



VELS



INSTITUTE OF SCIENCE, TECHNOLOGY & ADVANCED STUDIES (VISTAS)

(Deemed to be University Estd. u/s 3 of the UGC Act, 1956)

PALLAVARAM, THALAMBUR, PERIYAPALAYAM - CHENNAI

CRITERION 1 - CURRICULAR ASPECTS

1.1 CURRICULUM DESIGN AND DEVELOPMENT

1.1.1 CURRICULA DEVELOPED AND IMPLEMENTED HAVE RELEVANCE TO THE LOCAL, NATIONAL, REGIONAL AND GLOBAL HEALTH CARE NEEDS WHICH ARE VISIBLE IN PROGRAMME OUTCOMES (POS), AND COURSE OUTCOMES (COS) OFFERED BY THE UNIVERSITY, AS PER THE NORMS OF THE REGULATORY BODIES.

Criterion Number	1
Metric	1.1.1
Details	Any other relevant data
Pages	1-7

Registrar
Vels Institute of Science, Technology
& Advanced Studies (VISTAS)
Pallavaram, Chennai - 600 117.

Pallavaram Campus: Velan Nagar, P.V. Vaithiyalingam Road,
Pallavaram, Chennai - 600 117

Thalambur Campus: Off.Old Mahabalipuram Road,
Thalambur, Chennai - 603 130

Periyapalayam Campus: 12/123, Velan Nagar, Periyapalayam
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PALLAVARAM - CHENNAI

ACCREDITED BY NAAC WITH 'A' GRADE
Marching Beyond 30 Years Successfully
INSTITUTION WITH UGC 12B STATUS

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING
MINUTES OF BOARD OF STUDIES MEETING

Date: 7th February 2023

The Board of Studies meeting of the Department of ECE for the Programme B.Tech – Electronics and Computer Engineering, School of Engineering, VISTAS was held on 7th February 2023 at 3:00 pm to discuss the Curriculum and Syllabus of B.Tech – Electronics and Computer Engineering for the Regulation 2022 from the III to the VIII semester which is to be followed from the academic year 2023-2024.

Members:

S. No	Name of the Board Member	Designation	Institute / Industry.
Internal Members			
1	Dr. V. Rajendran	Professor, Director & Chair person	Vels Institute of Science, Technology and Advanced Studies (VISTAS)
2	Dr. S. Jerritta	Professor & HoD	Vels Institute of Science, Technology and Advanced Studies(VISTAS)
3	Dr. G.R. Jothilakshmi	Associate Professor	Vels Institute of Science, Technology and Advanced Studies(VISTAS)
3	Dr. T. Jaya	Associate Professor	Vels Institute of Science, Technology and Advanced Studies(VISTAS)
4	Dr. P. Vijayalakshmi	Associate Professor	Vels Institute of Science, Technology and Advanced Studies(VISTAS)
5	Dr. M. Monisha	Assistant Professor	Vels Institute of Science, Technology and Advanced Studies(VISTAS)
External Expert Members			
1	Dr. P. Vijayakumar	Professor	Vellore Institute of Technology, Chennai
2	Dr. R. Srinivasan	Scientist – F, Ocean Electronics Group	National Institute of Ocean Technology, Chennai.
Alumni Member			
1	Mr. Mahesh S	NFVi - Cloud Infrastructure Engineer	Nokia Solution Network Pvt Ltd, Chennai

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The syllabi of courses containing theory and practical elements may be synchronized. The Syllabus of IoT and Embedded System Design may be modified to include Applications. Reference books may be included.

The following courses may be included as electives:

- Java Programming
- Machine Learning Algorithms
- Data Science
- Natural Language Processing
- Deep Learning
- Cyber Security
- Software Defined Radio
- Cyber Physical Systems
- Android and Web Development

Industry Expert:

The Curriculum and Syllabi of the courses is as per the requirements of the Electronics and Computer Engineering Discipline.

The Syllabus should include components that would enable students understand and update themselves with the state of the art technologies and skills to develop software and firmware that impacts the society.

The PCC on VLSI Programming and VLSI Programming Laboratory may be replaced by Industrial Electronics and Automation as it will help Electronics and Computer Engineers in understanding the Industrial trends. This course can include Aerospace Electronics, Space Electronics, Underwater Electronics, Seismic Systems, Reliability and Safety requirements of Industrial Electronics and Systems, Test and Calibration.

Robotics and Automation Laboratory focusing on applications may be included as practical in the VII sem. Downloadable and Open Source Software may be used for the same to empower the students.

The following courses* may be included as electives:

- Machine Learning Algorithms
- Data Science
- Natural Language Processing
- Deep Learning
- Software Defined Radio
- Web of Things

Alumni:

The Curriculum and Syllabi of the courses is as per the requirements of the Electronics and Computer Engineering Discipline.

The course may include practical elements so that the students are Industry ready at the end of their studies.

The PCC on Computer Networks may be modified as Data Communication Networks and students may be the oriented of the practical aspect on the same.

The PEC on User Interface Design may be modified to include User Interface Design and Extension.

