and Disc managements, with various algorithms used to process the task are all important. Due to evolution of AI and need for GPU, hyper threading concepts are important.
- UI and UX design: Design thinking concepts, mockup design, measuring the effectiveness of design, conducting workshop to capture user persona, wire framing, HTML clickable interface development and delivering are very important skill-sets in UI/UX must consider device agnostic, omni-channel experience. Figma is a good consideration.
- Ethical hacking lab was appreciated.

Mr.Sumanth T, Alumnus from 2013-2017 Batch (Department of ISE):

- A standalone course in Data visualization could be very useful for DS students. It could cover all major visualization packages.
- A course that brushes up on Statistics and Probability and teaches students some real world applications of these could be very useful.
- Course on Natural Language Processing ,Industry is focusing a lot on Generative AI currently and even though the course on Deep Learning may cover Generative AI fundamentals, an NLP course would be a great addition too if students would like to pursue research/projects in NLP.
- An introduction to AI/ML course that is centered on teaching AI/ML applications in business.

AGENDA -6

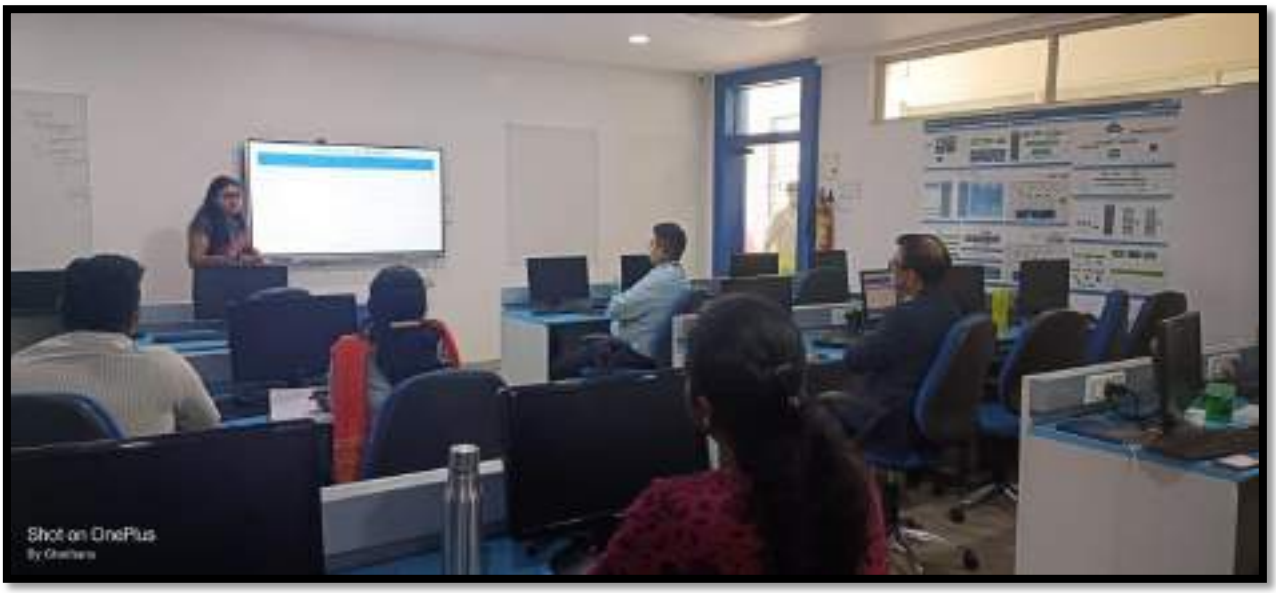
Concluding Remarks

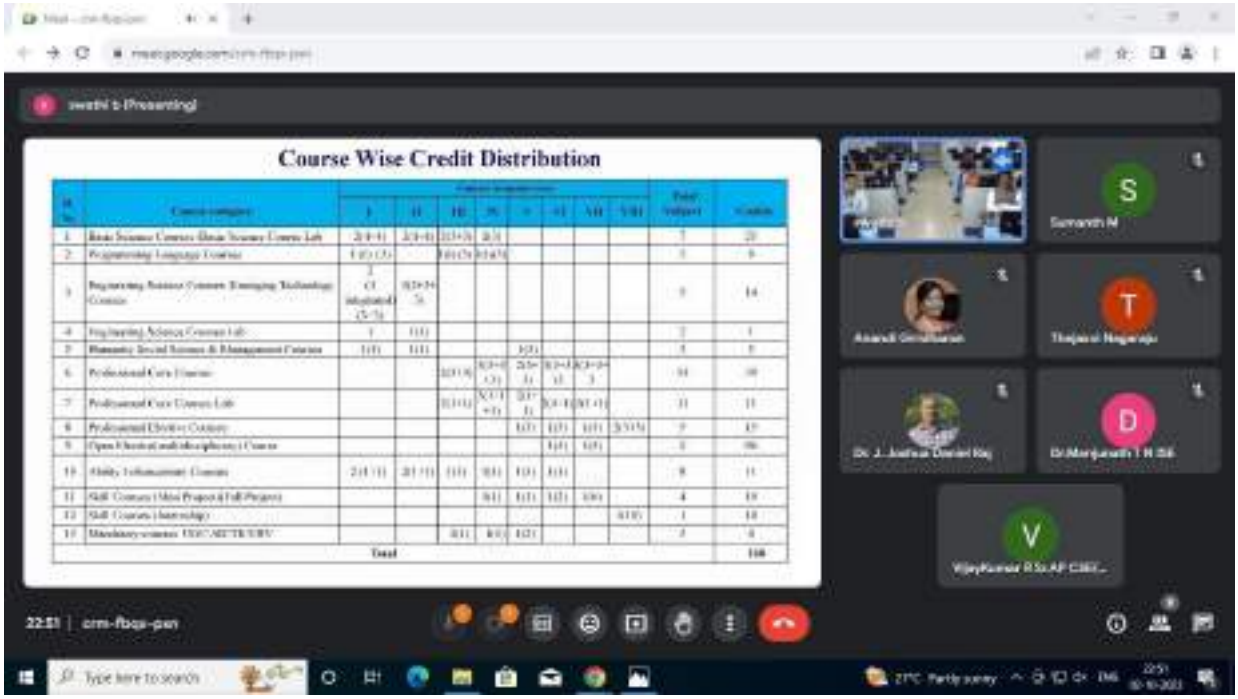
- Board of Studies members appreciated the curriculum design.

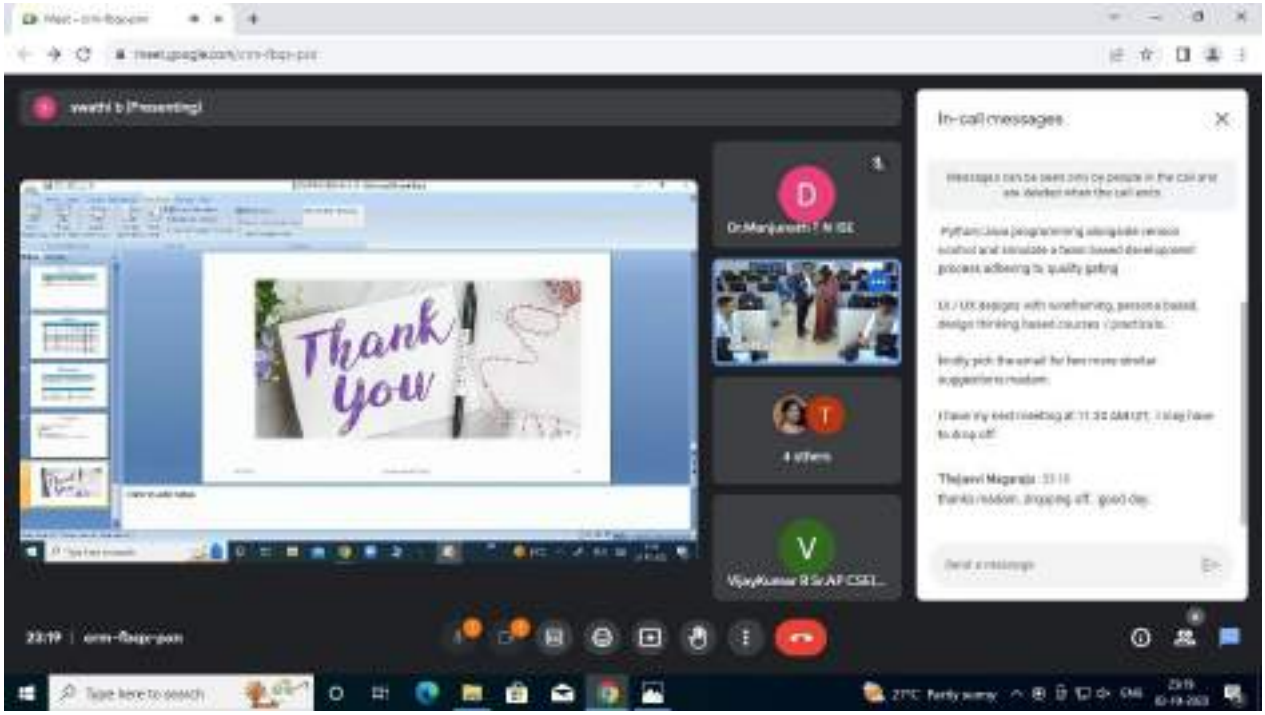
VOTE OF THANKS BY THE CHAIRMAN-BOS

BOS Chairman delivered Vote of thanks. BOS Chairman thanked each and every member for their contribution and completion of BOS Meeting successfully.

SCREENSHOTS:







HOD-CSE (DS)

NEW HORIZON
COLLEGE OF ENGINEERING
New Horizon Knowledge Park, Ring Road, Marathalli
Autonomous College Permanently Affiliated to VTU, Approved by AICTE & UGC
Accredited by NAAC with 'A' Grade. Accredited by NBA

DEPARTMENT OF CIVIL ENGINEERING

10th BOARD OF STUDIES MEETING

Minutes of Meeting

ACADEMIC YEAR 2023-24

DATE : 05.10.2023

VENUE : DEPARTMENT OF CIVIL ENGINEERING

TIME : 10.30 AM

Dr. B. V. Anandhi
Professor and Dean-Academics
New Horizon College of Engineering
Ring Road Bellandur Post
Bengaluru - 560 103

CONTENTS

AGENDA FOR THE MEETING

1. Welcome address by the chairman of BOS
2. Presentation by Chairman of BOS about Department achievements
3. Presentation of proceedings of the previous BOS meeting by Chairman of BOS.
4. Presentation of draft of Scheme & Syllabus of Third year Civil Engineering Courses.
5. Recommendations/ Suggestions of BOS members.
6. Implementation of recommendation of BOS members
7. Approval of Scheme& Syllabus of Third year Civil Engineering Subjects.
8. Vote of Thanks by the chairman of BOS.

BOS LIST OF MEMBERS 2023-24

Sl. No	Category	Nomination of the committee	Name of the person	Email ID & Mobile No
1	Head of the Department	Chairperson	**Dr. Niranjan P S**	niranjanps@newhorizonindia.edu 9845788345
2	Faculty member at different level with different specialization	Member		
		1	**Prof. Surendra B V**	surendrabv@newhorizonindia.edu 9663758660
		2	**Ms. Swetti Jha**	swettij@newhorizonindia.edu 9916109384
		3	**Ms. Snehal R Lahande**	snehalrl@newhorizonindia.edu 8197522350
		4	**Ms. SerinIssac**	serini@newhorizonindia.edu 9633740988
		5	**Mr. Channabasava**	channabasava@newhorizonindia.edu 9844468028
3	Subject expert from outside the college nominated by Academic Council	Member		
		1	**Dr. Devatha Chella Purushothaman** Associate Professor, National Institute of Technology, Suratkal, Karnataka	devathafce@nitk.edu.in 9483032757
		2	**Dr. Radha Krishna ,** Professor & HOD, RVCE Bengaluru	radhakrishna@rvce.edu.in 9886127398
		3	**Dr. P. Prasanna Kumar,** Professor, BMSCE, Bengaluru	ppkiisc@gmail.com 9448555312
4	Experts from outside the college nominated by Vice Chancellor	Member		
		1	**Dr. K N Vishwanath** Professor & HOD, DSATM, Bengaluru	hodcivil@dsatm.edu.in 9880059065
5	Representative from Industry / Corporate sector / allied area related to placements, nominated by Academic Council	Member		
		1	**Mr. Sandeep T D** Asst Engineer, BWSSB, Peenya Division, Govt of Karnataka	sandeeptd7@gmail.com 9964733758
		2	**Mr. N. VijayaBhaskar** Project Manager, DSR Waterscape, Bangalore.	bhask.nidhi@gmail.com 7760969310
6	Post Graduate meritorious alumni nominated by Principal	Member		
		1	**Mr. Siddarth Hegde** Lead Specialist, Space Presentation and Transition, Target Corporations, India	sidd99rocks@gmail.com 7892394614

LIST OF MEMBERS PRESENT

Sl. No	Category	Nomination of the committee	Name of the person	Signature
1	Head of the Department	Chairperson	**Dr. Niranjan P S**	
2	Special Invitees	Members		
		1	**Dr. Manjunatha** Principal, NHCE	
		2	**Dr. R J Anandhi** Dean Academics, NHCE	
2	Faculty members at different level with different specialization	Members		
		1	**Prof. Surendra B V**	
		2	**Ms. Swetti Jha**	
		3	**Ms. Snehal R Lahande**	
		4	**Ms. SerinIssac**	
		5	**Mr. Channabasava**	
3	Subject experts from outside the college nominated by Academic Council	Members		
		1	**Dr. Devatha Chella Purushothaman** Associate Professor National Institute of Technology, Suratkal, Karnataka	ONLINE
		2	**Dr. Radha Krishna ,** Professor & HOD, RVCE Bengaluru	
		3	**Dr. P. Prasanna Kumar,** Professor, BMSE, Bengaluru	ONLINE
4	Experts from outside the college nominated by by VTU	Member		
		1	**Dr. K N Vishwanath** Professor & HOD, DSATM, Bengaluru	05/10/2023
5	Representatives from Industry / Corporate sector / allied areas related to placements, nominated by Academic Council	Members		
		1	**Mr. Sandeep T D** Asst Engineer BWSSB, Peenya Division, Govt of Karnataka	
		2	**Mr. N. Vijaya Bhaskar** Project Manager, DSR Waterscape. Bangalore.	ONLINE
6	Post Graduate meritorious alumnus nominated by the Principal	Member		
		1	**Mr. Siddarth Hegde** Lead Specialist, Space Presentation and Transition,Target Corporations, India	ONLINE

AGENDA -1

Welcome address by the Chairman of BOS

The 10th Board of Studies meeting of Department of Civil engineering was scheduled on 05.10.2023 at 10.30 AM in the Civil Engineering Department.

At the outset, Chairperson Dr. Niranjan P S – Professor & Head – Department of Civil Engineering, welcomed the members for attending the 10th Board of Studies meeting that was arranged in smart class room B-119.

The chairperson introduced Dr. Manjunatha, Principal and Dr. R J Anandhi, Prof & Dean-Academics, New Horizon College of Engineering to the members of Board of Studies and welcomed them for the ensuing proceedings.

The chairperson further expressed special thanks to **Dr. K N Vishwanath,** an expert, nominatedby VTU, Dr. **Devatha Chella Purushothaman (joined online),Dr. Radha Krishna** and **Dr. P. Prasanna Kumar** experts, nominated by Academic Council for sparing their valuable time from their busy schedule to attend the meeting.

The chairperson also expressed his gratitude to **industrial nominees,** Mr. Sandeep T D, Asst Engineer, BWSSB, Govt of Karnataka and Mr. N. Vijaya Bhaskar, Project Manager, DSR Waterscape. Bangalore.

The meeting was also attended by meritorious alumnus **Mr. Siddarth Hegde,** Lead Specialist, Space Presentation and Transition, Target Corporations, India nominated by the Principal, and Internal faculty members **Prof. Surendra B V,Ms. Swetti Jha, Ms. Snehal R Lahande, Ms. SerinIssac, Mr. Channabasava** specialized in various domains.

AGENDA -2

Presentation by the Chairman of BOS about the Departmental achievements

Chairman of BOS Dr. Niranjan P S, Professor & Head, Department of Civil Engineering, presented the achievements of the department in the current academic year 2022-23.

AGENDA -3

Presentation of proceedings of the previous BOS meeting by the Chairman of BOS

The Chairman of BOS Dr. Niranjan P S, Professor & Head, Department of Civil Engineering, briefed the proceedings of previous BOS meeting acknowledging their contribution for betterment in framing the scheme & syllabus.

AGENDA -4

Proposed Course details for the academic year 2023-24

V Semester (2023 Scheme –160 Credits)

Sl.No	Course Code	Course	BOS	Credit Distribution				Overall Credits	Contact Hours	Marks		
				L	T	P	S			CIE	SEE	Total
1	21CIV51	Environment Engineering	CIV	3	0	0	0	3	3	50	50	100
2	21CVL51	Environment Engineering Lab	CIV	0	0	1	0	1	2	50	50	100
3	21CIV52	Design of RC Structural Elements	CIV	3	0	0	0	3	3	50	50	100
4	21CVL52	RC Structural Elements Lab	CIV	0	0	1	0	1	2	50	50	100
5	21CIV53	Hydrology and Irrigation Engineering	CIV	3	0	0	0	3	3	50	50	100
6	21CIV54*	Professional Elective Course-I	CIV	3	0	0	0	3	3	50	50	100
7	21CVL55*	Ability Enhancement Course-V	CIV	0	0	1	0	1	2	50	50	100
8	21CIV56	Mini Project – (STAAD-Analysis of Structure concepts)	CIV	0	0	1	0	1	2	50	50	100
9	21CVK57	Research Methodology and IPR	CIV	1	0	0	0	1	1	50	50	100
10	21CVK58	Innovation and Design Thinking	CIV	1	0	0	0	1	1	50	50	100
Total								18	22	500	500	1000

Professional Elective Course - I	
21CIV541	Advance concrete technology
21CIV542	Air pollution and control
21CIV543	Applied Geotechnical Engineering
21CIV544	Construction quality and safety
21CIV545	Prefabricated Structures
Ability Enhancement Course - V	
21CVL551	Concrete Mix design Concept
21CVL552	Building Design Lab
21CVL553	Data Analytics with Excel
21CVL554	Construction and Services Lab

NEW HORIZON
COLLEGE OF ENGINEERING
New Horizon Knowledge Park, Ring Road, Marathalli
Autonomous College Permanently Affiliated to VTU, Approved by AICTE & UGC
Accredited by NAAC with 'A' Grade. Accredited by NBA

DEPARTMENT OF CIVIL ENGINEERING

Scheme of VI Semester B.E Program

Sl. No	Course Code	Course	BOS	Credit Distribution				Overall Credits	Contact Hours	Marks		
				L	T	P	S			CIE	SEE	Total
1	21CIV61	Construction Management and Engineering Economics	CIV	3	0	0	0	3	3	50	50	100
2	21CIV62	Transportation Engineering	CIV	3	0	0	0	3	3	50	50	100
3	21CVL62	Transportation Engineering Lab	CIV	0	0	1	0	1	2	50	50	100
4	21CIV63	Design of Steel Structures	CIV	3	0	0	0	3	3	50	50	100
5	21CVL63	Steel Structures Lab	CIV	0	0	1	0	1	2	50	50	100
6	21CIV64*	Professional Elective Course-II	CIV	3	0	0	0	3	3	50	50	100
7	21CVK65	Social Connect and Responsibility	CIV	0	0	1	0	1	2	50	50	100
8	21CIV66	Innovation/Entrepreneurship/ Societal Internship	CIV	0	0	3	0	3	0	50	50	100
9	21CIV67	Mini project (Extensive survey project)	CIV	0	0	1	0	1	2	50	50	100
10	21NHOP6XX	Industrial Open Elective Course-I	Offering Dept.	3	0	0	0	3	3	50	50	100
Total								22	23	500	500	1000

Professional Elective Course - II	
21CIV641	Ground Water Hydrology
21CIV642	Pavement Materials and construction
21CIV643	Recycling of waste water
21CIV644	Design & Drawing of Hydraulic Structure
21CIV645	Bio Inspired Design and Innovation

Presentation of draft of Scheme & Syllabus of Third year

160 Credits Civil Engineering Courses

✓ The Chairperson presented the draft of scheme and contents of syllabus in each Course for fifth and sixth semester for scrutiny. The details were scrutinized by the members of the Board.

