Criterion2:Teaching-LearningandEvaluation

Key Indicator –2.6 Student Performance and Learning Outcome

2.6.1. Programme Outcomes (POs) and Course Outcomes (COs) for all Programmes offered by the institution are stated and displayed on website and attainment of POs and COs are evaluated

NOTE: The supporting documents for this metric exceed the upload limit of 5MB. Hence the documents are made available in HEI website and links for the metric is given below.

INDEX

METRIC	PARAMETER	LINK TO RELEVANT DOCUMENTS
2.6.1	Programme Outcomes (POs) and Course Outcomes (COs) for all Programmes offered by the institution are stated and displayedonwebsiteand attainmentofPOsandCOs arevaluated	VIEW DOCUMENTS

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2.6.1. Programme Outcomes (POs) and Course Outcomes (COs) for all Programmes offered by the institution are stated and displayed on website and attainment of POs and COs are evaluated.

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2.6.1.Programme Outcomes(POs) and Course Outcomes(Cos) and for all Programmes offered by the institution are stated and displayed on website and attainment of POs and Cos are evaluated.

In strict compliance with the objectives of Outcome Based Education (OBE), the Program Outcomes (POs), Program Specific Outcomes (PSOs) and Course Outcomes (COs) are framed by the department offering the concerned program after rigorous consultation with all faculty and the stakeholders. After attainment of consensus, the same are widely propagated and publicized through various means such as display and/or communication specified hereunder.

- Website
- Curriculum /regulations books
- Class rooms
- Department Notice Boards
- Laboratories
- Student Induction Programs
- Parents meetings
- Faculty meetings
- Alumni meetings
- LibraryNotice Boards

While addressing the students, the HODs create awareness on POs, PSOs and COs. The faculty members, class teachers, mentors, course coordinators, program/ISO coordinators also inform the students and create awareness and emphasize the need to attain the outcomes.

Program specific outcomes (PSOs) are the specific skill requirements and accomplishments to be fulfilled by the students at micro level and by the end of the program. The programme co-ordinators prepare the PSOs, usually two to four in number, in consultation with course coordinators. The Head of the Department and subject experts, of the individual departments will discuss the same and approve it after endorsement by the Principal.

Program Outcomes (POs) are broad statements that describe the professional accomplishments which the program aims at, and these are to be attained by the students by the time they complete the program. POs incorporate many areas of inter-related knowledge, skills and personality traits that are to be acquired by the students during their graduation.

Course outcomes (COs) are direct statements that describe the essential and enduring disciplinary knowledge, abilities that students should possess and the depth of learning that is expected upon completion of a course. They are clearly specified and communicated. The Course Outcomes are prepared by the course coordinator in consultation with concerned faculty members teaching the same course. The course coordinator will verify it. Finally, they are discussed in the concerned department's meeting course-wise and approved.
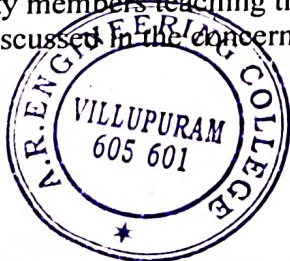
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The POs/PSOs of the programme are published through electronic media at individual Department site located on the college website.The COs of the courses are also published through electronic media at the Department site located on the college website.In all the interactions with the students awareness on POs, PSOs and COs is consciously promoted.

In 2008, the College began with four Undergraduate Engineering programmes with an annual intake of 240 students, and now has six Undergraduate and programmes with an annual intake of 300 students. The AICTE's clearance and affiliation with Anna University for such a progressive intake is a testament to the college's consistent growth over the years. The college has grown considerably under the dynamic leadership of its Chairman Sri.G.Madhadevan, Vice Chairman Sri.M.Kuberan, B.E., M.Tech, Secretary Sri M.Prabu, B.E., MBA., and Principal Dr.R.Panneerdhass, spear heading all academic and non academic activities.

VISION

To be world class nodal centre committed to advanced learning, research and training to serve the nation, meeting the national / international standards

MISSION

To be a premier Engineering College, much sought after by the industries and society offering professional education and training blended with ethical values to convert student resource into strong assets of our nation

Figure:VisionandMissionof the Institutionare displayedinCollegewebsite

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## OUR DEPARTMENTS

MECHANICAL ENGINEERING

Mechanical Engineering recently started in the year 2009 and offer B.E Mechanical engineering

CIVIL ENGINEERING

Civil Engineering is field of engineering sciences, related to Design, Construction and Maintenance of buildings

ELECTRONICS AND COMMUNICATION ENGINEERING

The Department of Electronics & Communication Engineering (ECE) was established in our college in the year 2013

ELECTRICAL AND ELECTRONICS ENGINEERING

The Department of Electrical and Electronics Engineering was established in the year 2008 with the approval of AICTE.

COMPUTER SCIENCE & ENGINEERING

Computer Science and engineering Department has been running successfully 8 years and has also been accredited by AICTE.

SCIENCE AND HUMANITIES

The department of Science and Humanities was established in 1998 with the student strength of knowledge

ARTIFICIAL INTELLIGENCE AND DATA SCIENCE

Professional experience of the faculty members bring a flavor and strength to research and development activities of the department.