Number of new courses introduced: 76

(BSC - 3, HSC- 4, PCC - 25, PEC - 40, Project -2, MC-2)

% of Syllabus Revision in the Program: NA

New Courses Introduced:

S. No	Name of the Course
1	Mathematics-III (Fourier Series and Transforms)
2	Introduction to IoT
3	Electronic Devices
4	Digital Electronics
5	Data Structures
6	Electronic Devices Laboratory
7	Data Structures and algorithms Laboratory
8	Personality Development I (Effective Technical Communication)
9	Basic Life Skills
10	Probability and Random Processes
11	Operating Systems
12	Signals and Systems
13	Database Management Systems Laboratory
14	Design and Analysis of Algorithms
15	Signals and Systems - Laboratory
16	Database Management Systems Laboratory
17	Personality Development II
18	Environmental Science and Engineering

19	Gender, Institution and Society
20	Data Communication Networks
21	Introduction to AI & ML
22	Microprocessors and Microcontrollers
23	Computer Networks Laboratory
24	Microcontrollers Laboratory
25	Personality Development III
26	Industrial Training/ Mini Project/ MOOC Course (NPTEL/SWAYAM/CourseEra/Mathworks) - Minimum 4 weeks
27	.Net Programming
28	Embedded System Design
29	.Net Programming Laboratory
30	Embedded System Design Laboratory
31	Personality Development – IV
32	Summer Internship (4 weeks)
33	Industrial Electronics and Automation
34	Automation and Robotics Laboratory
35	Project Phase I
36	Project Phase II
37	Information Theory and Coding
38	Digital Image and Video Processing
39	CMOS Design
40	High Speed Electronics
41	Wireless Networks
42	Mobile Ad-hoc Networks
43	Wireless Sensor Networks
44	Cognitive Radio Networks
45	Cryptography and Network Security
46	Electronic System Design
47	Robotics
48	Optical Network
49	Software Defined Network
50	High Speed Networks
51	Applied Cryptography
52	Big-Data Programming
53	Bioinformatics
54	Cyber Forensics
55	Data Warehousing And Data Mining

56	E- Commerce
57	Ethical Hacking
58	Game Programming
59	Information Retrieval Techniques
60	Object Oriented Analysis And Design
61	Software Engineering
62	Software Project Management
63	User Interface Design and Extension
64	Virtual Reality
65	Agile Methodologies
66	Information Security
67	Java Programming
68	Machine Learning Algorithms
69	Data Science
70	Natural Language Processing
71	Deep Learning
72	Cyber Security
73	Software Defined Radio
74	Cyber Physical Systems
75	Android and Web Development
76	Web of Things

Resolved that the Programme Educational Objectives (PEO) and Programme Specific Outcomes (PSO) that are defined in line with the vision and mission of the Department and Institution be approved.

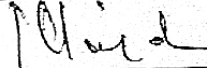
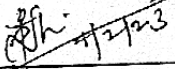
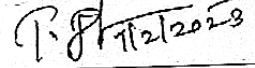
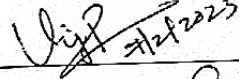
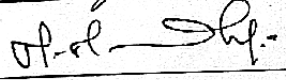
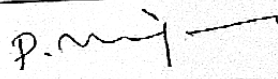
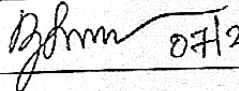
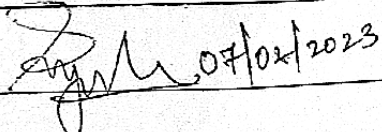
Resolved that the Competencies and Performance Indicators defined for the PO and PSO's of the B.Tech – Electronics and Computer Engineering Programme is as per the recommendations of the AICTE Examination Reforms Policy be approved. (Annexure 1)


Resolved that the Curriculum & Syllabus for the B.Tech – Electronics and Computer Engineering Programme (Regulation 2022), from the III to VIII semester is designed as per the Learning outcome-based curriculum framework (LOCF) guidelines of UGC and Model Curriculum of AICTE, effective from the Academic Year 2023-2024 be approved.

Resolved that the Course Outcomes (CO) that are defined by focusing on skill development, employability and entrepreneurship, effective from the Academic Year 2023-2024 be approved. (Annexure 2: List of courses with direct bearing on skill development, employability and entrepreneurship)

Resolved that the Course Outcome (CO) – Programme Outcome (PO) and Programme Specific Outcome (PSO) Mapping (CO-PO/PSO Mapping) done in accordance with the defined Competencies and Performance Indicators, effective from the Academic Year 2023-2024 be approved.

Signature of the Members:

S. No	Name of the Board Member	Designation	Signature
Internal Members			
1	Dr. V. Rajendran	Professor, Director & Convenor	 07.02.23
2	Dr. S. Jerritta	Professor & HoD	 07/2/2023
3	Dr. G. R. Jothilakshmi	Associate Professor	Absent
4	Dr. T. Jaya	Associate Professor	 07/2/2023
5	Dr. P. Vijayalakshmi	Associate Professor	 07/2/2023
	Dr. M. Monisha	Assistant Professor	 07.02.23
External Expert Members			
1	Dr. P. Vijayakumar	Professor	 07/02/23
2	Dr. R. Srinivasan	Scientist - F, Ocean Electronics Group	 07/2/2023
Alumni Member			
1	Mr. Mahesh S	NFVi - Cloud Infrastructure Engineer	 07/02/2023


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