❖ **Fifth semester Civil Engineering Courses :-**

SL NO	COURSE CODE	COURSE
1	21CIV51	Environment Engineering
2	21CVL51	Environment Engineering Lab
3	21CIV52	Design of RC Structural Elements
4	21CVL52	RC Structural Elements Lab
5	21CIV53	Hydrology and Irrigation Engineering
6	21CIV541	Advance concrete technology
7	21CIV542	Air pollution and control
8	21CIV543	Applied Geotechnical Engineering
9	21CIV544	Construction quality and safety
10	21CIV545	Prefabricated Structures
11	21CVL551	Concrete Mix design Concept
12	21CVL552	Building Design Lab
13	21CVL553	Data Analytics with Excel
14	21CVL554	Construction and Services Lab
15	21CIV56	Mini Project – (STAAD-Analysis of Structure concepts)
16	21CVK57	Research Methodology and IPR
17	21CVK58	Innovation and Design Thinking

❖ **Sixth Semester Civil Engineering Subjects: -**

SL NO	COURSE CODE	COURSE
1	21CIV61	Construction Management and Engineering Economics
2	21CIV62	Transportation Engineering
3	21CVL62	Transportation Engineering Lab
4	21CIV63	Design of Steel Structures
5	21CVL63	Steel Structures Lab
6	21CIV641	Ground Water Hydrology
7	21CIV642	Pavement Materials and construction
8	21CIV643	Recycling of waste water
9	21CIV644	Design & Drawing of Hydraulic Structure
10	21CIV645	Bio Inspired Design And Innovation
11	21CIV67	Mini project (Extensive survey project)
12	21NHOP6XX - Industrial Open Elective Course-I	
A	21NHOP601	Big Data Analytics using HP Vertica-1
B	21NHOP602	VM Ware Virtualization Essentials-1
C	21NHOP604	Big Data Analytics using HP Vertica-2
D	21NHOP605	VM Ware Virtualization Essentials-2
E	21NHOP607	SAP
F	21NHOP608	Schneider-Industrial Automation
G	21NHOP609	CISCO-Routing and Switching-1
H	21NHOP610	Data Analytics
I	21NHOP611	Machine learning
J	21NHOP612	CISCO-Routing and switching - 2
K	21NHOP613	IIOT – Embedded System
L	21NHOP614	Block Chain
M	21NHOP615	Product Life Cycle Management
N	21NHOP617A	Network Security and Cryptography
O	21NHOP618A	Physical Design
P	21NHOP619A	AI Data Analysis with Python

AGENDA -5

Recommendations/ Suggestions of BOS members

1 Discussion Points

1.1 General

Members suggested the following measures after discussing pros and cons of the contents of the syllabii of all the courses, their relevance and their coverage within the scheduled allotted time period in a semester.

- The **COs** and **mapping of the COs and Program outcomes (POs)** for all the Courses are to be relooked into.
- Members suggested to include software based courses (Labs) to enhance the employability opportunities of the students.
- Coaching hours for the GATE and other competitive examinations are to be included in the time table.

1.2 Scheme

- The Professional electives of each group should include all the streams of the Civil Engineering and should be carefully chosen.
- Professional Elective (PE) Courses should provide employable opportunity. Members suggested to include more software related courses in the PE.
- Members proposed to conduct Workshops/Seminars to fill the gap in the curriculum.
- The **NPTEL courses** for each elective have to be identified and the link of the same should be shared with students for enrolment into those courses..

1.3 Subject Specific

1.3.1 Environmental Engineering (21CIV51)

- The content of the syllabus is ok.
- Visits to water treatment plants can be arranged.
- Workshops/Technical talks can be organizedto impart knowhow regarding layout of water supply distribution system in a building .

1.3.2 Design of R C Structural Elements (21CIV52)

- The content of the syllabus is ok.
- Site Visits need to be compulsorily arranged.

- Hands-on workshops should be conducted to prepare detailing and bar bending schedule.

1.3.3 *Air pollution and control (21CIV542)*

- The content of the syllabus is ok.
- Critical junctions in Bangalore can be chosen for study and a data base can be prepared.

1.3.4 *Construction Quality and safety (21CIV544)*

- The content of the syllabus is ok.
- Site Visits need to be compulsorily arranged to study quality and safety measures.

1.3.5 *Prefabricated Structures (21CIV545)*

- The content of the syllabus is ok.
- Workshops need to be organized to stress the importance of speed of construction and economy achieved using prefabrication construction technology.

1.3.6 *Transportation Engineering (21CIV62)*

- The content of the syllabus is ok.
- Case studies to suggest remedial measures for the traffic congestion in ORR can be undertaken.

AGENDA -6

Implementation of recommendation of BOS members

The chairperson constituted the following groups to review and implement the recommendations of the BOS members in the scheme and syllabus of the curriculum based on industry needs.

Sl. No	Course Code	Course Name	Faculty Incharge
1	21CIV51	Environment Engineering	Ms. Swetti Jha
2	21CVL51	Environment Engineering Lab	Ms. Swetti Jha
3	21CIV52	Design of RC Structural Elements	Dr. Surendra B V
4	21CVL52	RC Structural Elements Lab	Dr. Surendra B V
5	21CIV53	Hydrology and Irrigation Engineering	Ms. Swetti Jha
6	21CIV541	Advance concrete technology	Mr. Channabasava
7	21CIV542	Air pollution and control	Ms. Swetti Jha
8	21CIV543	Applied Geotechnical Engineering	Ms. SerinIssac
9	21CIV544	Construction quality and safety	Ms. Snehal R Lahande
10	21CIV545	Prefabricated Structures	Ms. Snehal R Lahande
11	21CVL551	Concrete Mix design Concept	Ms. Snehal R Lahande
12	21CVL552	Building Design Lab	Mr. Channabasava
13	21CVL553	Data Analytics with Excel	Mr. Channabasava
14	21CVL554	Construction and Services Lab	Mr. Channabasava
15	21CIV56	Mini Project – (STAAD-Analysis of Structure concepts)	Mr. Channabasava
16	21CVK57	Research Methodology and IPR	Ms. Swetti Jha
17	21CVK58	Innovation and Design Thinking	Ms. SerinIssac
18	21CIV61	Construction Management and Engineering Economics	Ms. Snehal R Lahande
19	21CIV62	Transportation Engineering	Ms. Swetti Jha
20	21CVL62	Transportation Engineering Lab	Ms. SerinIssac
21	21CIV63	Design of Steel Structures	Dr. Niranjan P S
22	21CVL63	Steel Structures Lab	Mr. Channabasava
23	21CIV641	Ground Water Hydrology	Ms. Swetti Jha

24	21CIV642	Pavement Materials and construction	Ms. SerinIssac
25	21CIV643	Recycling of waste water	Ms. Swetti Jha
26	21CIV644	Design & Drawing of Hydraulic Structure	Ms. SerinIssac
27	21CIV645	Bio Inspired Design And Innovation	Mr. Channabasava
28	21CIV67	Mini project (Extensive survey project)	Mr. Channabasava

The groups reviewed the curriculum and affected the changes regarding issues raised by external BOS members.

AGENDA -7

Approval of Scheme & Syllabus of Third year Civil Engineering Subjects

The members of the Board of Studies reviewed the modified draft of the scheme & syllabus which included their recommendations/suggestions.

Finally, the members approved the modified draft for final implementation.

❖ **Fifth semester Civil Engineering Subjects :-**

SL NO	SUBJECT CODE	SUBJECT
1	21CIV51	Environment Engineering
2	21CVL51	Environment Engineering Lab
3	21CIV52	Design of RC Structural Elements
4	21CVL52	RC Structural Elements Lab
5	21CIV53	Hydrology and Irrigation Engineering
6	21CIV54* - Professional Elective Course-I	
A	21CIV541	Advance concrete technology
B	21CIV542	Air pollution and control
C	21CIV543	Applied Geotechnical Engineering
D	21CIV544	Construction quality and safety
E	21CIV545	Prefabricated Structures
7	21CVL55*- Ability Enhancement Course-V	
A	21CVL551	Concrete Mix design Concept
B	21CVL552	Building Design Lab
C	21CVL553	Data Analytics with Excel
D	21CVL554	Construction and Services Lab
8	21CIV56	Mini Project – (STAAD-Analysis of Structure concepts)
9	21CVK57	Research Methodology and IPR
10	21CVK58	Innovation and Design Thinking

❖ **Sixth Semester Civil Engineering Subjects :-**

SL NO	SUBJECT CODE	SUBJECT
1	21CIV61	Construction Management and Engineering Economics
2	21CIV62	Transportation Engineering
3	21CVL62	Transportation Engineering Lab
4	21CIV63	Design of Steel Structures
5	21CVL63	Steel Structures Lab
6	21CIV64*	Professional Elective Course-II
A	21CIV641	Ground Water Hydrology
B	21CIV642	Pavement Materials and construction
C	21CIV643	Recycling of waste water
D	21CIV644	Design & Drawing of Hydraulic Structure
E	21CIV645	Bio Inspired Design and Innovation
7	21CIV67	Mini project (Extensive survey project)

Name and Signatures of all the Attendees:

Sl. No.	Name	Signature	Sl. No.	Name	Signature
1	Dr. Niranjan P S		9	Ms. Swetti Jha	
2	Dr. Manjunatha		10	Ms. Snehal R Lahande	
3	Dr. R J Anandhi		11	Ms. Serin Issac	
4	Dr. K N Vishwanath	05/12/2023	12	Mr. Channabasava	
5	Dr.Devatha Chella Purushothaman	–	13	Mr. Sandeep T D	
6	Dr. Radha Krishna		14	Mr. N VijayaBhaskar	–
7	Dr. P Prasanna Kumar	–	15	Mr. Siddarth Hegde	–
8	Prof. Surendra B V				

AGENDA -8

Vote of Thanks by the chairman of BOS

The chairman of BOS thanked the external members for their fruitful participation on behalf of the Principal and the Management. He also thanked Dr. Manjunatha, Principal and Dr. R J Anandhi, Prof & Dean-Academics and all the other members of the BOS for their active participation.

Dr. Niranjan P S

Chairman

Board of Studies

Department of Civil Engineering

DA

New Horizon College of Engineering

Department of Electronics and Communication Engineering

BOARD OF STUDIES MEETING -10

DATE: 09/09/2023

VENUE: Department of ECE (CISCO LAB)

Time: 10.00 AM to 12:00 PM

New Horizon College of Engineering

Department of Electronics and Communication Engineering

BOARD OF STUDIES MEETING – 10

DATE: 09/09/2023

VENUE: Department of ECE (CISCO LAB) (Blended mode)

Time: 10.00 AM to 12:00 PM

AGENDA

1. Scheme of the B.E. program of 160 credits (as per NEP) for 2021-25 and 2022-26 batches.
2. Syllabus of 3rd, 4th, 5th and 6th semesters B.E program (160 credits)

NEW HORIZON COLLEGE OF ENGINEERING

DEPARTMENT OF ELECTRONICS AND COMMUNICATION

LIST OF MEMBERS - BOARD OF STUDIES (2023-24)

S. No	Category	Nomination of the committee	Name of the person	Designation & Affiliation
1	Head of the Department	Chairperson	Dr. Aravinda K.	HOD - ECE, NHCE
2	Special Invitees (one academician from Institution of National Eminence: IIT, NIT, IIM, IISc)	1	Dr. Manjunatha	Principal, NHCE
		2	Dr. R. J. Anandhi	Dean - Academics, NHCE
		3	Dr. Sudeb Dasgupta	HOD - ECE, IIT Roorkee
3	Faculty members at different level with different specialization	Members		
		1	Dr. Sanjeev Sharma	DEAN - QASDC, NHCE
		2	Dr. Jayanthi M.	Associate Professor, ECE, NHCE
		3	Dr. Piruthiviraj P.	Associate professor, ECE, NHCE
		4	Dr. Gurulakshmi A. B.	Associate professor, ECE,NHCE
		5	Dr. Arun Kumar	Associate Professor, ECE, NHCE
4	Subject experts from outside the College nominated by Academic Council	Members		
		1	Dr. R. Jayagowri	Associate professor, Department of ECE, B M S College of Engineering
		2	Dr. Ramya S	Assistant professor, Department of ECE, R V College of Engineering

5	**Experts from outside the College nominated by VTU**	**Member**		
		1	Dr. Shivananda	Associate Professor, Dept. of Electronics and Communication Engg. Cambridge Institute of Technology, Bangalore-560036
6	**Representatives from Industry / Corporate sector / allied area related to placements, nominated by Academic Council**	**Members**		
		1	Dr. Parag Bhatnagar	Senior Engineering Manager Intel Corporation
		2	Mr. Padmanaban K.	Software Enabling and Optimization Engineer - CEG Intel PSG
		3	Prof. Anis Mirza	Director – Corporate Relations, L&D, Placements & IIIC Department of HRD NHCE
7	**Post Graduate meritorious alumni nominated by Principal**	**Member**		
		1	Mr. Kishore Y C	Staff engineer, Mediatek
8	**Co-opted members**	**Members**		
		1	Dr. Rajesh. G.	Associate Professor, ECE, NHCE
		2	Prof. Ramanamma M.	Sr. Assistant Professor, ECE, NHCE

MINUTES OF THE 10TH MEETING OF THE BOARD OF STUDIES FOR AY 2023-2024

1. **Welcome and Introductory remarks by the BOS Chairman**

The Chairman welcomed VTU Nominee, Expert members from academics and industry and other members of the Board of Studies and highlighted the following salient points for discussion in the 10th BOS Meeting.

- Approval for Scheme of the B.E. program of 160 credits (as per NEP) for 2021-25 and 2022-26 batches.
- Approval for syllabus of 3rd, 4th, 5th and 6th semesters B.E program (160 credits)

Introductory remarks by the BOS Chairman

1. Chairman remarked on the need of accreditation process which is predominantly outcome-based aiming at giving more weightage to the curriculum design, execution and outcome.
2. Chairman also mentioned about the 3 levels of expectation by the NBA namely the achievement of course outcomes, program outcomes and the program educational objectives.
3. Chairman mentioned that different guidelines such as that proposed by AICTE, Lead Professional Societies and VTU are available on the curriculum structure i.e., number of courses to be offered for B.E. program.
4. Chairman briefed about National Education Policy and emphasized more on conceptual understanding and Experiential Learning.
5. Chairman outlined Department Specific Centres of Excellence collaborated with reputed Industries.
6. Chairman sought opinion of industry experts on curriculum design and structure that could promote learning and impart industry-specific skills, most importantly technical skills. He also invited responses from the external academic experts on the same.

Remarks by Academic Experts and Expert Members

1. Comments, Suggestions and Discussions about Agenda

Agenda 1: Scheme of the B.E. program of 160 credits (as per NEP) for 2021-25 and 2022-26 batches

Academic Expert Members suggested the following:

- For the scheme of 2021-2025 Batch, change the title of the course of "Object Oriented Programming using Java" to "Object Oriented Programming using C++".
- Make "Data Communication and Networking" course as Professional core course.
- Modify "Low power VLSI Course" so as to incorporate to mini project.
- Include "RTL verification Course" in the curriculum.
- For Physical Design II open elective course, talk to Industry sponsored person to include RTL Verification in the syllabus.
- For Industrial Internship, academic expert emphasized to request Center of excellence to provide the Internship for the students of Final year in emerging Technology in their respective domains, as the internship carries 14 credits.

Agenda 2: Syllabus of 3rd, 4th, 5th and 6th semesters B.E program (160 credits)

1. Expert Member Suggested to verify the syllabus for "Linear Integrated Courses" and "Circuit design and Analysis".
2. Expert members emphasized that some courses like Network analysis, Control Systems, Signals and Systems and Electromagnetic Field Theory courses are very much essential for GATE preparation. So, special care should be taken to make the students to become familiar about these courses.
3. All Expert members appreciated the syllabus curriculum structure of National Educational Policy (NEP).

2. The Board of Studies in Electronics and Communication Engineering recommended the following:

The Diverse Committee recommended

- Scheme of the B.E. program of 160 credits (as per NEP) for 2021-25 and 2022-26 batches
- Syllabus for 3rd, 4th, 5th and 6th semesters B.E program (160 credits)

Scheme and syllabus of 3rd, 4th, 5th and 6th semesters can be forwarded for approval for the AY 2023-24.

3.Vote of Thanks by the Chairman- BOS

The meeting concluded with the vote of thanks by the chairman (HOD, ECE Department). He appreciated the comments from all the experts, faculty members and student alumni for their valuable inputs and suggestions.

The schemes of 2021-25 and 2022-26 are enclosed with this MoM.

11-09-23
BOS - CHAIRMAN

DEAN - ACADEMICS

PRINCIPAL

New Horizon College of Engineering

Department of Electronics and Communication Engineering

Scheme of Semester I to Semester VIII (Autonomous) - 160 Credits (2021-25 batch) (AY:2022-23)

Semester I

Sl. No.	Course Code	Name of the Course	BoS	Credit Distribution				Overall Credits	Contact hours Weekly (Theory)	Contact hours Weekly (Lab)	Contact hours Weekly (Total)	Marks		
				L	T	P	S					CIE	SEE	Total
1	21MAT11A	Applied Mathematics - I	AS	3	1	0	0	4	5	0	5	50	50	100
2	21CHE12A	Engineering Chemistry	AS	3	0	0	0	3	4	0	4	50	50	100
3	21CSE13A	Problem solving using Python	CSE	3	0	0	0	3	4	0	4	50	50	100
4	21MEE14A	Computer Aided Engineering Drawing	ME	2	0	1	0	3	2	2	4	50	50	100
5	21ECE15A	Basic Electronics	ECE	3	0	0	0	3	4	0	4	50	50	100
6	21CHL16A	Engineering Chemistry Lab	AS	0	0	1	0	1	0	3	3	50	50	100
7	21CSL17A	Problem solving using Python Lab	CSE	0	0	1	0	1	0	3	3	50	50	100
8	21AEC11A	Communicative English	HSS	1	0	0	0	1	2	0	2	50	50	100
9	21AEC13A	Political Science	HSS	1	0	0	0	1	1	0	1	50	50	100
								20	22	8	30	450	450	900

Semester II

Sl. No.	Course Code	Course	BoS	Credit Distribution				Overall Credits	Contact hours Weekly (Theory)	Contact hours Weekly (Lab)	Contact hours Weekly (Total)	Marks		
				L	T	P	S					CIE	SEE	Total
1	21MAT21A	Applied Mathematics - II	AS	3	1	0	0	4	5	0	5	50	50	100
2	21PHY22A	Engineering Physics	AS	3	0	0	0	3	4	0	4	50	50	100
3	21MEE23A	Elements of Mechanical Engineering	ME	3	0	0	0	3	4	0	4	50	50	100
4	21CIV24A	Elements of Civil Engineering	CV	3	0	0	0	3	4	0	4	50	50	100
5	21EEE25A	Basic Electrical Engineering	EE	3	0	0	0	3	4	0	4	50	50	100
6	21PHL26A	Engineering Physics Lab	AS	0	0	1	0	1	0	3	3	50	50	100
7	21EEL27A	Basic Electrical Engineering Lab	EE	0	0	1	0	1	0	3	3	50	50	100
8	21AEC21A	Professional Writing Skills in English	HSS	1	0	0	0	1	2	0	2	50	50	100
9	21AEC22A	Entrepreneurship Development - 1	MBA	1	0	0	0	1	1	0	1	50	50	100
								Total 20	24	6	30	450	450	900

Semester III

Sl. No.	Course Code	Name of the Course	BoS	Credit Distribution				Overall Credits	Contact hours Weekly (Theory)	Contact hours Weekly (Lab)	Contact hours Weekly (Total)	Marks		
				L	T	P	S					CIE	SEE	Total
1	21ECE31A	Applied Mathematics - III	AS	3	0	0	0	3	4	0	4	50	50	100
2	21ECE322A	Signals & Systems using Python	ECE	1	0	1	0	2	1	2	3	50	50	100
3	21HSS332A / 21HSS333A	Aadalitha Kannada / Vyavaharika Kannada	HSS	1	0	0	0	1	1	0	1	50	50	100
4	21HSS342A	Environmental Science	HSS	1	0	0	0	1	1	0	1	50	50	100
5	21ECE35A	Analog Electronic Circuits	ECE	3	0	0	0	3	4	0	4	50	50	100
6	21ECL36A	Analog Electronic Circuits Lab	ECE	0	0	1	0	1	0	2	2	50	50	100

7	21EC486A	Digital Electronic Circuits Lab	ECE	0	0	1	0	1	0	2	2	50	50	100
8	21EC487A	Networks & Control Systems	ECE	3	0	0	0	3	4	0	4	50	50	100
9	21EC437A	Networks & Control Systems Lab	ECE	0	0	1	0	1	0	2	2	50	50	100
10	21EC487A	Networks & Control Systems Lab	ECE	0	0	2	0	2	0	4	4	50	50	100
11	21EC438A	Mini project	ECE	0	0	2	0	2	0	4	4	50	50	100
								21	19	12	31	550	550	1100

Semester IV

Sl. No.	Course Code	Course	BoS	Credit Distribution				Overall Credits	Contact hours Weekly (Theory)	Contact hours Weekly (Lab)	Contact hours Weekly (Total)	Marks		
				L	T	P	S					CIE	SEE	Total
1	21EC441A	Applied Mathematics - IV	AS	3	0	0	0	3	4	0	4	50	50	100
2	21HS471A	Life Skills for Engineers	HSS	1	0	1	0	2	1	2	3	50	50	100
3	21HS481A	Entrepreneurship Development - 2	HSS	1	0	0	0	1	1	0	1	50	50	100
4	21HS448A	Constitution of India & Professional Ethics	HSS	1	0	0	0	1	1	0	1	50	50	100
5	21EC485A	System Design using HDL	ECE	3	0	0	0	3	4	0	4	50	50	100
6	21EC485A	Hardware Description Language Lab	ECE	0	0	1	0	1	0	2	2	50	50	100
7	21EC486A	Microprocessors & Interfacing	ECE	3	0	0	0	3	4	0	4	50	50	100
8	21EC486A	Microprocessors Lab	ECE	0	0	1	0	1	0	2	2	50	50	100
9	21EC487A	Digital Signal Processing	ECE	3	0	0	0	3	4	0	4	50	50	100
10	21EC487A	Digital Signal Processing Lab	ECE	0	0	1	0	1	0	2	2	50	50	100
11	21EC438A	Summer Internship - I	ECE	0	0	0	2	2	0	0	0	50	50	100
							Total	21	19	8	27	550	550	1100

Sl. No.	Course Code	Course	BoS	Credit Distribution				Overall Credits	Contact hours Weekly (Theory)	Contact hours Weekly (Lab)	Contact hours Weekly (Total)	Marks		
				L	T	P	S					CIE	SEE	Total
1	21ECE51	Communication Systems - I	ECE	3	0	0	0	3	3	0	3	50	50	100
2	21ECL51	Communication Systems - I Lab	ECE	0	0	1	0	1	0	2	2	50	50	100
3	21ECE52	CMOS VLSI Design	ECE	3	0	0	0	3	3	0	3	50	50	100
4	21ECL52	CMOS VLSI Design Lab	ECE	0	0	1	0	1	0	2	2	50	50	100
5	21ECE53	Linear ICs and Applications	ECE	3	0	0	0	3	3	0	3	50	50	100
6	21ECE54X	Professional Elective Course - I	ECE	3	0	0	0	3	3	0	3	50	50	100
7	21ECL55X	Ability Enhancement Course - V	ECE	0	0	1	0	1	0	2	2	50	50	100
8	21ECE56	Mini Project	ECE	0	0	1	0	1	0	0	0	50	50	100
9	21ECK57	Research Methodology and IPR	ECE	1	0	0	0	1	1	0	1	50	50	100
10	21ECK58	Innovation and Design Thinking	Any	1	0	0	0	1	1	0	1	50	50	100
								18	14	6	20	500	500	1000

Course Code	Professional Elective Course - I
21ECE541	Internet of Things
21ECE542	Electromagnetic Field Theory
21ECE543	DSP Algorithms and Architecture
21ECE544	Programming with Data Structures using C
21ECE545	Nanoelectronics

Course Code	Ability Enhancement Course - V
21ECL551	Antenna simulation using Ansys
21ECL552	ALP with Microcontrollers
21ECL553	Network simulation using NS-2
21ECL554	Electronics Applications using Scilab
21ECL555	Optical Communication using Optsim

Semester VI														
Sl. No.	Course Code	Course	BoS	Credit Distribution				Overall Credits	Contact hours Weekly (Theory)	Contact hours Weekly (Lab)	Contact hours Weekly (Total)	Marks		
				L	T	P	S					CIE	SEE	Total
1	21ECE61	Operations Research and Management	ECE	3	0	0	0	3	3	0	3	50	50	100
2	21ECE62	Embedded System Design	ECE	3	0	0	0	3	3	0	3	50	50	100
3	21ECL62	Embedded System Design Lab	ECE	0	0	1	0	1	0	2	2	50	50	100
4	21ECE63	Communication Systems - II	ECE	3	0	0	0	3	3	0	3	50	50	100
5	21ECL63	Communication Systems - II Lab	ECE	0	0	1	0	1	0	2	2	50	50	100
6	21ECE64X	Professional Elective Course - II	ECE	3	0	0	0	3	3	0	3	50	50	100
7	21ECK65	Social Connect and Responsibility	ECE	0	0	1	0	1	2	0	2	50	50	50
8	21ECE66	Innovation / Entrepreneurship / Societal Internship	ECE	0	0	3	0	3	0	0	0	50	50	100
9	21ECE67	Mini Project	ECE	0	0	1	0	1	0	0	0	50	50	100
10	21NHOP6XX	Industrial Open Elective Course - I	ECE	2	0	1	0	3	3	0	3	50	50	100
							Total	22	17	4	21	500	500	950

Course Code	Professional Elective Course - II

21ECE642	Biomedical Signal Processor
21ECE643	Low Power VLSI Design
21ECE644	Object Oriented Programming using Java
21ECE645	Bio-Inspired Design and Innovation

Course Code	Industrial Open Elective Course - I
21IN0E0626	CISCO - Routing & Switching - I
21IN0E0627	Programming of Industrial Robot
21IN0E0628	5G Communication
21IN0E0629	VLSI Physical Design - I
21IN0E0630	Juniper Network Operating System

Sl. No.	Course Code	Course	BoS	Credit Distribution				Overall Credits	Contact hours Weekly (Theory)	Contact hours Weekly (Lab)	Contact hours Weekly (Total)	Marks		
				L	T	P	S					CIE	SEE	Total
1	21ECE71	Wireless Communication	ECE	3	0	0	0	3	3	0	3	50	50	100
2	21ECE72	Coding and Cryptography	ECE	3	0	0	0	3	3	0	3	50	50	100
3	21ECE73X	Professional Elective Course – III	ECE	3	0	0	0	3	3	0	3	50	50	100
4	21ECE74	Project Work in startup / Industries	ECE	0	0	10	0	10	0	0	0	100	100	200
5	21NHOP7XX	Industrial Open Elective Course – II	ECE	3	0	0	0	3	3	0	3	50	50	100
							Total	22	12	0	12	300	300	600

Course Code	Professional Elective Course - III
21ECE731	Cyber Security
21ECE732	Digital Image Processing
21ECE733	Analog & Mixed Mode VLSI Design
21ECE734	Data Communication and Networking
21ECE735	Introduction to Machine Learning

Course Code	Industrial Open Elective Course - II
21NHOP709	CISCO - Routing & Switching - I
21NHOP712	CISCO - Routing & Switching - II
21NHOP722	Programming of Industrial Robot
21NHOP725	5G Communication
21NHOP726	VLSI Physical Design - I
21NHOP728	VLSI Physical Design - II
21NHOP727	Juniper Network Operating System

Semester VIII														
Sl. No.	Course Code	Course	BoS	Credit Distribution				Overall Credits	Contact hours Weekly (Theory)	Contact hours Weekly (Lab)	Contact hours Weekly (Total)	Marks		
				L	T	P	S					CIE	SEE	Total
1	21ECE81	Technical Seminar	ECE	0	0	1	0	1	0	0	0	100	–	100
2	21ECE82	Research internship / industry internship	ECE	0	0	14	0	14	0	0	0	100	100	200
3	21HSK83	Scientific Foundations of Health	XX	1	0	0	0	1	1	0	1	50	50	100
4	22NSS84 /22PES84 /22YOG84	National Service Scheme / Physical Education (Sports and Athletics) / Yoga	XX	0	0	0	0	0	0	0	0	50	50	100
							Total	16	1	0	1	300	200	500

New Horizon College of Engineering

Dep. ..ment of Electronics and Communication Engineering

Scheme of Semester I to Semester VIII (Autonomous) - 160 Credits (2022-26 batch) (AY:2022-23)

Semester I

Sl. No.	Category	Course Code	Name of the Course	BoS	Credit Distribution				Overall Credits	Contact hours Weekly (Theory)	Contact hours Weekly (Lab)	Contact hours Weekly (Total)	Marks		
					L	T	P	S					CIE	SEE	Total
1	ASC	22MTE11	Applied Mathematics for Engineers - I	AS	3	0	1	0	4	3	2	5	50	50	100
2	ASC	22CHE12	Applied Chemistry	AS	3	0	0	0	3	4	0	4	50	50	100
3	ASC	22CHL13	Applied Chemistry Lab	AS	0	0	1	0	1	0	3	3	50	50	100
4	ESC	22CAD13	Computer Aided Engineering Drawing	ME	2	0	1	0	3	3	2	5	50	50	100
5	ESC-I	22ESC142	Introduction to Electrical Engineering	EE	3	0	0	0	3	4	0	4	50	50	100
6	PLC-I	22PLC151	Problem solving using Python	IS	3	0	1	0	3	3	2	5	50	50	100
7	AEC	22ENG16	Communicative English	HSS	1	0	0	0	1	2	0	2	50	50	100
8	HSS	22COP17	Indian Constitution and Professional Ethics	HSS	1	0	0	0	1	1	0	1	50	50	100
9	AEC	22SFH18	Scientific Foundation for Health with Yoga	CV	1	0	0	0	1	2	0	2	50	50	100
								Total	20	22	9	31	450	450	900

Semester II

Sl. No.	Category	Course Code	Course	BoS	Credit Distribution				Overall Credits	Contact hours Weekly (Theory)	Contact hours Weekly (Lab)	Contact hours Weekly (Total)	Marks		
					L	T	P	S					CIE	SEE	Total
1	ASC	22MTE21	Applied Mathematics for Engineers - II	AS	3	0	1	0	4	3	2	5	50	50	100
2	ASC	22PHE22	Applied Physics	AS	3	0	0	0	3	4	0	4	50	50	100
3	ASC	22PHL23	Applied Physics Lab	AS	0	0	1	0	1	0	3	3	50	50	100
4	ESC	22CSE23	Programming Data Structures in C	CS	3	0	0	0	3	3	0	3	50	50	100
5	ESC	22CSL23	Programming Data Structures in C Lab	CS	0	0	1	0	1	0	3	3	50	50	100
6	ESC-II	22ESC241	Basic Electronics	EC	3	0	0	0	3	4	0	4	50	50	100
7	ETC-II	22ETC253	Robotics and Automation	ME	3	0	0	0	3	4	0	4	50	50	100
8	AEC	22ENG26	Professional Writing Skills	HSS	1	0	0	0	1	2	0	2	50	50	100
9	HSS	22KSK27 /22KBK27	Samskruthika Kannada /Balake Kannada	HSS	1	0	0	0	1	1	0	1	50	50	100
10	AEC	22IDT28	Innovation and Design Thinking	CV	1	0	0	0	1	2	0	2	50	50	100
								Total	20	23	8	31	500	500	1000

Semester III

Sl. No.	Category	Course Code	Name of the Course	BoS	Credit Distribution				Overall Credits	Contact hours Weekly (Theory)	Contact hours Weekly (Lab)	Contact hours Weekly (Total)	Marks		
					L	T	P	S					CIE	SEE	Total
1	BSC	22ECE31	Applied Mathematics - III	AS	3	0	0	0	3	3	0	3	50	50	100
2	PCC	22ECE32	Analog Electronic Circuits	EC	3	0	0	0	3	3	0	3	50	50	100
3	PCCL	22ECL32	Analog Electronic Circuits Lab	EC	0	0	1	0	1	0	2	2	50	50	100
4	PCC	22ECE33	Digital Electronic Circuits	EC	3	0	0	0	3	3	0	3	50	50	100
5	PCCL	22ECL33	Digital Electronic Circuits Lab	EC	0	0	1	0	1	0	2	2	50	50	100
6	ESC	22ECE34X	Engineering Science Course	EC	3	0	0	0	3	3	0	3	50	50	100
7	AEC	22ECL35X	Ability Enhancement Course - III	EC	0	0	1	0	1	0	2	2	50	50	100
8	BSC	22NK36	Bio-inspired Design and Innovation	Any	3	0	0	0	3	3	0	3	50	50	100
9	NCMC	22NSK37 /22PEK37 /22YOK37	National Service Scheme / Physical Education (Sports and Athletics) / Yoga	XX	0	0	0	0	0	2	0	2	50	–	50
10	UHV	22UCK38	Social Connect and Responsibility	Any	0	0	1	0	1	2	0	2	50	–	50
								Total	19	19	6	25	500	400	900

11	NCMC	22OMAT31	Basic Applied Mathematics - I	BS	0	0	0	0	0	2	0	2	50	–	50

Course Code	Engineering Science Course
22ECE341	Circuit Design and Analysis
22ECE342	Signals and Systems
22ECE343	Linear integrated Circuits
22ECE344	Control Systems

Course Code	Ability Enhancement Course - III
22ECL351	Electronics Design using Proteus
22ECL352	PCB Design using OrCAD
22ECL353	Embedded Design using MPLAB
22ECL354	System Design using Altium

Semester IV

Sl. No.	Category	Course Code	Course	BoS	Credit Distribution				Overall Credits	Contact hours Weekly (Theory)	Contact hours Weekly (Lab)	Contact hours Weekly (Total)	Marks		
					L	T	P	S					CIE	SEE	Total
1	BSC	22ECE41	Applied Mathematics - IV	AS	3	0	0	0	3	3	0	3	50	50	100
2	PCC	22ECE42	System Design using HDL	EC	3	0	0	0	3	3	0	3	50	50	100
3	PCCL	22ECL42	Hardware Description Language Lab	EC	0	0	1	0	1	0	2	2	50	50	100
4	PCC	22ECE43	Digital Signal Processing	EC	3	0	0	0	3	3	0	3	50	50	100
5	PCCL	22ECL43	Digital Signal Processing Lab	EC	0	0	1	0	1	0	2	2	50	50	100
6	PCC	22ECE44	Microprocessors & Interfacing	EC	3	0	0	0	3	3	0	3	50	50	100
7	PCCL	22ECL44	Microprocessors Lab	EC	0	0	1	0	1	0	2	2	50	50	100
8	PLC	22ECE45X	Programming Language Course	EC	2	0	1	0	3	3	0	3	50	50	100
9	AEC	22ECL46X	Ability Enhancement Course - IV	EC	0	0	1	0	1	0	2	2	50	50	100
10	NCMC	22NSE47 /22PEK47 /22YOK47	National Service Scheme / Physical Education (Sports and Athletics) / Yoga	XX	0	0	0	0	0	2	0	2	50	–	50
11	UHV	22UHK48	Universal Human Values Course	Ans	1	0	0	0	1	2	0	2	50	–	50
12	PROJ	22ECE49	Mini Project	EC	0	0	1	0	1	0	0	0	50	50	100
								Total	21	19	8	27	600	500	1100

13	NCMC	22OMAT41	Basic Applied Mathematics - II	BS	0	0	0	0	0	2	0	2	50	–	50

Course Code	Programming Language Course
22ECE451	Object Oriented Programming using Java
22ECE452	IoT Programming
22ECE453	Embedded Linux Programming
22ECE454	Programming using RoboDK

Course Code	Ability Enhancement Course - IV
22ECL461	Electronics Applications using Scilab
22ECL462	Embedded Designs using Atmel Studio
22ECL463	Virtual Instrumentation using Labview
22ECL464	App Development using Google Flutter

Sl. No.	Category	Course Code	Course	BoS	Credit Distribution				Overall Credits	Contact hours Weekly (Theory)	Contact hours Weekly (Lab)	Contact hours Weekly (Total)	Marks		
					L	T	P	S					CIE	SEE	Total
1	HSMC	22ECE51	Operations Research and Management	EC	3	0	0	0	3	3	0	3	50	50	100
2	PCC	22ECE52	Communication Systems - I	EC	3	0	0	0	3	3	0	3	50	50	100
3	PCCL	22ECL52	Communication Systems - I Lab	EC	0	0	1	0	1	0	2	2	50	50	100
4	PCC	22ECE53	CMOS VLSI Design	EC	3	0	0	0	3	3	0	3	50	50	100
5	PCCL	22ECL53	CMOS VLSI Design Lab	EC	0	0	1	0	1	0	2	2	50	50	100
6	PEC	22ECE54X	Professional Elective Course - I	EC	3	0	0	0	3	3	0	3	50	50	100
7	AEC	22RMK55	Research Methodology and Intellectual Property Rights	EC	2	1	0	0	3	4	0	4	50	50	100
8	UHV	22ESK58	Environmental Studies	Any	2	0	0	0	2	2	0	2	50	50	100
9	NCMC	22NSK57 / 22PEK57 / 22YOK57	National Service Scheme / Physical Education (Sports and Athletics) / Yoga	XX	0	0	0	0	0	2	0	2	50	--	50
10	PROJ	22ECE58	Mini Project	EC	0	0	1	0	1	0	0	0	50	50	100
									Total	20	20	4	24	500	450	950

Course Code	Professional Elective Course - I
22ECE541	Data Communication and Networking
22ECE542	Electromagnetic Field Theory
22ECE543	DSP Algorithms and Architecture
22ECE544	Artificial Neural Networks
22ECE545	Internet of Things

Semester VI

Sl. No.	Category	Course Code	Course	BoS	Credit Distribution				Overall Credits	Contact hours Weekly (Theory)	Contact hours Weekly (Lab)	Contact hours Weekly (Total)	Marks		
					L	T	P	S					CIE	SEE	Total
1	PCC	22ECE61	Embedded System Design	EC	3	0	0	0	3	3	0	3	50	50	100
2	PCCL	22ECL61	Embedded System Design Lab	EC	0	0	1	0	1	0	2	2	50	50	100
3	PCC	22ECE62	Communication Systems - II	EC	3	0	0	0	3	3	0	3	50	50	100
4	PCCL	22ECL62	Communication Systems - II Lab	EC	0	0	1	0	1	0	2	2	50	50	100
5	PCC	22ECE63	Essentials of Cyber Security	EC	3	0	0	0	3	3	0	3	50	50	100
6	PEC	22ECE64X	Professional Elective Course - II	EC	3	0	0	0	3	3	0	3	50	50	100
7	PROJ	22ECE65	Project Phase - I	EC	0	0	2	0	2	0	0	0	50	50	100
8	OEC	22NHOP66X	Industrial Open Elective Course - I	XX	3	0	0	0	3	3	0	3	50	50	100
9	AEC	22ECL66A	Ability Enhancement Course - V	EC	0	0	1	0	1	0	2	2	50	50	100
10	NC	22NSK67 / 22PEK67 / 22YOK67	National Service Scheme / Physical Education (Sports and Athletics) / Yoga	XX	0	0	0	0	0	2	0	2	50	0	50
									Total	20	17	6	23	500	450	950

Course Code	Professional Elective Course - II
22ECE641	Machine Learning Algorithms
22ECE642	Biomedical Signal Processing
22ECE643	Error Control Coding
22ECE644	Low Power VLSI Design
22ECE645	Optical Communication

Course Code	Industrial Open Elective Course
22NHOP660A	CISCO - Routing & Switching - I
22NHOP622A	Programming of Industrial Robot
22NHOP623A	5G Communication
22NHOP625A	VLSI Physical Design - I

22MHOPSXXA | JUNIPER - Routing & Switching

Course Code	Ability Enhancement Course - V
22ECL661	Antenna simulation using Ansys
22ECL662	Network simulation using NS-2
22ECL663	Electronic Design Automation using Tanner
22ECL664	ALP with Microcontrollers

Sl. No.	Category	Course Code	Course	BoS	Credit Distribution				Overall Credits	Contact hours Weekly (Theory)	Contact hours Weekly (Lab)	Contact hours Weekly (Total)	Marks		
					L	T	P	S					CIE	SEE	Total
1	PCC	22ECE71	Wireless Communication	EC	3	0	0	0	3	3	0	3	50	50	100
2	PCCL	22ECL72	Wireless Communication Lab	EC	0	0	1	0	1	0	2	2	50	50	100
3	PCC	22ECE73	Computer Vision	EC	3	0	0	0	3	3	0	3	50	50	100
4	PCCL	22ECL74	Computer Vision Lab	EC	0	0	1	0	1	0	2	2	50	50	100
5	PCC	22ECE75	Analog and Mixed mode VLSI Design	EC	3	1	0	0	4	3	0	3	50	50	100
6	PEC	22ECE76X	Professional Elective Course - III	EC	3	0	0	0	3	3	0	3	50	50	100
7	PROJ	22ECP77	Project Phase - II	EC	0	0	6	0	6	0	0	0	50	50	100
8	OEC	22NHOP78X	Industrial Open Elective Course - II	XX	3	0	0	0	3	3	0	3	50	50	100
								Total	24	17	4	21	400	400	800

Course Code	Professional Elective Course - III
22ECE761	Automotive Electronics
22ECE762	Advanced Microcontrollers
22ECE763	Software Defined Radio
22ECE764	Satellite Communication
22ECE765	Digital Image Processing

Course Code	Industrial Open Elective Course
22NHOP709A	CISCO - Routing & Switching - I
22NHOP712A	CISCO - Routing & Switching - II
22NHOP722A	Programming of Industrial Robot
22NHOP723A	5G Communication
22NHOP725A	VLSI Physical Design - I
22NHOP730A	VLSI Physical Design - II
22NHOP730A	JUNIPER - Routing & Switching

Semester VIII															
Sl. No.	Category	Course Code	Course	BoS	Credit Distribution				Overall Credits	Contact hours Weekly (Theory)	Contact hours Weekly (Lab)	Contact hours Weekly (Total)	Marks		
					L	T	P	S					CIE	SEE	Total
1	PEC	22ECE81X	Professional Elective Course - IV	EC	3	0	0	0	3	3	0	3	50	50	100
2	PEC	22ECE82X	Professional Elective Course - V	EC	3	0	0	0	3	3	0	3	50	50	100
3	INT	22ECE83	Internship (Industry / Research / Rural)	EC	0	0	10	0	10	0	0	0	100	100	200
								Total	16	6	0	6	200	200	400

Course Code	Professional Elective Course - IV
22ECE811	Multimedia Communication
22ECE812	Wireless Sensor Networks
22ECE813	Nanoelectronics
22ECE814	Speech Processing
22ECE815	Statistical Signal Processing

Course Code	Professional Elective Course - V
22ECE821	Quantum Computing
22ECE822	Geospatial Communication
22ECE823	Adaptive Signal Processing
22ECE824	Radar Networks
22ECE825	Power Electronics

NEW HORIZON
COLLEGE OF ENGINEERING
New Horizon Knowledge Park, Ring Road, Marathalli
Autonomous College Permanently Affiliated to VTU, Approved by AICTE & UGC
Accredited by NAAC with 'A' Grade, Accredited by NBA

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

9th BOARD OF STUDIES MEETING

DATE	:	04.10.2023
VENUE	:	Schneider Electric Laboratory
		(Room No: B-001)
TIME	:	10 AM – 1 PM

Head of the Department
Dept. of Electrical & Electronics Engineering
New Horizon College of Engineering
Ring Road, Kadubisanahalli, Bellandur Post
Bangalore - 560103, Karnataka, India

CONTENTS

AGENDA FOR THE MEETING

Agenda 1: Implementation of revised syllabus details based on previous BoS meeting

Agenda 2: Approval of scheme and syllabus for the AY: 2023-2024, II year (III and IV semester) EEE Program as per NEP 2.

Agenda 3: Approval of scheme and syllabus for the AY: 2023-2024, III year (V and VI semester) EEE Program as per Revised NEP 1

Agenda 4: Revision of Vision, mission of the department, revision of Cos, CO-PO mapping of IV year courses-If any

Agenda 5: Recommendations of the Board

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

LIST OF MEMBERS- BOARD OF STUDIES AY: 2023-2024

S. No	Category	Nomination of the committee	Name of the person	Designation & Affiliation
1	**Head of the Department**	**Chairperson**	Dr. Sakthivel Aruchamy	HoD & Professor, NHCE, Bangalore
2	**Special Invitees (one academician from Institution of National Eminence, IIT,NIT,IIM,IISC)**	1	Dr. Manjunatha	Principal, NHCE
		2	Dr. R. J Anandhi	Dean Academics, NHCE
		3	Dr. L Umanand	Professor, Center for Electronics and Design Technology (CEDT), Indian Institute of Science, Bangalore, lums@iisc.ac.in
		4	Dr. Sanjeev Sharma	Professor & Dean - Quality Assurance and Skill Development Center, NHCE
3	**Faculty member at different level with different specialization**	**Members**		
		1	Dr.Sujitha S	Professor, NHCE
		2	Dr.Vinoth Kumar K	Professor, NHCE
		3	Dr.Gunapriya B	Associate Professor, NHCE
		4	Dr Mohan Das R	Associate Professor, NHCE
		5	Ms.Karthika M	Senior Assistant Professor, NHCE
4		**Members**		
	Subject expert from outside the college nominated by Academic Council	1.	Dr. Amuthan N	Professor Department of EEE AMC Engineering College , Bengaluru-560 083 amuthan.nallathambi@amceducation.in 9632284805
		2.	Dr Surekha P	Asst. Professor (Sr. Gr) EEE, Amrita School of Engineering, Bengaluru, Amrita Vishwa Vidyapeetham, India. p_surekha@blr.amrita.edu 88847 33747

5	**Experts from outside the college nominated by VTU**	**Member**		
		1	Dr. Samanvita N	Professor, NITTE Meenakshi Institute of Technology, Bengaluru-560064 samanvita.n@nmit.ac.in 9731777517
6	**Representative from Industry / Corporate sector / allied area related to placements, nominated by Academic Council**	**Members**		
		1	Dr B Hariram S Satheesh	R&D Team Manager MOSE - IN Modernization Digital R&D, ABB Global Industries and Services Private Ltd, Bangaluru. Hariram.satheesh@in.ABB.com 7609 98708
		2	Mr K Jeykishan Kumar	Engineering Officer, Central Power Research Institute, Energy efficiency & Renewable Division, CPRI, PB NO.8066, Prof.Sir. CV Raman road, Bangalore-560080, Karnataka. jeykishan@cpri.in 9953795473
7	**Under Graduate meritorious alumni nominated by Principal**	**Members**		
		1	Mr. Bhavan N	Controls system engineer, Quest global engineering Pvt Ltd, bhavannreddy@gmail.com
		2	Mr. Naimish Kumar Bareek,	Trainee Automation Engineer, Aideas Engineering Pvt Ltd, babubareek@gmail.com
8	**Co-opted members**	**Members**		
		1	Ms Anitha A	Senior Assistant Professor, NHCE
		2	Mr.Vinod Kumar S	Senior Assistant Professor, NHCE
		3	Mr. Sunil S K	Senior Assistant Professor, NHCE
		4	Mr Kartheek Vankadara	Assistant Professor, NHCE
		5	Ms Sangeetha C N	Assistant Professor, NHCE

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

LIST OF BOS MEMBERS PRESENT IN THE MEETING (AY: 2023-2024) - 04.10.2023

S.NO	NAME	DESIGNATION & AFFILIATION	SIGNATURE
		BoS Chairman	
1	Dr. Sakthivel Aruchamy	HoD/Professor, NHCE, Bangalore	
		Special Invitees	
2	Dr. Manjunatha	Principal, NHCE	
3	Dr. R. J Anandhi	Dean Academics, NHCE	
4	Dr. L Umanand	Professor, Center for Electronics and Design Technology (CEDT), Indian Institute of Science, Bangalore, lums@iisc.ac.in	
5	Dr. Sanjeev Sharma	Professor & Dean - Quality Assurance and Skill Development Center, NHCE	
		Academic Expert	
6	Dr. Amuthan N	Professor Department of EEE AMC Engineering College , Bengaluru-560 083 amuthan.nallathambi@amceducation.in 9632284805	
7	Dr Surekha P	Asst. Professor (Sr. Gr) EEE, Amrita School of Engineering, Bengaluru, Amrita Vishwa Vidyapeetham, India. p_surekha@blr.amrita.edu 88847 33747	
		VTU nominee	
8	Dr. Samanvitha N	Professor, NITTE Meenakshi Institute of Technology, Bengaluru-560064 samanvitha.n@nmit.ac.in 9731777517	
		Industry Experts	
9	Mr K Jeykishan Kumar	Engineering Officer, Central Power Research Institute, Energy efficiency & Renewable Division, CPRI, PB NO.8066, Prof.Sir. CV Raman road, Bangalore-560080, Karnataka.	ON LINE

		jeykishan@cpri.in 9953795473	
Faculty member at different level with different specialization			
10	Dr.Sujitha S	Professor, NHCE	
11	Dr.Vinoth Kumar K	Professor, NHCE	
12	Dr.Gunapriya B	Associate Professor, NHCE	
13	Dr. Mohan Das R	Associate Professor, NHCE	
14	Ms.Karthika M	Senior Assistant Professor, NHCE	
Meritorious alumni			
15	Mr. Bhavan N	Controls system engineer, Quest global engineering Pvt Ltd, bhavannreddy@gmail.com	
Co-opted faculty members			
16	Mr.Vinodkumar S	Senior Assistant Professor, NHCE	
17	Mr Kartheek Vankadara	Assistant Professor, NHCE	
18	Ms Sangeetha C N	Assistant Professor, NHCE	

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

WELCOME ADDRESS BY THE CHAIRMAN OF BOS AND INTRODUCTION OF MEMBERS

Minutes

Dr.Sakthivel Aruchamy, Chairman of BOS, welcomed the BoS members and introduced the significance of autonomy in the context of engineering education from industry perspective. The chairman briefed the gathering about the various regulations being followed in the department and emphasized the need for revision in curriculum and syllabi based on the inputs from various stake holders.

AGENDA -1
Implementation of revised syllabus details based on previous BoS meeting

Minutes

- *Based on the previous BoS meeting suggestions, the following courses were implemented and incorporated in the curriculum.*

S.No	***BoS member***	***Recommendations***	***Implementation***
1.	*Dr Lakshiminarayana C,VTU nominee, BMS College of Engineerng, Bangalore.*	*Dr Lakshminarayana C recommended that the course electromagnetic field theory has to be included in the NEP scheme. Since, the course is important for GATE exam preparation and for getting placed in industries and for higher education*	▪ *21EEE545-Electromagnetic Field Theory is included for V semester (2021-2025 Scheme) as a PE course* *21EEE454-Electromagnetic Field Theory is included for IV semester (2022-2026 Scheme) as A ESC course*
2.	*Dr Lakshiminarayana C , VTU nominee, BMS College of Engineering, Bangalore.*	*Dr Lakshminarayana C suggested to include fundamental courses and design thinking courses for higher semesters.*	*21EEK58-Innovation and Design Thinking course is included foor the V semester (2021-2025 Scheme)*
3.	*Dr Lakshiminarayana C, VTU nominee, BMS College of*	*The VTU nominee suggested to include E-books, video links and you tube links related to*	*The E-books, video links and you tube links related to particular course in reference section of syllabus is included*

	Engineering, Bangalore	*particular course in reference section of syllabus*	

AGENDA -2

Approval of scheme and syllabus for the AY: 2023-2024, II year (III and IV semester) EEE Program as per NEP 2.

Minutes

- *Scheme & Syllabus of II-year -2022-2026 Batch (III & IV semesters) has been reviewed.*
- *Suggestions from BoS members have been acknowledged and discussed in detail.*
- *Scheme & Syllabus of II Year 2022-2026 Batch (III & IV semesters) as per NEP2 has been unanimously approved by all the members.*

NEW HORIZON COLLEGE OF ENGINEERING

B. E. in Electrical and Electronics Engineering

Scheme of Teaching and Examinations for 2022- 2026 BATCH (2022 Scheme)

III Semester														
S. No.	Course and Course Code		Course Title	BoS	Credit Distribution				Overall Credits	Contact Hours	Marks		
					L	T	P	S			CIE	SEE	Total
1	BSC	22EEE31	Applied Mathematics-III	BS	3	0	0	0	3	3	50	50	100
2	PCC	22EEE32	DC Machines and Transformers	EE	3	0	0	0	3	3	50	50	100
3	PCCL	22EEL32	DC Machines and Transformers Laboratory	EE	0	0	1	0	1	2	50	50	100
4	PCC	22EEE33	Electric Circuit Theory	EE	3	0	0	0	3	3	50	50	100
5	PCCL	22EEL33	Electric Circuit Theory Laboratory	EE	0	0	1	0	1	2	50	50	100
6	ESC	22EEE34X	ESC/ ETC/ PLC	EE	If the course is ESC/ETC						50	50	100
					3	0	0	0	3	3			
					If the course is PLC								
					2	0	1	0	3	4			
7	AEC	22EEE35X	Ability Enhancement Course–III	EE	If the course is a Theory						50	50	100
					1	0	0	0	1	1			
					If the course is a Laboratory								
					0	0	1	0	1	2			
8	BSC	22BIK36	Bio Inspired Design	Any Dept	3	0	0	0	3	3	50	50	100
9	NCMC	22NSK37	National Service Scheme (NSS)	NSS coordinator	0	0	0	0	0	2	50	--	50
		22PEK37	Physical Education (PE) (Sports and Athletics)	Physical Education									

		22YOK37	Yoga	Yoga Teacher									
10	UHV	22SCK38	Social Connect and Responsibility	Any Dept	1	0	0	0	1	2	50	--	50
Total									**19**	**24/25/26**	**500**	**400**	**900**
11	NCMC	22DMAT31	Basic Applied Mathematics -I	BS	0	0	0	0	0	2	50	--	50

BSC: Basic Science Course, **PCC**: Professional Core Course, **PCCL**: Professional Core Course laboratory, **UHV**: Universal Human Value Course, **NCMC**: Non Credit Mandatory Course, **AEC**: Ability Enhancement Course, **L:** Lecture, **T**: Tutorial, **P**: Practical **S: SDA**: Self Study for Skill Development, **K:** This letter in the course code indicates common to all the stream of engineering. **ESC:** Engineering Science Course, **ETC**: Emerging Technology Course, **PLC**: Programming Language Course, **CIE**: Continuous Internal Evaluation, **SEE**: Semester End Evaluation.

Programming Language Course (PLC): Credit for PLC is 03 (L : T : P:S) can be considered as (2 : 1 : 0). The theory part of the PLC shall be evaluated both by CIE and SEE. The practical part shall be evaluated by only CIE (no SEE). However, questions from the practical part of PLC shall be included in the SEE question paper.

22DMAT311*: This non-credit mandatory course to be offered with only CIE and no SEE to Lateral entry students.

Engineering Science Course / Emerging Technology Course / Programming Language Course (ESC/ETC/PLC)			
22EEE341	Object Oriented programming using JAVA (2:0:1:0)	22EEE343	Measurements and Instrumentation (3:0:0:0)
22EEE342	Sensors and Actuators (3:0:0:0)	22EEE344	Signals and Systems (3:0:0:0)

Ability Enhancement Course–III (For EEE, all are Laboratory Courses 0-0-1-0)			
22EEE351	Microcontroller and Embedded Systems	22EEE353	SCI LAB for DC Machines and Transformers
22EEE352	Introduction to MATLAB	22EEE354	555 IC Laboratory

National Service Scheme /Physical Education/Yoga: All students have to register for any one of the courses namely National Service Scheme (NSS), Physical Education (PE) (Sports and Athletics), and Yoga(YOG) with the concerned coordinator of the course during the first week of III

semesters. Activities shall be carried out between III semester to the VI semester (for 4 semesters). Successful completion of the registered course and requisite CIE score is mandatory for the award of the degree. The events shall be appropriately scheduled by the colleges and the same shall be reflected in the calendar prepared for the NSS, PEd, and Yoga activities. These courses shall not be considered for vertical progression as well as for the calculation of SGPA and CGPA, but completion of the course is mandatory for the award of degree.

Credit Definition: 1-hour Lecture (L) per week=1Credit 2-hoursTutorial(T) per week=1Credit 2-hours Practical / Drawing (P) per week=1Credit 2-hours Self Study for Skill Development (SDA) per week = 1 Credit	03-Credits courses are to be designed for 40 hours in Teaching-Learning Session 02- Credits courses are to be designed for 25 hours of Teaching-Learning Session 01-Credit courses are to be designed for 15 hours of Teaching-Learning Sessions

Programming Language Course (PLC): Credit for PLC is 03 (L : T : P:S) can be considered as (2 : 1 : 0). The theory part of the PLC shall be evaluated both by CIE and SEE. The practical part shall be evaluated by only CIE (no SEE). However, questions from the practical part of PLC shall be included in the SEE question paper.

22DMAT411*: This non-credit mandatory course to be offered with only CIE and no SEE to Lateral entry students.

Engineering Science Course / Emerging Technology Course / Programming Language Course (ESC/ETC/PLC)			
22EEE451	Programming of Internet of Things (2:0:1:0)	22EEE453	Web design Technologies (2:0:1:0)
22EEE452	Advanced Data Structures and Algorithms (2:0:1:0)	22EEE454	Electro Magnetic Field Theory (3:0:0:0)

Ability Enhancement Course–IV (For EEE, all are Laboratory Courses 0-0-1-0)			
22EEE461	AUTOCAD for Electrical Engineering	22EEE463	Sci Lab for Electrical Engineering
22EEE462	Advanced Arduino Programming	22EEE464	PCB Design Laboratory

Mini-project work: Mini Project is a laboratory-oriented/hands on course that will provide a platform to students to enhance their practical knowledge and skills by the development of small systems/applications etc. Based on the ability/abilities of the student/s and

recommendations of the mentor. A student can do mini project as

(i) A group of 2 if mini project work is single discipline (applicable to all IT allied branches)

(ii) A group of 2- 4 if mini project work is single discipline (applicable to all Core Branches)

(iii) A group of 2 - 4 students if the Mini Project work is a multidisciplinary (Applicable to all Branches)

CIE procedure for Mini-project:

(i) Single discipline: The CIE marks shall be awarded by a committee consisting of the Head of the concerned Department and two faculty members of the Department, one of them being the Guide. The CIE marks awarded for the Mini-project work shall be based on the evaluation of the project report, project presentation skill, and question and answer session in the ratio of 50:25:25. The marks awarded for the project report shall be the same for all the batches mates.

(ii) Interdisciplinary: Continuous Internal Evaluation shall be group-wise at the college level with the participation of all the guides of the project.

The CIE marks awarded for the Mini-project, shall be based on the evaluation of the project report, project presentation skill, and question and answer session in the percentage ratio of 50:25:25. The marks awarded for the project report shall be the same for all the batch mates

National Service Scheme /Physical Education/Yoga: All students have to register for any one of the courses namely National Service Scheme (NSS), Physical Education (PE) (Sports and Athletics), and Yoga (YOG) with the concerned coordinator of the course during the first week of III semesters. Activities shall be carried out between III semester to the VI semester (for 4 semesters). Successful completion of the registered course and requisite CIE score is mandatory for the award of the degree. The events shall be appropriately scheduled by the colleges and the same shall be reflected in the calendar prepared for the NSS, PE, and Yoga activities. These courses shall not be considered for vertical progression as well as for the calculation of SGPA and CGPA, but completion of the course is mandatory for the award of degree.

Credit Definition: 1-hour Lecture (L) per week=1Credit 2-hoursTutorial(T) per week=1Credit 2-hours Practical / Drawing (P) per week=1Credit 2-hours Self Study for Skill Development (SDA) per week = 1 Credit	03-Credits courses are to be designed for 40 hours in Teaching-Learning Session 02- Credits courses are to be designed for 25 hours of Teaching-Learning Session 01-Credit courses are to be designed for 15 hours of Teaching-Learning Sessions

NEW HORIZON COLLEGE OF ENGINEERING

B. E. in Electrical and Electronics Engineering

Scheme of Teaching and Examinations for 2022- 2026 BATCH (2022 Scheme)

IV Semester														
S. No.	Course and Course Code		Course Title	BoS	Credit Distribution				Overall Credits	Contact Hours	Marks			
					L	T	P	S			CIE	SEE	Total	
1	BSC	22EEE41	Applied Mathematics-IV	EE	3	0	0	0	3	3	50	50	100	
2	PCC	22EEE42	Analog Electronics and Integrated Circuits	EE	3	0	0	0	3	3	50	50	100	
3	PCCL	22EEL42	Analog Electronics and Integrated Circuits Laboratory	EE	0	0	1	0	1	2	50	50	100	
4	PCC	22EEE43	Digital Logic Design	EE	3	0	0	0	3	3	50	50	100	
5	PCCL	22EEL43	Digital Logic Design Laboratory	EE	0	0	1	0	1	2	50	50	100	
6	PCC	22EEE44	Synchronous and Induction Machines	EE	3	0	0	0	3	3	50	50	100	
7	PCCL	22EEL44	Synchronous and Induction Machines Laboratory	EE	0	0	1	0	1	2	50	50	100	
	8	ESC	22EEE45X	ESC/ ETC/ PLC	EE	If the course is ESC/ETC								
						3	0	0	0	3	3	50	50	100
						If the course is PLC								
						2	0	1	0	3	4			
	9	AEC	22EEE46X	Ability Enhancement Course–IV	EE	If the course is a Theory								
						1	0	0	0	1	1	50	50	100
						If the course is a Laboratory								
						0	0	1	0	1	2			
10	NCMC	22NSK47	National Service Scheme (NSS)	NSS	0	0	0	0	0	2	50	--	50	

		22PEK47	Physical Education (PE) (Sports and Athletics)	Physical Education									
		22YOK47	Yoga	Yoga Teacher									
11	UHV	22UHK48	Universal Human Values	Any Dept	1	0	0	0	1	2	50	--	50
12	PROJ	22EEE49	Mini Project	EE	0	0	1	0	1	0	50	50	100
Total									**21**	**26/27/ 28**	**600**	**500**	**1100**
13	NCMC	22DMAT41	Basic Applied Mathematics -II	BS	0	0	0	0	0	2	50	--	50

Programming Language Course (PLC): Credit for PLC is 03 (L : T : P:S) can be considered as (2 : 1 : 0). The theory part of the PLC shall be evaluated both by CIE and SEE. The practical part shall be evaluated by only CIE (no SEE). However, questions from the practical part of PLC shall be included in the SEE question paper.

22DMAT411*: This non-credit mandatory course to be offered with only CIE and no SEE to Lateral entry students.

Engineering Science Course / Emerging Technology Course / Programming Language Course (ESC/ETC/PLC)			
22EEE451	Programming of Internet of Things (2:0:1:0)	22EEE453	Web design Technologies (2:0:1:0)
22EEE452	Advanced Data Structures and Algorithms (2:0:1:0)	22EEE454	Electro Magnetic Field Theory (3:0:0:0)

Ability Enhancement Course–IV (For EEE, all are Laboratory Courses 0-0-1-0)			
22EEE461	AUTOCAD for Electrical Engineering	22EEE463	Sci Lab for Electrical Engineering
22EEE462	Advanced Arduino Programming	22EEE464	PCB Design Laboratory

Mini-project work: Mini Project is a laboratory-oriented/hands on course that will provide a platform to students to enhance their practical knowledge and skills by the development of small systems/applications etc. Based on the ability/abilities of the student/s and recommendations of the mentor. A student can do mini project as

(iii) A group of 2 if mini project work is single discipline (applicable to all IT allied branches)

(iv) A group of 2- 4 if mini project work is single discipline (applicable to all Core Branches)

(iii) A group of 2 - 4 students if the Mini Project work is a multidisciplinary (Applicable to all Branches)

CIE procedure for Mini-project:

(iii)Single discipline: The CIE marks shall be awarded by a committee consisting of the Head of the concerned Department and two faculty members of the Department, one of them being the Guide. The CIE marks awarded for the Mini-project work shall be based on the evaluation of the project report, project presentation skill, and question and answer session in the ratio of 50:25:25. The marks awarded for the project report shall be the same for all the batches mates.

(iv) Interdisciplinary: Continuous Internal Evaluation shall be group-wise at the college level with the participation of all the guides of the project.

The CIE marks awarded for the Mini-project, shall be based on the evaluation of the project report, project presentation skill, and question and answer session in the percentage ratio of 50:25:25. The marks awarded for the project report shall be the same for all the batch mates

National Service Scheme /Physical Education/Yoga: All students have to register for any one of the courses namely National Service Scheme (NSS), Physical Education (PE) (Sports and Athletics), and Yoga (YOG) with the concerned coordinator of the course during the first week of III semesters. Activities shall be carried out between III semester to the VI semester (for 4 semesters). Successful completion of the registered course and requisite CIE score is mandatory for the award of the degree. The events shall be appropriately scheduled by the colleges and the same shall be reflected in the calendar prepared for the NSS, PE, and Yoga activities. These courses shall not be considered for vertical progression as well as for the calculation of SGPA and CGPA, but completion of the course is mandatory for the award of degree.

Credit Definition: 1-hour Lecture (L) per week=1Credit 2-hoursTutorial(T) per week=1Credit 2-hours Practical / Drawing (P) per week=1Credit 2-hours Self Study for Skill Development (SDA) per week = 1 Credit	03-Credits courses are to be designed for 40 hours in Teaching-Learning Session 02- Credits courses are to be designed for 25 hours of Teaching-Learning Session 01-Credit courses are to be designed for 15 hours of Teaching-Learning Sessions

AGENDA -3

Approval of scheme and syllabus for the AY: 2023-2024, III year (V and VI semester) EEE Program as per Revised NEP 1

Minutes

- *Scheme & Syllabus of III-year -2021-2025 Batch* (V and VI semester)*) has been reviewed.*
- *Suggestions from BoS members have been acknowledged and discussed in detail.*
- *Scheme & Syllabus of III Year 2021-2025 Batch (V & VI semesters) as per NEP1 has been unanimously approved by all the members.*

NEW HORIZON COLLEGE OF ENGINEERING
B. E. in Electrical and Electronics Engineering
Scheme of Teaching and Examinations for 2021- 2025 BATCH (2021 Scheme)

V Semester													
S. No.	**Course and Course Code**		**Course Title**	**BoS**	**Credit Distribution**				**Overall Credits**	**Contact Hours**	**Marks**		
					L	**T**	**P**	**S**			**CIE**	**SEE**	**Total**
1	PCC	21EEE51	Power Electronics	EE	3	0	0	0	3	3	50	50	**100**
2	PCCL	21EEL51	Power Electronics Laboratory	EE	0	0	1	0	1	2	50	50	**100**
3	PCC	21EEE52	Industrial Automation	EE	3	0	0	0	3	3	50	50	**100**
4	PCCL	21EEL52	Industrial Automation Laboratory	EE	0	0	1	0	1	2	50	50	**100**
5	PCC	21EEE53	Transmission Distribution and Protection	EE	3	0	0	0	3	3	50	50	**100**
6	PEC	21EEE54X	Professional Elective Course-I	EE	3	0	0	0	3	3	50	50	**100**
7	AEC	21EEL55X	Ability Enhancement Course-V	EE	0	0	1	0	1	2	50	50	**100**
8	MP	21EEE56	Mini Project	EE	0	0	1	0	1	0	50	50	**100**
9	AEC	21EEK57	Research Methodology and IPR	EE	1	0	0	0	1	2	50	50	**100**
10	UHV	21EEK58	Innovation and Design Thinking	Any Dept.	1	0	0	0	1	1	50	50	**100**
								Total	**18**	**21**	**500**	**500**	**1000**

NCMC	21NSS84	National Service Scheme (NSS)	NSS coordinator	All students have to register for any one of the courses namely National Service Scheme, Physical Education (PE) (Sports and Athletics) and Yoga with the concerned coordinator of the course during the first week of V semester. The activities shall be carried out from (for 4
	21PES84	Physical Education (PE) (Sports and Athletics)	Physical Education Director	

	21YOG84	Yoga	Yoga Teacher	semesters) between V semester to VIII semester. SEE in the above courses shall be conducted during VIII semester examinations and the accumulated CIE marks shall be added to the SEE marks. Successful completion of the registered course is mandatory for the award of the degree. The events shall to be reflected in the calendar prepared for the NSS, PE and Yoga activities.

PCC: Professional Core Course, **PCCL**: Professional Core Course laboratory, **UHV**: Universal Human Value Course, **NCMC**: Non-Credit Mandatory Course, **AEC**: Ability Enhancement Course, **PEC**: Professional Elective Course, **PROJ**: Mini Project work **L:** Lecture, **T**: Tutorial, **P**: Practical **S: SDA**: Self Study for Skill Development, **CIE**: Continuous Internal Evaluation, **SEE**:Semester End Evaluation

Professional Elective Course-I			
21EEE541	Object Oriented programming using JAVA	21EEE543	Advanced Control Systems
21EEE542	Signals and Systems	21EEE544	Professional Ethics
21EEE545	Electromagnetic Field Theory		

Ability Enhancement Course-V (For EEE, all are Laboratory Courses 0-0-1-0)			
21EEE551	Simulation tools in Electrical Engineering	21EEE553	Advanced Arduino programming
21EEE552	Power System Protection	21EEE554	Introduction to MATLAB/SCILAB

Professional Elective Courses (PEC): A professional elective (PEC) course is intended to enhance the depth and breadth of educational experience in the Engineering and Technology curriculum. Multidisciplinary courses that are added supplement the latest trend and advanced technology in the selected stream of engineering.

Mini-project work: Mini Project is a laboratory-oriented/hands on course that will provide a platform to students to enhance their practical knowledge and skills by the development of small systems/applications etc. Based on the ability/abilities of the student/s and

recommendations of the mentor. A student can do mini project as

(v) A group of 2 if mini project work is single discipline (applicable to all IT allied branches)

(vi) A group of 2- 4 if mini project work is single discipline (applicable to all Core Branches)

(S) A group of 2 – 4 students if the Mini Project work is a multidisciplinary (Applicable to all Branches)

CIE procedure for Mini-project:

(v) Single discipline: The CIE marks shall be awarded by a committee consisting of the Head of the concerned Department and two faculty members of the Department, one of them being the Guide. The CIE marks awarded for the Mini-project work shall be based on the evaluation of the project report, project presentation skill, and question and answer session in the ratio of 50:25:25. The marks awarded for the project report shall be the same for all the batches mates.

(vi) Interdisciplinary: Continuous Internal Evaluation shall be group-wise at the college level with the participation of all the guides of the project.

The CIE marks awarded for the Mini-project, shall be based on the evaluation of the project report, project presentation skill, and question and answer session in the percentage ratio of 50:25:25. The marks awarded for the project report shall be the same for all the batch mates

Credit Definition: 1-hour Lecture (L) per week=1Credit 2-hoursTutorial(T) per week=1Credit 2-hours Practical / Drawing (P) per week=1Credit 2-hours Self Study for Skill Development (SDA) per week = 1 Credit	03-Credits courses are to be designed for 40 hours in Teaching-Learning Session 02- Credits courses are to be designed for 25 hours of Teaching-Learning Session 01-Credit courses are to be designed for 15 hours of Teaching-Learning Sessions

NEW HORIZON COLLEGE OF ENGINEERING
B. E. in Electrical and Electronics Engineering
Scheme of Teaching and Examinations for 2021- 2025 BATCH (2021 Scheme)

VI Semester													
S. No.	**Course and Course Code**		**Course Title**	**BoS**	**Credit Distribution**				**Overall Credits**	**Contact Hours**	**Marks**		
					L	**T**	**P**	**S**			**CIE**	**SEE**	**Total**
1	HSMC	21EEE61	Operation Research and Management	EE	3	0	0	0	3	3	50	50	**100**
2	PCC	21EEE62	Advanced Industrial and Building Automation	EE	3	0	0	0	3	3	50	50	**100**
3	PCCL	21EEL62	Advanced Industrial and Building Automation Laboratory	EE	0	0	1	0	1	2	50	50	**100**
4	PCC	21EEE63	Power System Analysis	EE	3	0	0	0	3	3	50	50	**100**
5	PCCL	21EEL63	Power System Analysis Laboratory	EE	0	0	1	0	1	2	50	50	**100**
6	PEC	21EEE64X	Professional Elective Course-II	EE	3	0	0	0	3	3	50	50	**100**
7	UHV	21EEK65	Social Connect and Responsibility	EE	0	0	1	0	1	2	50	-	**50**
8	INT	21EEE66	Innovation/Entrepreneurship/ Societal Internship	EE	0	0	3	0	3	0	50	50	**100**
9	MP	21EEE67	Mini project	EE	0	0	1	0	1	0	50	50	**100**
10	OEC	21NHOP6XX	Industrial Open Elective Course-I	Offering Dept.	3	0	0	0	3	3	50	50	**100**
Total									**22**	**21**	**500**	**450**	**950**

HSMC: Humanity and Social Science & Management Course, **PCC**: Professional Core Course, **PCCL**: Professional Core Course

laboratory, **NCMC:** Non-Credit Mandatory Course, **AEC**: Ability Enhancement Course, **PEC**: Professional Elective Course, **OEC**: Open Elective Course, **PROJ**: Project work**, L:** Lecture, **T**: Tutorial, **P**: Practical **S: SDA**: Self Study for Skill Development, C**IE**: Continuous Internal Evaluation, **SEE**:Semester End Evaluation.

Industrial Open Elective Course-I (OEC): Credit for OEC is 03 (L: T: P: S) can be considered as (3: 0: 0 : 0). The teaching and learning of these Courses will be based on hands-on. The Course Assessment will be based on CIE and SEE in practical mode. This Courses will be offered by Centre of Excellence to students of all the branches. Registration to Industrial open electives shall be documented and monitored on college level.

Professional Elective Courses (PEC): A professional elective (PEC) course is intended to enhance the depth and breadth of educational experience in the Engineering and Technology curriculum. Multidisciplinary courses that are added supplement the latest trend and advanced technology in the selected stream of engineering.

21XXX61(HSMC)- This course must be pertaining to economics and management of the concerned degree program. The course syllabus should have both economics and management topics and the course title should bear the word Management.
For IT allied Branches: Software Product Management
For Core Branches: Engineering Economics and Management / Industrial Management / Construction Management

Professional Elective Course-II			
21EEE641	Introduction to Cyber Security	21EEE643	CMOS VLSI Design
21EEE642	Data Structures and Algorithms using Python	21EEE644	High Voltage Engineering
21EEE645	Special Electrical Machines		

Credit Definition: 1-hour Lecture (L) per week=1Credit 2-hoursTutorial(T) per week=1Credit 2-hours Practical / Drawing (P) per week=1Credit	03-Credits courses are to be designed for 40 hours in Teaching-Learning Session 02- Credits courses are to be designed for 25 hours of Teaching-Learning Session

2-hours Self Study for Skill Development (SDA) per week = 1 Credit	01-Credit courses are to be designed for 15 hours of Teaching-Learning Sessions

AGENDA -4

Revision of Vision, mission of the department, revision of Cos, CO-PO mapping of IV year courses-If any

- *All the BoS members are agreed to retain the Vision and Mission of the department and suggested to make modifications in the Program Specific Outcomes.*

Department of Electrical and Electronics Engineering

BoS meeting-AY: 2023-2024

RECOMMENDATIONS OF THE BOARD

The agenda was already circulated among the committee members and the following discussions were made based on the agenda.

Dr Samanvita N, VTU nominee, Professor in EEE, NITTE Meenakshi Institute of Technology, Bengaluru attended the meeting along with Dr. Amuthan N, Professor, AMC Engineering College, Bengaluru, Dr Surekha P, Asst. Professor (Sr. Gr), EEE, Amrita School of Engineering, Bengaluru, Mr K Jeykishan Kumar (Industry expert), Engineering Officer, Central Power Research Institute, Energy efficiency & Renewable Division, CPRI, Bengaluru and Mr. Bhavan N (Meritorious alumni), Controls system engineer, Quest global engineering Pvt Ltd, Bengaluru. The members appreciated the curriculum and syllabi.

Subject 1: Ability enhanced courses- MATLAB and SCI lab courses can be replaced with domain based laboratory courses

Dr. Amuthan N recommended that the Ability enhanced courses- MATLAB and SCI lab courses can be replaced with domain based laboratory courses, since those packages can be included in the laboratory curriculum with hardware experiments. Also, He has added not to mention the specific name of the tool and to represent in terms of course name.

Subject 2: Suggestion to include Measurements and Instrumentation and Signals and Systems as a Professional core course

Dr. Amuthan N suggested to include Measurements and Instrumentation and Signals and Systems as a Professional core course instead of elective course. Since, the course is important for GATE exam preparation and for getting placed in industries and for higher education.

Subject 3: Indexing of text book chapters in syllabus is not necessary

Dr Surekha P opined that the indexing of text book chapters in syllabus is not necessary. It restricts the student to refer different books and narrow down their ability of referring text books.

Subject 4: Sensors and Actuators can be a laboratory course

Dr Surekha P suggested to include Sensors and Actuators as a laboratory course, since mini projects and major projects are done with the sensors. Alumni Mr Bhavan also endorsed this point, as it will be helpful for the students those are working in control system area.

Subject 5: Inclusion of Cloud computing

Dr. Amuthan N opined that the cloud computing course can be included in the curriculum. This course is the on-demand delivery of computing services over the internet which will provide the industry placements to the students.

Subject 6: Suggestions for Ability Enhancement Courses

Dr Samanvita N suggested to include Quantum computing as Ability Enhancement course, as this course will be having good opportunities in future.

Dr. Amuthan N suggested to include IPR, Patent design and Innovation and Design thinking Courses as AEC and advised to train the students in this domain.

Dr Surekha P suggested few courses viz., Semiconductor Physics, Material Science for Electrical Engineering, Arm Processors and Green Computing. As these courses are having opportunities in the industry sectors.

Subject 7: Web design technologies course can be replaced with app development courses:

Dr. Amuthan N opined that the web design technologies course can be removed as it is an outdated course with less package and it can be replaced with the app development courses.

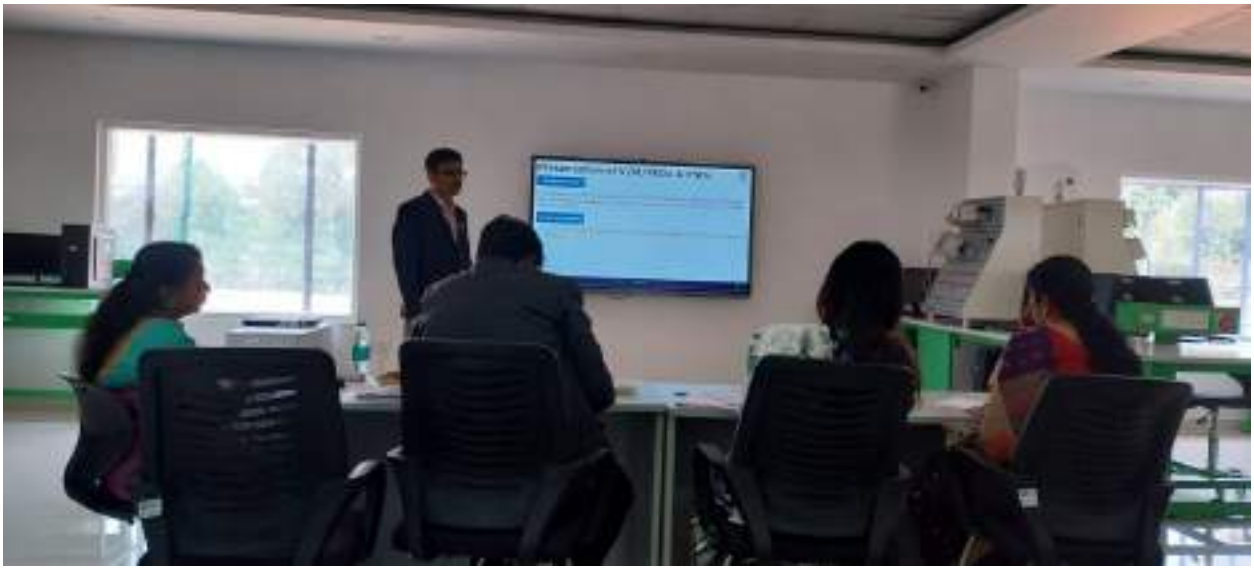
Subject 8: Revision of Vision, Mission, PEOS and PSOs:

All the BoS members are agreed to retain the Vision and Mission of the department and suggested to make modifications in the Program Specific Outcomes (PSOs).

VOTE OF THANKS BY THE CHAIRMAN-BoS

The Chairman thanked all the members for having participated in the meeting and contributed in framing the curriculum and syllabus for 2021-2025 batch and 2022-2026 batch.

Glimpses of BoS meeting for the AY: 2023-2024 –Dt: 04.10.2023




CENTRE OF EXCELLENCE
Schneider
Electric

NEW HORIZON COLLEGE OF ENGINEERING

Autonomous College Permanently Affiliated to VTU, Approved by AICTE & UGC
Accredited by NAAC with 'A' Grade

DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

BOARD OF STUDIES MEETING

DATE	:	4th Oct. 2023
VENUE	:	Dept. of ISE, NHCE
TIME	:	11.00 am to 2.00pm

Professor and Dean-Academics
New Horizon College of Engineering
Ring Road, Bellandur Post
Bengaluru - 560 103

CONTENTS

AGENDA FOR THE MEETING

Agenda 1: BE - Scheme of semester V, VI, VII & VIII of Batch 2021-2025 – Discussion and Approval (NEP 160 Credits)

Agenda 2: Approval of syllabus for BE semester V and VI of Batch 2021-2025 (160 credits)

Agenda 3: BE - Scheme of semsester from III to VIII of Batch 2022-2026– Discussion and Approval (NEP 160 Credits)

Agenda 4: Approval of syllabus for BE semester III and IV of Batch 2022-2026 (160 credits)

Agenda 5: Discussion and Approval of Evaluation Metrics in CIE component

Agenda 6: Suggestions and Recommendations from Board Member

Agenda 7: Concluding Remarks

LIST OF MEMBERS

Sl. No	Category	Nomination of the committee	Name of the person	Designation & Affiliation
1	**Head of the Department**	**Chairperson**	Dr. Vandana C P	Associate Professor & HOD, Dept. of ISE
2	**Special Invitees**	1	Dr.Manjunatha	Principal, NHCE
		2	Dr. R.J Anandhi	Professor and Dean - Academics, NHCE
		3	Dr. Swathi. B	HoD, Dept. of Data Science, NHCE
3	**Faculty member at different level with different specialization**	**Member**		
		1	Dr. K Saravanan	Professor, Dept. of ISE, NHCE, Bangalore
		2	Dr. Arvind Kapse	Professor, Dept. of ISE, NHCE, Bangalore
		3	Dr. Kalaivani D	Associate Professor, Dept. of ISE, NHCE, Bangalore
		4	Mrs. Divya K.V	Sr. Assistant Professor, Dept. of ISE, NHCE, Bangalore
		5	Mrs. TN Chitti	Sr. Assistant Professor, Dept. of ISE, NHCE, Bangalore
4	**Subject expert from outside the college nominated by Academic Council**	**Member**		
		1	Prof. Anandhi Giridharan Principal Research Scientist IISc, Bangalore.	Academic Technical Expert
		2	Dr. Natarajan S Professor and Key Resource Person, PES University,	

			Bengaluru	
5	**Experts from outside the college nominated by VTU**	**Member**		
		1	Dr Nalini, Professor, Dept. of CSE, Nitte Meenakshi Institute of Technology, Bengaluru	VTU Nominee
6	**Representative from Industry / Corporate sector / allied area related to placements, nominated by Academic Council**	**Member**		
		1	Mr. Prasad L.K Founder & Managing Director, Acceleron Labs Ltd., Bangalore.	Industry Technical Expert
		2	Mr. Satyam Jakkula Senior Program Manager-Supplier Management IBM, Bangalore	
7	**Post Graduate meritorious alumni nominated by Principal**	**Member**		
		1	Mr.Aditya Srivastava, Packaged App Development, Senior Analyst, Accenture, Bangalore	Alumini
		2	Mr. Mohamed Nafeel Advanced Software Engineer, Honey Well, Bengaluru	
			Member	
8	**Co-opted members**	1	Mr. Aniz Mirza, Head Placement & Corporate relations, NHCE, Bangalore	Placement
		2	Dr. Sivaramakrishnan, Associate Professor and R&D coordinator, ISE, NHCE	Academic and Research Expertise

		3	Ms. Shruthi, Assistant Professor and Placement Coordinator, Dept. of ISE, NHCE	

WELCOME ADDRESS BY THE CHAIRMAN OF BOS AND INTRODUCTION OF MEMBERS

Minutes

The **BOARD OF STUDIES (2023 – 24)** meeting was held on 4th Oct. 2023 in hybrid mode using Google Meet with internal members, few external members (in person) and other external members joined online.

Dr. K. Saravanan, Professor in the Department of ISE welcomed the BOS Committee members. He presented the agenda of the Board of studies meeting to the members. He introduced the Internal and External BOS members. He started the discussion on the Scheme and syllabus of B.E semester V to VIII of Batch 2021-2025, and semester III to VIII of Batch 2022-2026 which was shared via email to all the board members earlier.

AGENDA - 1

TITLE	BE - Scheme for semester V, VI, VII & VIII of 2021-2025 Batch – Discussion and Approval (NEP 160 Credits)

Minutes

1. Dr. K. Saravanan, professor, ISE presented the scheme of semester V, VI, VII and VIII of 2021-2025 batch.
2. The panel was asked to explain the need of the course 'Innovation & Design Thinking' and it was explained.
3. The panel has suggested to keep internship from semester III onwards. It was explained that based on NEP it is being followed as suggested.

AGENDA - 2

TITLE	Approval of BE syllabus for 5th and 6th semester of Batch 2021-2025 (160 credits)

Minutes

1. Dr.K.Saravanan, professor, ISE presented the syllabus of semester V and VI of Batch 2021-2025.

2. After a detailed discussion on the syllabus the board members approved the syllabus of 5th and 6th semester, which incorporated the previous suggestions given by BOS.

AGENDA - 3

TITLE BE - Scheme of semsester from III to VIII of Batch 2022-2026 – Discussion and Approval (NEP 160 Credits)

Minutes

1. Dr.K.Saravanan, professor, ISE presented the scheme of semester III to VIII of batch 2022-2026.
2. During the presentation the implementation of Non-credit Mandatory Coureses (NCMC) such as National Service Scheme (NSS), Physical Education (PE) (Sports and Athletics) and Yoga were explained.
3. Also about the course under Universal Human Values Course (UHV) was explained.

AGENDA - 4

TITLE BE - syllabus of semsester from III and IV of 2022-2026 Batch – Discussion and Approval (NEP 160 Credits)

Minutes

1. Dr.K.Saravanan, professor, ISE presented the syllabus of semester III and IV of 2022-2026 batch.
2. After a detailed discussion on the syllabus the board members approved the syllabus of 3rd and 4th semester.

AGENDA - 5

TITLE | Suggestions and Recommendations from Board Members

The suggestions from various BOS members are presented as following:

Dr. Anandhi Giridharan , Academic Technical Expert

1. Prof. Dr. Anandhi Giridharan recommended to include a module about 'Edge Computing' in the course 'Principles of Cloud Computing' in semester V of Batch 2021-25. The internal committee has decided to incorporate it in the upcoming batch syllabus.
2. She asked whether outreach programme is there in practice or not. Dr. Vandana, HoD, explained that the process is in practice with Activity point (100 points)
3. She also suggested to include the course 'Signal processing'. This suggestion will be implemented in upcoming scheme.

Dr Natarajan S, Academic Technical Expert

1. Prof. Dr Natarajan recommended to have 'Principles of Cyber Security' course as elective, instead of keeping it as a core subject. But the input from placement department requested to have it as a core subject.
2. The professor suggested to invite the technical experts from industry for atleast few of the topics of 'Innovation & Design thinking'. The suggested point will be followed in TLP.
3. He suggested to push 'Research Methodology' in the higher semesters. This suggestion will be followed from the upcoming batches onwards.
4. He suggested to change the name of the professional elective course 'Bio inspired Design and Innovation' into 'Bio-inspired computing' in sem. VI of Batch 2021-25. Since the course is to be provided commonly to all braches, this can be done in future.
5. He suggested that the course 'Computer Vision' could be named as 'Image processing and Computer vision' in sem. V of Batch 2022-26. It will be incoprporated.

6. He also suggested that the faculty upgradation should be a continuous process and to balance between the theoretical and practical approaches.

Mr. Prasad L.K, Industry Technical Expert

1. Mr. Prasad appreciated the BOS process and mentioned that the scheme and syllabus of ISE department is in line with the industry requirements and standards.
2. He suggested to check whether the course 'Operations Research' is meant to be in electivelist in sem. V of Batch 2021-25. Later the BoS decided that it should be in elective list.
3. He suggested to add 'Computer storage' in syllabus and suggested that it can be a part of cloud computing course. It will be incorporated.
4. He suggested to change the name of the course 'Virtual Reality' into 'Virtual Reality & Augmented Reality' in semester VII of Batch 2021-25. It will be incorporated.
5. He also suggested to rename the course of 'Advanced Machine Learning' into 'Machine Learning' in sem. VI of Batch 2021-25. It will be incorporated.
6. He suggested to establish practical lab exclusively for cloud computing. This suggestion will be implemented during the upcoming batches onwards.

Mr. Satyam Jakkula, Industry Technical Expert

1. Mr. Satyam Jakkula suggested that faculties can have mentors from industry to further enhance the skills. He was explained that his suggestion is in-practise already.
2. He suggested to collaborate with IBM in organizing guest lectures. He was explained about the MoU which was signed recently with IBM.
3. BOS chairman updated that guest talks are being conducted by industry experts in all the courses (especially 5th module) to bridge the gap between academics and industry and to enrich students' knowledge with up-to-date technology trends.
4. BOS chairman explained the presence of strong industry institute interaction cell and 19 Center of Excellence (COE) in college. Also she explaine about ongoing program 'Train the Trainer' which is being conducted in COEs which enhances faculty skillset.
5. BOS chairman also highlighted that 'Life skill and lifelong learning' is a separate department in college which enhance the communication skill, soft skill and

personality development of students. Toastmaster collaborated activities are in place and students actively take part in it.

Dr. Nalini, VTU Nominee

1. Prof. Dr. Nalini appreciated that the scheme and syllabus is well framed
2. She suggested for integrated labs in the scheme.
3. She also suggested to incorporate Information retrieval systems, Full stack web development subjects in the curriculum . This suggestion will be followed from the upcoming batches onwards.

Mr. Prashanth, Alumnus from 2012-2016 Batch

1. Mr. Prasanth observed that too many subjects are loaded in the Semester V. But later it was considered that no theory courses in semester VIII, it is decided to keep as it is.
2. He suggested that in the semester VIII students should have one MBA Syllabus ('Income Tax' oriented clourse can be there which can also be a non-credit course). This suggestion will be followed from the upcoming batches onwards.
3. Communication skill course inclusion in scheme was appreciated.
4. BOS chairman shared the observation that lower semester students came up with very innovative ideas which got recognized in National level events.

Mr. Mohamed Nafeel, Alumnus from 2012-2016 Batch

1. Mr. Mohamed Nafeel suggested to incorportate some practical concepts in the course 'Natural Language Processing'.
2. Full stack course as profession elective can be doensized, as it is very elaborated.
3. He suggested that the Real – time operating system should be incorporated in 'Operating System' subject. It can be done in the upcoming batches onwards.

Mr. Aniz Mirza, Placement Nominee

1. Mr. Aniz updated that during internship period, department closely and constantly monitor the students so that they can be absorbed by companies.
2. College provides the orientation session before any placement drive highlighting the company polices, culture and basic etiquette to be followed.

3. Suggested that the mini project documentations can be shared with faculties via email so that email writing process comes inbuilt.
4. BOS chairman augmented that the suggestions provided will be considered and feasible solutions will be provided.

AGENDA - 6

TITLE Concluding Remarks

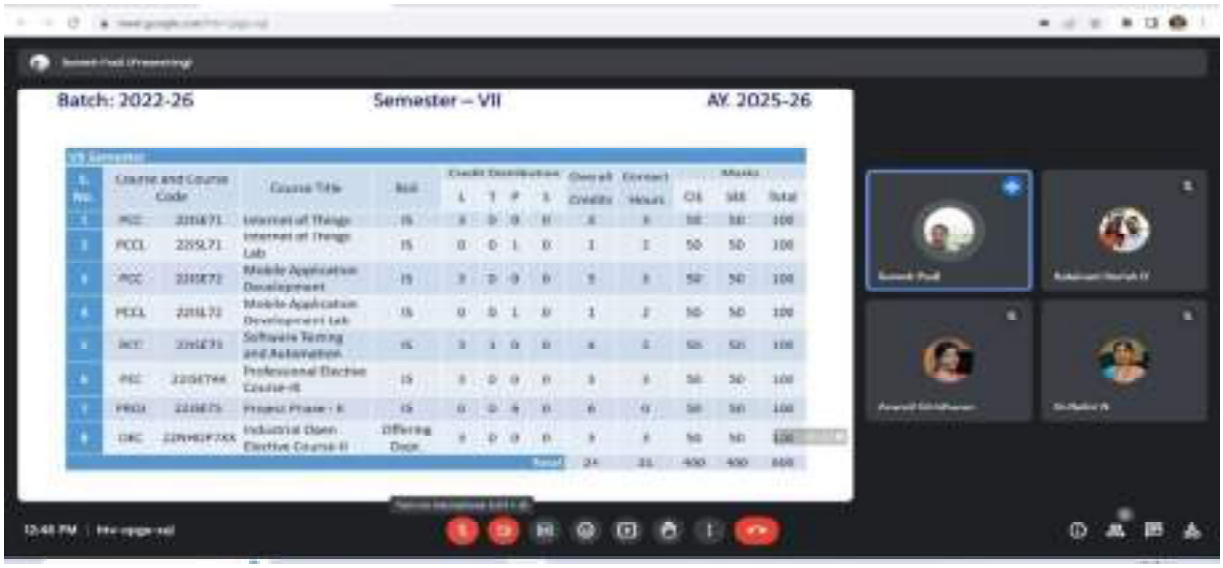
Minutes

1. BOS chairperson expressed that the students are being given quality education as par with foreign universities.
2. Also she explained that the Industry readiness and technical excellence are being attained in trending technologies.
3. She enlightened that the students and faculty are trained to write proposals for funding agencies.

SCREENSHOTS


Shot on OnePlus


Batch: 2022-26
Semester – IV
AY: 2023-24



VOTE OF THANKS BY THE CHAIRMAN-BOS

BOS Chairman delivered Vote of Thanks and appreciated each and every member of the board for their contribution and valuable suggestions provided.

NEW HORIZON
COLLEGE OF ENGINEERING
New Horizon Knowledge Park, Ring Road, Marathalli
Autonomous College Permanently Affiliated to VTU, Approved by AICTE & UGC
Accredited by NAAC with 'A' Grade, Accredited by NBA

DEPARTMENT OF MANAGEMENT STUDIES

9th BOARD OF STUDIES MEETING

Minutes of Meeting

ACADEMIC YEAR 2023-24

Date : 8th November 2023

Venue : Hall No: 308, Netaji Subash Chandra Bose Block

Time : 10.00 AM to 01.00 PM

CONTENTS

AGENDA: Review of Syllabus

1. Welcome address by BOS Chairman.
2. Presentation by chairman of BOS about department achievements
3. Presentation of proceedings of the previous BOS meeting by chairman of BOS
4. Proposed course details of 2022 -23 batch of the 3rd and 4th Semester.
5. Presentation of draft scheme & syllabus for the commencement of semesters (Agenda-1) schemes for ratification.
6. Recommendations/ suggestions of BOS members
7. Implementation of recommendation of BOS members
8. Approval of syllabus for all the semesters
9. Proposed course details of 2023 -24 batch of the 1st and 2nd Semester.
10. Presentation of draft scheme & syllabus for the commencement of semesters (Agenda-2) schemes for ratification.
11. Recommendations/ suggestions of BOS members
12. Implementation of recommendation of BOS members
13. Approval of syllabus for all the semesters
14. Vote of Thanks

Department of Management Studies

List of the Members of the Board of Studies -2023-24

S. No	Category	Nomination of the committee	Name of the person	Designation & Affiliation
1	**Head of the Department**	**Chairperson**	Dr. Guru Basava Aradhya S	Prof. & Head – Management Studies, NHCE Bangalore
2	**Special Invitees**	1	Dr. Manjunatha	Principal, NHCE
		2	Dr. Anandhi R J	Prof. & Dean-Academics – NHCE
		3	Dr. Gurucharan Singh	Executive Director, HRD, NHCE, Bangalore
3	**Faculty member at different level with different specialization**	**Members**		
		1	Dr. Rose Kavitha	Professor, MBA, NHCE
		2	Dr. Priyameet Kaur Keer	Associate Prof., MBA, NHCE
		3	Dr. Dhanlakshmi R V	Associate Prof., MBA, NHCE
		4	Dr. Krishna Kumar D	Associate Prof., MBA, NHCE
		5	Dr. Sandhya CH VL	Sr. Assistant Prof., MBA, NHCE
4	**Subject expert from outside the college nominated by Academic Council**	**Members**		
		1	Dr. Sheetal Mahender	Professor & Head, Department of Business Analytics, ISBR Business School, Bangalore
		2	Dr. Pratap B N	Professor & Head, Department of MBA & Research Centre, East West Institute of Technology, Bangalore
		3	Dr. Shubhashree Acharya	Associate Professor, School of Business & Management, Christ University, Lavasa Campus, Pune
		4	Mr. Balakrishna	Head Marketing, Degree Granting Programs, IIM-Bangalore

5	**Experts from outside the college nominated by VTU**	**Member**		
		1	Dr. Manoharan S	Professor, BMSCE, Bangalore
		Members		
6	**Representative from Industry / Corporate sector / allied area related to placements, nominated by Academic Council**	1	Mr. Kamal Artwani	Talent Leader, Tekion Corp, Bangalore
7	**Post Graduate meritorious alumni nominated by Principal**	**Members**		
		1	Ms. Sonali	Goldman Sachs
8	**Co-opted members**	**Members**		
		1	Ms. Saumi Roy	Assistant Professor, MBA, NHCE
		2	Mr. Seshu A N	Sr. Asst. Professor, MBA, NHCE
		3	Ms. Ankitha Jeewankar	Assistant Professor, MBA, NHCE
		4	Ms. Shalini S N	Assistant Professor, MBA, NHCE
		5	Ms. Aiswarya D Pillai	Assistant Professor, MBA, NHCE
		6	Mr. Rajath Hubballi	Assistant Professor, MBA, NHCE

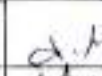
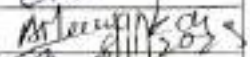
LIST OF MEMBERS PRESENT

Department of Management Studies

Board of Studies -2023-24

8th November 2023

S. No	Category	Nomination of the committee	Name of the person	Signature
1	Head of the Department	Chairperson	Dr. Guru Basava Aradhya S	8/11/2023
2	Special Invitees	1	Dr. Manjunatha	
		2	Dr. Anandhi R J	
		3	Dr. Gurucharan Singh	
3	Faculty member at different level with different specialization			
		1	Dr. Rose Kavitha	
		2	Dr. Priyameet Kaur Keer	
		3	Dr. Dhanlakshmi R V	
		4	Dr. Krishna Kumar D	8/11/23
		5	Dr. Sandhya CH VL	
4	Subject expert from outside the college nominated by Academic Council			
		1	Dr. Sheetal Mahender	8/11/2023
		2	Dr. Pratap B N	
		3	Dr. Shubhashree Acharya	
		4	Mr. Balakrishna	
5	Experts from outside the college nominated by VTU			
		1	Dr. Manoharan S	

6	Representative from Industry / Corporate sector / allied area related to placements, nominated by Academic Council	1	Mr. Kamal Artwani	
7	Post Graduate meritorious alumni nominated by Principal	1	Ms. Sonali	
8	Co-opted members	1	Ms. Saumi Roy	
		2	Mr. Sheshu A	
		3	Ms. Ankita Jeewankar	
		4	Ms. Shalini SN	
		5	Ms. Aiswarya D Pillai	
		6	Mr. Rajat Hubballi	

WELCOME ADDRESS BY THE CHAIRMAN OF THE BOS AND INTRODUCTION OF MEMBERS

Minutes:

Head, Department of Management Studies Dr. Guru Basava Aradhya, Chairperson of the Board of Studies welcomed all the members of MBA- BOS and explained the course structure. Chairperson of the BOS welcomed the nominee of the VTU Dr. Manoharan S, Professor, BMSCE, Bangalore and Subject expert from outside the college nominated by Academic Council Members Dr. Sheetal Mahender-Professor & Head, Department of Business Analytics, ISBR Business School, Bangalore, Dr. Pratap B N- Professor & Head, Department of MBA & Research Centre, East West Institute of Technology, Bangalore, Dr. Shubhashree Acharya- Associate Professor, School of Business & Management, Christ University, Lavasa Campus, Pune and Mr. Balakrishna- Head Marketing, Degree Granting Programs, IIM-Bangalore.

Dr. Guru Basava Aradhya also welcomed the Representative from Industry nominated by Academic Council Mr. Kamal Artwani Talent leader, Tekion Corp, Bangalore and Post graduate meritorious alumni nominated by principal Ms. Sonali Kathare-Senior Analyst, Goldman Sachs.

HOD, Management Studies has also introduced all the internal board members to the members of the BOS, Professor, Dr. Rose Kavitha, Professor, Dr. Priyameet Kaur, Associate Professor, Dr. Krishna Kumar, Associate Professor, Dr. Dhanalakshmi, Associate professor, Prof. Sheshu A N-Sr. Assistant Professor, Dr. Sandhya CH V. L-Sr. Assistant Professor, Prof. Saumi Roy-Assistant Professor, Prof. Shalini S N-Assistant Professor, Prof Ankitha Jeewankar-Assistant Professor, Prof. Aiswarya D Pillai-Assistant Professor, Prof. Rajath Hubballi-Assistant Professor

HOD explained the structure of overall MBA Program, Scheme of evaluation, Electives offered and the Value-Added Programmes for the Executive, Professional and Global Streams of MBA. The agenda for the MBA -BOS was read and the forum was open for individual subject discussion.

Agenda 1 - Discussion on syllabus for MBA III /IV SEM

Dr. Guru Basava Aradhya, HOD of management studies has presented the course structure and detailed regarding the subjects and credits involved in the programme. The BOS team had suggestions regarding the subjects in the 3rd and 4th semester. This includes a change of name for the subject global retail management to retail management as there is no much difference in both the subjects as the contents stands the same.

The team has suggested to make additions in the content of sales and distribution management as to include 7 steps of selling process in module 1, remove design thinking from module 2 and certain books in terms of SAP syllabus into the reference criteria.

In the subject Investment Management, the team have suggested to change the contents that will include wealth management, algorithm trading, basic terms and process of wealth management and also to include behavioural finance and its relevance in one of the modules.

All the decision science subjects in the syllabus should be restructure according to the learning level so that the students will have good knowledge about the tools. They have suggested to Text and Social Media Analytics, Analytics Application in Functional Area and Statistical Modeling using R as new subjects into 3rd semester. The theory part in the subjects should also be supported with the practical essence of the same.

Financial Decision Making syllabus needs to be restructured as it contains only financial management contents and lacks strategic financial management.

Agenda 2- Discussion on syllabus for MBA I /II SEM

Dr. Guru Basava Aradhya, HOD of management studies has presented the course structure and detailed regarding the subjects and credits involved in the programme. The members have suggested to change the name of two papers from semester one namely Management Principles, Concepts and Applications and Managerial communication as per the contents in the syllabus. The team also suggested to revamp the syllabus of Indian Ethos and Corporate Governance as per current requirements and it's renamed as business ethics and corporate governance.

The team has suggested to include basics of Excel into semester 1 and also needs to introduce operational research into semester 2. Also suggested to include corporate exposure seminar in between 1st and 2nd semester. The operations Management subject has been renamed as

Productions and operations management. For each suggestion, respective faculties have given explanation and has note it down to make changes before the finalization of syllabus.

Agenda 3: Finalization of syllabus along with incorporations of Recommendations and Suggestions

It was resolved to:

- Amend the name of Management Principles, Concepts and Applications.
- New subject called Basics of Excel need to be introduced into semester 1 with 2 credits.
- Revamp the total syllabus of Indian Ethos and Corporate governance and renamed as Business Ethics and Corporate Governance.
- Quantitative Techniques and Operations Research will be included in 2nd semester with 4 credits.
- Business Research Methods and management principles, concepts & applications has been reduced to 3 credits.
- Remove the component of design thinking from sales and distribution management course.
- Restructure the entire decision science subjects and that should also include practical sessions.
- Text and Social Media Analytics, Analytics Application in Functional Area and Statistical Modeling using R as new subjects into 3rd semester.
- Human resource management and Business ethics and Corporate Governance will have 3 credits.
- Continue with the existing duration of 8 weeks for both the Internship and the Project work.
- Put efforts in converting students' projects into research articles and case studies.

Agenda 4 - Summarizing the Minutes of Meeting

To sum-up, the members of the BOS were happy about the overall structure of the MBA program. They were appreciative of the value-added programmes and the various certifications offered. They emphasized the need for effective delivery with relevant pedagogical tools and wished all the best for the team MBA.

VOTE OF THANKS

The coordinator-BOS, Prof. Aiswarya D Pillai proposed the Vote of Thanks. She individually thanked the BOS Members for their committed participation in the discussions and for their valued inputs. She then thanked the nominee of the VTU Dr. Manoharan S, Professor, BMSCE, and Subject experts Dr. Sheetal Mahender-Professor & Head, Department of Business Analytics, ISBR Business School, Bangalore, Dr. Pratap B N- Professor & Head, Department of MBA & Research Centre, East West Institute of Technology, Bangalore, Dr. Shubhashree Acharya- Associate Professor, School of Business & Management, Christ University, Lavasa Campus, Pune and Mr. Balakrishna-Head Marketing, Degree Granting Programs, IIM-Bangalore. Prof. Aiswarya D Pillai also thanked the Representative from Industry nominated by Academic Council Mr. Kamal Artwani Talent leader, Tekion Corp, Bangalore and Post graduate meritorious alumni nominated by principal Ms. Sonali Kathare-Senior Analyst, Goldman Sachs and all other members of the department.

NEW HORIZON
COLLEGE OF ENGINEERING
Autonomous College Permanently Affiliated to VTU, Approved by AICTE & UGC
Accredited by NAAC with 'A' Grade, Accredited by NBA
New Horizon Knowledge Park, Ring Road, Bellandur Post, Bengaluru 560 103

DEPARTMENT OF MASTER OF COMPUTER APPLICATIONS

9th Board of Studies Meeting

Minutes of Meeting

Academic Year 2023-24

Venue: B-308, Sardar Vallabhbhai Patel Block

Date: 23-09-2023

Time: 10.30AM – 12.30 PM

NHCE/MCA/2023-24

Head of the Department
Department of Master of Computer Applications
NEW HORIZON COLLEGE OF ENGINEERING
Ring Road, Bellandur Post, Bengaluru - 560 103

Dr R J Anandhi
Professor and Dean-Academics
New Horizon College of Engineering
Ring Road Bellandur Post
Bengaluru - 560 103

CONTENTS

CONSTITUTION OF THE BOARD OF STUDIES (2023-24)

S.No.	Academic Board	Structure/Constitution	Functions/Responsibilities	Frequency of Meetings
1	**BOS**	BOS Constituted with • Head of the Department as Chairman • Faculty members at different level with different specialization • Subject experts from outside the college nominated by academic council • Academic Expert from outside the college nominated by VTU • Representatives from Industry / Corporate sector / allied area related to placements, nominated by academic council • Post Graduate meritorious alumni nominated by Principal • Co-opted members with academic & research expertise.	• Recommendation and approval of curriculum-Scheme and Syllabus • Suggestions for incorporating new technologies /course • Removal of obsolete topics • To bridge the gap between industry and academia with supportive instructions and relevance • Validation and approval of course objectives and outcomes • Module-wise recommendation/ discussion/ suggestion for each proposed course of curriculum • Recommendations and approval of rubrics for evaluation.	Once in a year

- **BOS-CHAIRMAN**

List of Members

S.No	Category	Name of the Person
1	Chairperson – BOS	Dr. V. Asha, Professor & Head, Department of MCA, NHCE, Bengaluru.
2	Special Invitees (one academician from Institution of National Eminence, IIT, NIT, IIM, IISC)	Dr. Manjunatha B Head of the Institution, New Horizon College of Engineering, Bengaluru.
		Dr. Jaidhar C D, Associate Professor & Head, Department of Information Technology, National Institution of Technology, Suratkal
		Dr. R.J. Anandhi, Dean Academics, NHCE, Bengaluru.
3	Subject Experts from outside the College nominated by Academic Council (VTU Nominee)	Dr. Balaji Rajendran, Associate Director, C-DAC, Bengaluru.
4	Representative from Industry/ Corporate Sector / allied area relating to placements nominated by Academic Council	Mr. Pravin Kumar Sinha Lead Data Engineer, VISA, Bengaluru.
		Mr. Melvin Vincent, Senior Customer Support Engineer, Azul Inc. Bengaluru
5	Postgraduate Meritorious alumnus nominated by Principal	Mr. Vipul Kumar, Sr. Consultant Engineer, Open Text, Bengaluru.
		Mr. Vasanthram S, Sr. Program Manager, ARYAKA networks, Bengaluru.
6	Subject Experts from outside the College nominated by Academic Council	Prof. Lakshminarayana, Associate Professor, Department of MCA, BMS College of Engineering, Bengaluru.

7	Faculty members at different levels with different specializations	Dr. A. P Nirmala
		Dr. Nithya Ramesh
		Dr. Arpana Prasad
		Prof. S.P. Sreeja
8	Co-opted member	Mr. Gurcharan Singh
		Mr. Aniz Mirza
		Prof. M. Govindaraj
		Prof. Jincy C Mathew
		Prof. Binju Saju
		Prof. Neethu Tressa

List of BoS Members Present

Sl. NO	NAME	SIGNATURE	Sl. NO	NAME	SIGNATURE
1.	Dr. V. Asha		12.	Dr. A.P. Nirmala	
2.	Dr. R.J. Anandhi		13.	Dr. Nithya Ramesh	
3.	Dr. Balaji Rajendran		14.	Dr. Arpana Prasad	
4.	Prof. Gurucharan Singh		15.	Prof. S.P. Sreeja	
5.	Dr. C.D. Jaidhar	Online	16.	Prof. Govindaraj M	
6.	Prof. Lakshminarayana		17.	Prof. Jincy C Mathew	
7.	Mr. Pravin Kumar Sinha		18.	Prof. Binju Saju	
8.	Mr. S. Vasanthram		19.	Prof. Neethu Tressa	
9.	Mr. Anig Mirza				
10.	Mr. Vipul Kumar				
11.	Mr. Melvin Vincent				

Welcome Address and Introduction of the Members

The 9th Board of Studies meeting for Department of Master of Computer Applications was held on 23rd September 2023 at 10.30 am.

At the outset, Chairperson Dr. V. Asha – Professor & Head – Department of Master of Computer Applications, welcomed all the members to the 9th Board of Studies meeting. The Chairperson introduced special invitees from the college and invited academician Dr. Jaidhar C D, Associate Professor & Head, Department of IT, National Institute of Technology, Suratkal.

The Chairperson further expressed special thanks to the subject expert and VTU nominee Dr. Balaji Rajendran, Associate Director C-DAC. Subject expert from outside the college nominated by the academic council Prof. Lakshminarayana from Department of MCA, BMS College of Engineering was also given a warm introduction and welcome by the chairperson.

The chairperson also expressed her gratitude to industrial nominee by Academic Council Mr. Pravin Kumar Sinha from VISA Bengaluru and Mr. Vasanthram S from ARYAKA networks for sparing the time from their busy schedule to attend the meeting. In attendance meritorious alumnus Mr Vipul Kumar, Sr. Consultant Engineer, Open Text and Mr Melvin Vincent, Senior Customer Support Engineer, Azul Inc nominated by the Principal were also introduced and welcomed. The chairperson gave a valued introduction for Mr. Aniz Mirza from Department of HRD, New Horizon College of Engineering. The faculty members at different levels with different specializations and the coopted members from the department were also introduced to the attendees.

AGENDA 1: Highlights of MCA Programme

- Academic strength
- Technical strengths of curriculum
- Industry-Academia Interaction
- Opportunities to demonstrate technical expertise
- Generating and enabling creativity
- Faculty resources
- Learning Infrastructure
- Trending Value-Added Professional Programs

AGENDA 2: Proposed Scheme and Syllabus for the Academic Year 2023-24 (Batch 2022-24, Semester III & IV)

MCA DEGREE CURRICULUM – CREDIT DISTRIBUTION TABLE FOR THE 2022-24 BATCH ONWARDS (100 CREDITS)

SEMESTER I TO IV

SEMESTER	CORE	ELECTIVE	MINI PROJECT / PROJECT WORK	SEMINAR	TOTAL CREDITS
I	25	0	0	0	25
II	17	6	2	0	25
III	9	9	4	2	24
IV	0	3	22	1	26
TOTAL	51	18	28	3	100
% of Distribution	51%	18%	28%	3%	100%

DEPARTMENT OF MASTER OF COMPUTER APPLICATIONS
SCHEME OF THIRD SEMESTER MCA PROGRAM
AY 2023-24 NEP BATCH

SNO	BOARD/ COURSE	COURSE CODE	COURSE	BOS	CREDIT DISTRIBUTION				OVERALL CREDITS	CONTACT HOURS WEEKLY (THEORY)	MARKS		
					L	T	P	S			CIE	SEE	TOTAL
1	MCA/PCC	23MCA31	MACHINE LEARNING TECHNIQUES	MCA	3	0	0	0	3	3	50	50	100
2	MCA/PCC	23MCA32	FULL STACK DEVELOPMENT TOOLS	MCA	3	0	0	0	3	3	50	50	100
3	MCA/PEC	23MCA33X	PROFESSIONAL ELECTIVES - 3	MCA	3	0	0	0	3	3	50	50	100
4	MCA/PEC	23MCA34X	PROFESSIONAL ELECTIVES – 4	MCA	3	0	0	0	3	3	50	50	100
5	MCA/PCCL	23MCAL35	MACHINE LEARNING USING PYTHON LAB	MCA	0	0	1.5	0	1.5	3	50	50	100
6	MCA/PCCL	23MCAL36	FULL STACK LAB	MCA	0	0	1.5	0	1.5	3	50	50	100
7	MCA/PROJ1	23MCAL37	PROJECT WORK PHASE-1	MCA	0	0	2	0	2	-	100	-	100
8	MCA/SP	23MCAL38	SOCIETAL PROJECT	MCA	0	0	2	0	2	-	100	-	100
9	MCA/OEC	20NHOPXXX	OPEN ELECTIVE COURSE	MCA	3	-	-	-	3	3	50	50	100
10	MCA/SEM	23MCA39	TECHNICAL SEMINAR-1	MCA	-	-	-	2	2	-	50	50	100
TOTAL					15	0	7	2	24	21	600	400	1000

L -Lecture (1 hour), T- Tutorial (2 hours), P-Practical (2 hours), S-Self Study (hours – Nil)
*PCC- Professional Core, PEC-Professional Elective Course, INT – Internship,
SP - Societal Project, PROJ- Project Work

PROFESSIONAL ELECTIVES - 3								
SNO	COURSE CODE	COURSE	BOS	CREDIT DISTRIBUTION				TOTAL
				L	T	P	S	
1	23MCA331	ADVANCED WEB DESIGN TECHNOLOGIES	MCA	3	0	0	0	3
2	23MCA332	CLOUD COMPUTING	MCA	3	0	0	0	3
3	23MCA333	NON-RELATIONAL DATABASES	MCA	3	0	0	0	3
4	23MCA334	INTERNET OF EVERYTHING	MCA	3	0	0	0	3
5	23MCA335	DEEP LEARNING TECHNIQUES	MCA	3	0	0	0	3

PROFESSIONAL ELECTIVES – 4								
SNO	COURSE CODE	COURSE	BOS	CREDIT DISTRIBUTION				TOTAL
				L	T	P	S	
1	23MCA341	DATA SCIENCE	MCA	3	0	0	0	3
2	23MCA342	COMPUTER VISION	MCA	3	0	0	0	3
3	23MCA343	AUGMENTED REALITY AND VIRTUAL REALITY	MCA	3	0	0	0	3
4	23MCA344	MOBILE APPLICATION DEVELOPMENT	MCA	3	0	0	0	3
5	23MCA345	AGILE SOFTWARE DEVELOPMENT	MCA	3	0	0	0	3

OPEN ELECTIVE COURSES								
SNO	COURSE CODE	COURSE	BOS	CREDIT DISTRIBUTION				TOTAL
				L	T	P	S	
1	20NHOP601	BIG DATA ANALYTICS USING HP VERTICA-1	MCA	3	0	0	0	3
2	20NHOP602	VM WARE VIRTUALISATION ESSENTIALS-1	MCA	3	0	0	0	3
3	20NHOP614	BLOCKCHAIN	MCA	3	0	0	0	3
4	20NHOP728A	DATABASE ADMINISTRATION USING DB2	MCA	3	0	0	0	3

DEPARTMENT OF MASTER OF COMPUTER APPLICATIONS
SCHEME OF FOURTH SEMESTER MCA PROGRAM
AY 2023-24 NEP BATCH

S NO	BOARD/ COURSE	COURSE CODE	COURSE	BOS	CREDIT DISTRIBUTION				OVERALL CREDITS	CONTACT HOURS WEEKLY	MARKS		
					L	T	P	S			CIE	SEE	TOTAL
1	MCA/PEC	23MCA41X	PROFESSIONAL ELECTIVES - 5	MCA	3	0	0	0	3	3	50	50	100
9	MCA/INT	23MCA42	INTERNSHIP	MCA	(06 weeks Internship to be completed in intervening vacation of Semester II and Semester III)				6	-	50	50	100
3	MCA/SEM	23MCA43	TECHNICAL SEMINAR -2	MCA	-	-	-	1	1	-	50	50	100
4	MCA/PROJ2	23MCA44	PROJECT WORK PHASE – 2	MCA	-	-	16	-	16	-	100	100	200
5	AUD/AEC	23AUD45	BOS RECOMMENDED TWO ONLINE COURSES		Classes and evaluation procedures are as per the policy of the online course providers.								PP
TOTAL					3	-	16	1	26	3	250	250	500

L -Lecture (1 hour), T- Tutorial (2 hours), P-Practical (2 hours), S-Self Study (hours – Nil)
*PEC-Professional Elective Course AEC– Ability Enhancement Course, SEM-Seminar, OEC-Open Elective Course, PROJ- Project Work

PROFESSIONAL ELECTIVES – 5								
SNO	COURSE CODE	COURSE	BOS	CREDIT DISTRIBUTION				TOTAL
				L	T	P	S	
1	23MCA411	PROFESSIONAL ETHICS	MCA	3	0	0	0	3
2	23MCA412	DESIGN THINKING	MCA	3	0	0	0	3
3	23MCA413	SOFTWARE PROJECT MANAGEMENT	MCA	3	0	0	0	3
4	23MCA414	ENTREPRENEURSHIP AND INNOVATION MANAGEMENT	MCA	3	0	0	0	3
5	23MCA415	DIGITAL MARKETING	MCA	3	0	0	0	3

AGENDA 3: CO, PO, Credit and RBT levels requirements and mapping verification

S.NO	Graduate Attributes	Program Outcomes (POs)
1.	Computational Knowledge	**PO1:** Apply computing knowledge, mathematical knowledge and domain knowledge to create and develop new models for real world applications.
2.	Problem Analysis	**PO2:** Identify, formulate, review research literature and analyze complex problems using principles of mathematics, computing sciences and relevant domains.
3.	Design /Development of Solutions	**PO3:** Design, implement, test and maintain solutions for systems, components or processes that meet specific needs with consideration for public health safety, societal and environmental issues.
4.	Conduct Investigations of Complex Computing Problems	**PO4:** Use Research–based knowledge to analyse and interpret data to obtain viable conclusions.
5.	Modern Tool Usage	**PO5:** Use modern tools, techniques and skills to solve complex and critical computing problems with an understanding of their limitations.
6.	Professional Ethics	**PO6:** Understand and apply ethical principles, cyber regulations and commit to professional computing practice and responsibilities.
7.	Life-long Learning	**PO7:** Recognize the importance of self-learning for continual Development as a computing professional.
8.	Project management and finance	**PO8:** Demonstrate the management principles for managing projects as an individual, as a member and as a leader in a team under multidisciplinary environments.
9.	Communication Efficacy	**PO9:** Recognize the importance of communication within the Computing community and the society at large.
10.	Societal and Environmental Concern	**PO10:** Understand and assess the local and global influence of software solutions and responsibilities related to Professional computing practice.
11.	Individual and Team Work	**PO11:**Deliver effectively as an individual and as a member or leader in diverse teams and in multidisciplinary Environments.
12.	Innovation and Entrepreneurship	**PO12** : Adopt standardized computer application practices with innovative ideas to succeed as an employee or an entrepreneur.

The aforementioned POs are mapped with the Course Outcomes in each course (CO) by using the CO-PO table.

The correlated values 3, 2 and 1 refer the degree of correlation of the CO-PO mapping. The enumerated values are labeled as High (3), Medium (2), and Low (1).

The Co's are written using Revised Bloom's Taxonomical (RBT) levels to ensure the attainment.

The course outcomes are well-written in terms of cognitive levels (Level 1 to 6)

- Level 1 –Remember
- Level 2 –Understand
- Level 3 –Apply
- Level 4 –Analyze
- Level 5 –Evaluate
- Level 6 –Create

Every course CO-PO mapping were verified by both the faculty members and expert members of the BOS.

AGENDA 4: Suggestions and Recommendations of the BoS Members

The valuable suggestions by the experts are as follows:

- Subject name for 23MCA334 is 'Internet of Everything,' but syllabus mentions 'Internet of Things' in contents, rectifications may be made accordingly.
- Remove weightage for PO3 'Design and Development of Solutions' from theory courses, include it in laboratory courses only.
- Avoid using 'Tools' and 'Techniques' in course names, use generic terms like 'Full Stack Development' for 23MCA32. Same may be checked for other courses.
- It is suggested that the students take internships after the second semester but before the third semester begins.
- Change 'Online Course' in Semester IV to 'Certified Online Course.'
- Reduce internship credits from 6 to 3 or 4.
- Modify the course name for 23MCAL35 to 'Machine Learning Lab using Python.'
- Keep CO and PO mapping minimalistic.
- Ensure attainment of all Course Outcomes (COs).
- Allow Societal Projects to be done in groups.
- Include SEE for Societal Projects since it is a credited course.
- Include 'Software Project Management' in Semester 3 as a PCC (Professional Core Course) instead of Project Work Phase 1.
- Assign weightage of 2 for PO8- 'Project Management and Finance' for Project courses only.
- Replace Project Work Phase 1 and Phase 2 with a single 'Major Project' in Semester 4 with more credits.
- Equalize credits for Technical Seminar in Semester III and Semester IV. The Chairperson of the BOS welcomed all the suggestions and assured that these suggestions will be taken care while preparing the scheme and syllabus.

AGENDA 5: Approval of scheme & syllabus

The Board of Studies members reviewed the modified draft of the scheme & syllabus with their recommendations/suggestions being incorporated appropriately. Finally, the members approved the draft of the same with the modifications for final implementation.

AGENDA 6: Stakeholders Feedback and Considerations

- Students feedback & exit survey comments, Faculty members course feedback, PTM comments and External expert members comments are incorporated into the BoS decisions to make the curriculum complaint free.
- Student's course feedback – taken every academic semester for all individual courses through feedback link shared from Library & Information Centre, NHCE.
- Exit Survey taken from graduating students while leaving the campus, which recollects about the infrastructure, curriculum, placement opportunities and other facilities.
- Faculty course feedback taken from the individual faculty members who taught the course in the academic semesters. The pros & cons in the content, mode of delivery etc.…. were taken and considered.
- PTM meeting is held twice in a year (interim period of odd and even semesters). The faculty coordinator records and minutes the remarks received and taken the same for BoS decisions.

Vote of thanks

BOS – Chairman consolidated the recommendations proposed by the BOS members. Recommendations were accepted by every member of the BOS.

It was assured that the proposed changes will be incorporated in the syllabus and scheme of A.Y: 2023-24 (3rd & 4thSemesters).

The vote of thanks was proposed by Dr Arpana Prasad, Associate Professor, MCA Department. She conveyed her heartfelt thanks to all the members of the BoS and stakeholders for their valuable inputs to make this program a value-added program.

Head of the Department
Department of Master in Computer Applications
NEW HORIZON COLLEGE OF ENGINEERING
Ring Road Bellandur Post, Bengaluru - 560 103

Dr R J Anandhi
Professor and Dean-Academics
New Horizon College of Engineering
Ring Road Bellandur Post
Bengaluru - 560 103

DEPARTMENT OF MECHANICAL ENGINEERING

BOARD OF STUDIES MEETING

Minutes of Meeting

DATE : 27th September 2023

VENUE : Industry 4.O LAB

Time : 10:00 am to 4:00 pm

CONTENTS

AGENDA FOR THE MEETING

- **Agenda – 1** Approval of Syllabus for 5th and 6th Semester 2021- 2025 batch – 160 credits
- **Agenda – 2** Approval of scheme for 5th to 8th semester - 2021-2025 batch
- **Agenda – 3** Approval of Syllabus for 3rd and 4th Semester 2022- 2026 batch – 160 credits
- **Agenda – 4** Approval of scheme for 3rd to 8th semester - 2022-2026 batch
- **Agenda – 5** Workload, teaching hours and credits distribution.

LIST OF MEMBERS

Sl. No	Category	Nomination of the committee	Name of the person	Designation & Affiliation
1	**Head of the Department**	**Chairperson**	Prof. Rakesh C	Professor & HoD - ME
2	**Special Invitees (one academician from Institution of National Eminence, IIT,NIT,IIM,IISC)**	1	Dr. Manjunatha	Principal, NHCE
		2	Dr. R J Anandhi	Dean Academics, NHCE
		3	Dr. M R Ramesh	Associate Professor, Mechanical Engineering Dept. NITK, Surathkal
3	**Faculty member at different level with different specialization**			
		Members		
		1	Dr. Srinath M K	Associate Professor
		2	Dr. Nagendra J	Associate Professor
		3	Dr. Sudarshan T A	Sr. Assistant Professor
		4	Dr. Adhikary P	Professor & Associate Head R&D Cell, NHCE
		5	Dr. Hemanth Raju T	Associate Professor
		6	Dr. Piyush Kumar Soni	Professor & Associate Head-R&D, NHCE
4	**Subject expert from outside the college nominated by Academic Council**	**Members**		
		1	Dr. Shanmukha Nagaraj	Dean Academics, Professor, Dept., of Mechanical Engineering, RVCE, Bengaluru.

5	**Experts from outside the college nominated by VTU**	**Member**		
		1	Dr. Ranga Vittal	Professor, Mechanical Engineering Dept. BMSCE
6	**Representative from Industry / Corporate sector / allied area related to placements, nominated by Academic Council**	**Members**		
		1	Mr. N. R Shekar	Sr. Director, Capgemini Engineering, Bangalore
		2	Mr. Avinash R Sarvepalli	Capgemini Engineering, Bangalore
7	**Post Graduate meritorious alumni nominated by Principal**	**Members**		
		1	Shivana Gouda S Patil	Alumni, NHCE
		2	Mr. Aswajith	Alumni, NHCE
8	**Co-opted members**	**Members**		
		1	Dr. Bopanna K D	Placement Co-ordinator - ME
		2	Mr. Shivaprakash	Sr. Assistant Professor, NHCE
		3	Mr. Hanamant Yaragudri	Alumini Coordinator, NHCE
		4	Dr. Gopal K	Associate Professor, NHCE
		5	Dr. Nagabhushan N	Sr. Assistant Professor, NHCE

LIST OF MEMBERS PRESENT

Sl. No.	Nomination of the committee	Name of the person	Affiliated To	Signature
1.	Chairperson	Prof. Rakesh C	Head of the Department, NHCE, Bangalore	
2.	Special Invitees	Dr. Manjunatha	Principal, NHCE, Bangalore	
3.	Special Invitees	Dr. R J Anandhi	Dean Academics, NHCE, Bangalore	
4.	Special Invitees	Dr. M R Ramesh	Associate Professor, Mechanical Engineering Dept. NITK, Surathkal	
5.	Subject expert from outside the college	Dr. Shanmukha Nagaraj	Dean Academics, Professor, Dept., of Mechanical Engineering, RVCE, Bengaluru.	
6.	VTU Nominee	Dr. Ranga Vittal	Professor, Mechanical Engineering Dept. BMSCE	
7.	Member	Dr. Srinath M K	NHCE, Bangalore	
8.	Member	Dr. Nagendra J	NHCE, Bangalore	
9.	BOS Coordinator and Member	Dr. Sudarshan T A	NHCE, Bangalore	
10.	Member	Dr. Adhikary P	NHCE, Bangalore	
11.	Member	Dr. Hemanth Raju T	NHCE, Bangalore	
12.	Member	Dr. Piyush Kumar Soni	NHCE, Bangalore	
13.	Representative from Industry	Mr. N. R Shekar	Sr. Director, Capgemini Engineering, Bangalore	
14.	Representative from Industry	Mr. Avinash R Sarvepalli	Capgemini Engineering, Bangalore	
15.	Post Graduate meritorious alumni	Shivana Gouda S Patil	Alumni, NHCE	
16.	Member	Dr. Bopanna K D	Placement Coordinator, NHCE, Bangalore	
17.	Member	Dr. Nagabhushan N	NHCE, Bangalore	
18.	Member	Mr. Raghu Tilak Reddy	NHCE, Bangalore	
19.	Member	Mr. Ravikumar M	NHCE, Bangalore	
20.	Member	Mr. Shiva Prakash	NHCE, Bangalore	
21	Member	Mr. Hanamant Yaragudri	NHCE, Bangalore	
22.	Member	Dr. Gopal	NHCE, Bangalore	
23.	Member	Dr. Gayathri	NHCE, Bangalore	
24.	Member	Mr. Chethan Kumar	NHCE, Bangalore	
25.	Member	Mr. Gowthan	NHCE, Bangalore	
26.	Member	Mr. Sunil Prasanth	NHCE, Bangalore	
27.	Member	Mr. Sujith	NHCE, Bangalore	

WELCOME ADDRESS BY THE CHAIRMAN OF BOS

Minutes

The Board of Studies meeting for Department of Mechanical engineering was scheduled on 27-09-2023 at 10.00 AM in Industry 4.0 lab of Mechanical Engineering Department, NHCE.

At the outset, Chairperson Prof. Rakesh C – Professor & Head – Department of Mechanical Engineering, welcomed the Members for attending the Board of studies meeting held in Industry 4.0 lab via offline and online (Blended) mode.

The chairperson expressed special thanks to Dr. Rangavittala H K, Professor, BMSCE, VTU Nominee and Subject expert from outside the college Dr. Shanmukha Nagaraj, Professor, RVCE, Bangalore, nominated by Academic Council for sparing the time from their busy schedule to attend the meeting.

The chairperson also expressed his gratitude to Dr. M R Ramesh, Associate Professor, Mechanical Engineering Dept.NITK, Surathkal who was special Invitee

The meeting was also attended by Dr. R J Anandhi, Dean-Academics, NHCE and BOS members from Mechanical department with different specializations.

AGENDA – 1

TITLE | **Approval of Syllabus for 5th and 6th Semester 2021- 2025 batch – 160 credits**

Discussion on Syllabus of 5th and 6th Semester courses of 160 credits program was deliberated by the respective course coordinators.

This agenda was unanimously approved by the members with few suggestions/ recommendations

AGENDA – 2

TITLE | **Approval of scheme for 5th to 8th semester - 2021-2025 batch**

Discussion on scheme of 5th to 8th semester of 160 credit program was presented by Prof. Rakesh C.

This agenda was unanimously approved by the members with few suggestions/ recommendations.

AGENDA – 3

TITLE	**Approval of Syllabus for 3rd and 4th Semester 2022- 2026 batch – 160 credits**

Discussion on Syllabus of 3rd and 4th Semester courses of 160 credits program(2022-26 batch) was deliberated by the respective course coordinators.

This agenda was unanimously approved by the members with few suggestions/ recommendations

.

AGENDA – 4

TITLE	**Approval of scheme for 3rd to 8th semester - 2022-2026 batch**

Discussion on scheme of 3rd to 8th semester of 160 credit program(2022-26 batch) was presented by Prof. Rakesh C. This agenda was unanimously approved by the members with few suggestions/ recommendations

AGENDA – 5

TITLE	**Workload, Teaching hours and credits distribution.**

Prof. Rakesh C, Professor and HOD of Department of Mechanical Engineering discussed the Workload, Teaching hours and credits distribution with all the Internal / External members. They gave some suggestions/recommendations.

VOTE OF THANKS BY THE CHAIRMAN OF BOS

The Chairman – BoS, Prof. Rakesh C thanked the external members, industry representative, Alumini representative for their fruitful participation on behalf of the Principal and the Management. He also thanked all the other members of the BOS and course coordinators for their active participation. The meeting was concluded at 4:00 pm.

RECOMMENDATIONS / SUGGESTIONS OF BOS MEMBERS

- In 2021-2025 batch scheme mini project of 1 credit, if outcome is expected then the number of credits given is less
- Fundamentals of mathematics can be included in few subjects
- Control engineering and mechanical vibrations courses can be taught as mandatory course
- In MTMD lab in one of the CO they suggested to change the word synthesis
- Suggested to include codes and standards as a introductory part in DME subject
- Suggested to include sustainability studies in industrial waste management course.
- Electric vehicles and battery management subject can be offered as multidisciplinary course.
- In air pollution control course, they suggested to look in to the experiments that are of demonstration.
- In innovation and design thinking course importance on product design to be given
- Suggested to include just in time concept related to time in ORM subject
- Suggested to include vector matrix in FEM course
- In mechanics of materials course, they suggested to think about thermal stresses numerical
- In advanced python programming course in CO list CO3 and CO4 are same, need to be changed
- In computer aided machine drawing using CATIA course, CATIA word can be removed, time allocation to be rechecked
- In Tools for energy system design course demonstration should be as part C and evaluation of these demonstration is required also they suggested to reframe the COs.

IMPLEMENTATION OF RECOMMENDATION OF BOS MEMBERS

The chairperson constituted the following faculty to review and implement the recommendations of the BOS members in the scheme and syllabus of the curriculum based on industry needs.

The faculties have reviewed the curriculum and affected the changes regarding issues raised by external BOS members

2022-2026 batch

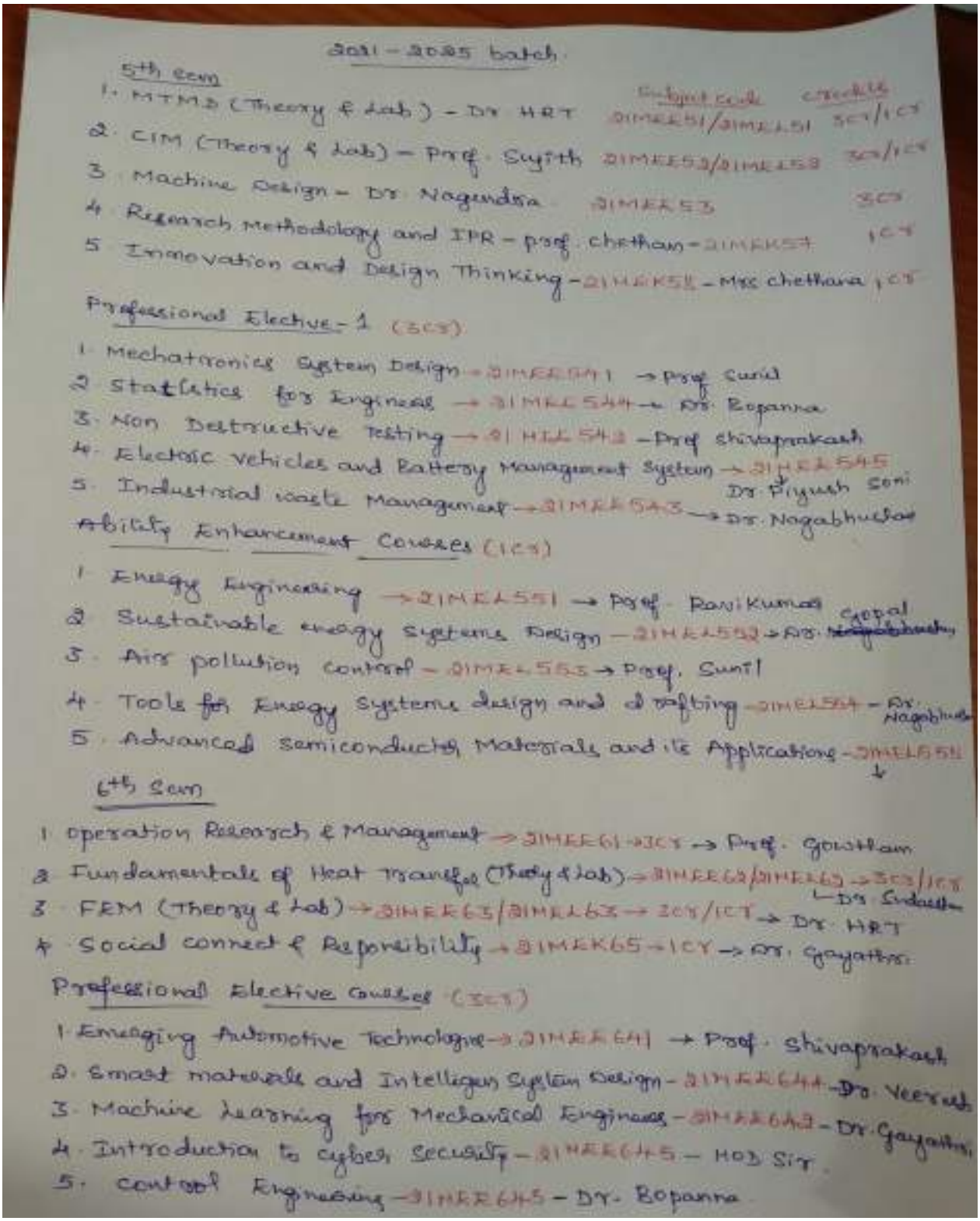
3rd semester

Sl No	Faculty	Subject	Subject code	
1	Prof. Hanamant	Mechanics of Materials(Theory and Lab)	22MEE32/22MEL32	
2	Dr. Sudarshan	Fluid Mechanics and Machinery(Theory and Lab)	22MEE33/22MEL33	
3	Dr. Srinath	Bio Inspired Design	22BIK36	
4	Dr. Gayathri	Social Connect and Responsibility	22SCK38	
	Engineering Science Course / Emerging Technology Course/ Programming Language Course			
1	Dr. Bopanna	Object oriented programming using Java	22MEE341	
2	Dr. Nagendra	Advanced python Programming	22MEE342	
3	Dr. Gayathri	Introduction to AI	22MEE343	
4	Dr. Nagendra	EDA(Exploratory Data Analysis) using Modern Tools	22MEE344	
	Ability Enhancement Course			
1	Dr. Nagabhushan	Computer Aided Machine Drawing using CATIA(0-0-1-0)	22MEE351	
2	Prof. Rajesh	Excel in MS Excel[0-0-1-0)	22MEE352	
3	Prof. Shivaprakash	Tool Engineering(1-0-0-0)	22MEE353	
4	Dr. Nagabhushan	Industrial Waste Management(1-0-0-0)	22MEE354	

4th semester

Sl No	Faculty	Subject	Subject code	
1	Dr. Sudarshan	Engineering Thermodynamics(Theory and Lab)	22MEE42/22MEL42	
2	Prof. RTR	Manufacturing Technology(Theory and Lab)	22MEE43/22MEL43	
3	Prof. Rajesh	Mechanical Measurements and Metrology(Theory and Lab)	22MEE44/22MEL44	
4		Universal Human Values Course	22UHK48	
Engineering Science Course / Emerging Technology Course / Programming Language Course				
1	Dr. Gayathri	Programming for IoT	22MEE451	
2	HoD sir	Essential of cyber security	22MEE452	
3	Dr. Gayathri	Introduction to Machine learning	22MEE453	
4	Prof. RTR	Robotic Programming	22MEE454	
Ability Enhancement Course				
1	Prof. Ravi Kumar	Mat Lab for Mechanical Engineers (0-0-1-0)	22MEE461	
2	Prof. Gowtham	Disaster Management(0-0-1-0)	22MEE463	
3	Dr. Gopal	Energy management and auditing(0-0-1-0)	22MEE462	
4	Prof Sunil	Air Pollution Control(1-0-0-0)	22MEE464	

2021-2025 Batch



2021 – 2025 batch.

5th sem

	Subject code	credits
1. MTMD (Theory & Lab) – Dr HRT	21MEE51/21MEL51	3cr/1cr
2. CIM (Theory & Lab) – Prof. Sujith	21MEE52/21MEL52	3cr/1cr
3. Machine Design – Dr. Nagendra	21MEE53	3cr
4. Research Methodology and IPR – prof. chethan – 21MEK54		1cr
5. Innovation and Design Thinking – 21MEK55 – Mrs chethana		1cr

Professional Elective – 1 (3cr)

1. Mechatronics System Design – 21MEE641 → Prof Sunil
2. Statistics for Engineers → 21MEL544 → Dr. Bopanna
3. Non Destructive Testing → 21 MEL543 – Prof shivaprakash
4. Electric Vehicles and Battery Management System → 21MEE545 Dr Piyush Soni
5. Industrial waste Management → 21MEE543 → Dr. Nagabhushan

Ability Enhancement Courses (1cr)

1. Energy Engineering → 21MEA551 → Prof. RaviKumar Gopal
2. Sustainable energy systems Design – 21MEA552 → Dr. [illegible]
3. Air pollution control – 21MEL553 → Prof. Sunil
4. Tools for Energy systems design and drafting – 21MEL554 – Dr. Nagabhushan
5. Advanced semiconductor Materials and its Applications – 21MEL655

6th Sem

1. operation Research & Management → 21MEE61 → 3cr → Prof. Gowtham
2. Fundamentals of Heat transfer (Theory & lab) → 21MEE62/21MEL62 → 3cr/1cr – Dr Sudarshan
3. FEM (Theory & lab) → 21MEE63/21MEL63 → 3cr/1cr → Dr. HRT
4. Social connect & Responsibility → 21MEK65 → 1cr → Dr. Gayathri

Professional Elective Courses (3cr)

1. Emerging Automotive Technologies → 21MEE641 → Prof. Shivaprakash
2. Smart materials and Intelligent System Design – 21MEE644 – Dr. Veeresh
3. Machine learning for Mechanical Engineers – 21MEE643 – Dr. Gayathri
4. Introduction to cyber Security – 21MEE645 – HOD Sir
5. control Engineering – 21MEE645 – Dr. Bopanna

.

APPROVAL OF SCHEME & SYLLABUS OF SECOND YEAR COURSES(2022-26 Batch)

The Board of Studies members reviewed the modified draft of the scheme & syllabus with their recommendations/suggestions being incorporated appropriately.

Finally, the members approved the draft of the same with the modifications for final implementation.

SUBJECT CODE	SUBJECT	% Additions / Deletions in Modules	Proposed Experiential Learning in the Modules	Industrial inputs in the Modules	Percentage change in the syllabus
22MEE351	Computer Aided Machine Drawing using CATIA	20%	Case Study	Surface modelling	20%
22MEE33	Fluid Mechanics and Machinery	20%	Case Study	Hands on Experience with real time examples	20%
22MEL33	Fluid Mechanics and Machinery Lab	20%	Experiments related to Pumps and Turbines	Power generation Methods	20%
22MEE32	Mechanics of Materials	10%	Case study	MAT Lab introduction in assignments	10%
22MEL32	Mechanics of Materials Lab	30%	Case study	Study of NDT and DT tests	30%
22MEE44	Mechanical Measurements and Metrology	15%	Industrial Visit	Plant Visit	15%
22MEL44	Mechanical Measurements and Metrology Lab	10%	Case study	Study of surface roughness	10%
22MEE42	Engineering Thermodynamics	10%	Case Study	Plant Visit	10%
22MEL42	Engineering Thermodynamics Lab	10%	Cut-open section study of 4-stroke and 2-stroke Engine Parts	Software Tool for performance analysis	10%
22MEE43	Manufacturing Technology	20%	Case Study	Industrial Visits	20%
22MEL43	Manufacturing Technology Lab	20%	Case Study	Industrial Visit	20%

APPROVAL OF SCHEME & SYLLABUS OF SECOND YEAR COURSES(2021-25 Batch)

The Board of Studies members reviewed the modified draft of the scheme & syllabus with their recommendations/suggestions being incorporated appropriately.

Finally, the members approved the draft of the same with the modifications for final implementation

SUBJECT CODE	SUBJECT	% Additions / Deletions in Modules	Proposed Experiential Learning in the Modules	Industrial inputs in the Modules	Percentage change in the syllabus
21MEE51	Machine Theory & Mechanism Design	20%	Case study	simulation	20%
21MEL51	Machine Theory & Mechanism Design Lab	20%	Case study	simulation	20%
21MEE52	Computer Integrated Manufacturing	15%	Case study	simulation	15%
21MEL52	Computer Integrated Manufacturing Lab	10%	Case study	simulation	10%
21MEE53	Machine Design	20%	Case study	Design with material selection	20%
21MEE61	Operation Research and Management	20%	Case study	Numerical validation	20%
21MEE62	Fundamentals of Heat Transfer	10%	Case Study	Thermal Plant Visit	10%
21MEL62	Fundamentals of Heat Transfer Lab	10%	Heat exchangers	Software Tool for analysis	10%
21MEE63	Finite Element Methods	15%	Case study	simulation	15%
21MEL63	Finite Element Methods Lab	10%	Case study	simulation	10%
21MEE643	Control Engineering	15%	Case study	simulation	15%

GLIMPSES OF OFFLINE/ONLINE BOS MEETING