Figure: Departments are displayedinCollege website

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ANNA UNIVERSITY,CHENNAI
AFFILIATED INSTITUTIONS
B.E. COMPUTER SCIENCE AND ENGINEERING
REGULATIONS – 2017
CHOICE BASED CREDIT SYSTEM

MAPPING OF COURSE OUTCOMES WITH PROGRAMME OUTCOMES

A broad relation between the Course Outcomes and Programme Outcomes is given in the following table

	Course Title	Programme Outcome (PO)											
		1	2	3	4	5	6	7	8	9	10	11	12
SEMESTER I	Communicative English								√	√	√		√
	Engineering Mathematics - I	√	√	√						√			
	Engineering Physics	√	√	√									
	Engineering Chemistry	√	√	√									
	Problem Solving and Python Programming	√	√	√									
	Engineering Graphics	√	√	√		√			√	√	√		√
	Problem Solving and Python Programming Laboratory	√	√	√		√			√	√	√		√
	Physics and Chemistry Laboratory	√	√	√					√	√	√		
	Technical English								√	√	√		√
	Engineering Mathematics II	√	√	√						√			
	Physics for Information Science	√	√	√									
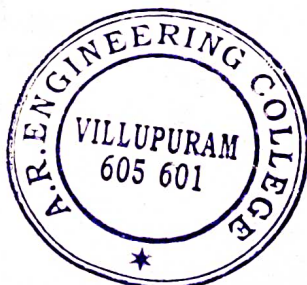
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| | | COURSE TITLE | PROGRAMME OUTCOME (PO) |
			1	2	3	4	5	6	7	8	9	10	11	12
YEAR II	SEMESTER III	Discrete Mathematics	√	√	√						√			
		Digital Principles and Design	√	√	√									
		Data Structures	√	√	√									
		Object Oriented Programming	√	√	√									
		Communication Engineering	√	√	√									
		Data Structures Laboratory	√	√	√					√	√	√		√
		Object Oriented Programming Laboratory	√	√	√					√	√	√		√
		Digital Systems Laboratory	√	√	√			√		√	√	√		√
		Interpersonal Skills/Listening &Speaking								√	√	√		√
		Probability and Queueing Theory	√	√	√						√	√		√
		Computer	√	√	√									

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		Course	1	2	3	4	5	6	7	8	9	10	11	12	13
	SEMESTER VI	Internet Programming	√	√	√						√	√	√		√
		Artificial Intelligence	√	√	√										
		Mobile Computing	√	√	√										
		Compiler Design	√	√	√						√	√	√		√
		Distributed Systems	√	√	√										
		Professional Elective I													
		Internet Programming Laboratory	√	√	√			√			√	√	√		√
		Mobile Application Development Laboratory	√	√	√			√	√		√	√	√		√
		Mini Project	√	√	√	√	√	√	√	√	√	√	√	√	√
		Professional Communication								√			√		√
YEAR IV	SEMESTER VII	Principles of Management	√	√	√									√	
		Cryptography and Network Security	√	√	√										
		Cloud Computing	√	√	√										
		Open Elective II					-								

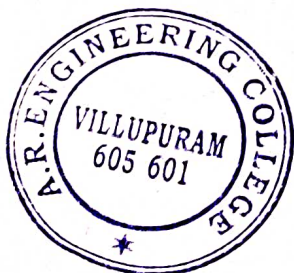Figure:Mapping of Cos with POs defined by Anna Universit

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CS8792	CRYPTOGRAPHY AND NETWORK SECURITY	L T P C
		3 0 0 3

OBJECTIVES:
- To understand Cryptography Theories, Algorithms and Systems.
- To understand necessary Approaches and Techniques to build protection mechanisms in order to secure computer networks.

UNIT I   INTRODUCTION   9

Security trends - Legal, Ethical and Professional Aspects of Security, Need for Security at Multiple levels, Security Policies - Model of network security – Security attacks, services and mechanisms – OSI security architecture – Classical encryption techniques: substitution techniques, transposition techniques, steganography- Foundations of modern cryptography: perfect security – information theory – product cryptosystem – cryptanalysis.

UNIT II   SYMMETRIC KEY CRYPTOGRAPHY   9

MATHEMATICS OF SYMMETRIC KEY CRYPTOGRAPHY: Algebraic structures - Modular arithmetic-Euclid's algorithm- Congruence and matrices - Groups, Rings, Fields- Finite fields- SYMMETRIC KEY CIPHERS: SDES – Block cipher Principles of DES – Strength of DES – Differential and linear cryptanalysis - Block cipher design principles – Block cipher mode of operation – Evaluation criteria for AES – Advanced Encryption Standard - RC4 –

UNIT III   PUBLIC KEY CRYPTOGRAPHY   9

MATHEMATICS OF ASYMMETRIC KEY CRYPTOGRAPHY: Primes – Primality Testing – Factorization – Euler's totient function, Fermat's and Euler's Theorem - Chinese Remainder Theorem – Exponentiation and logarithm - ASYMMETRIC KEY CIPHERS: RSA cryptosystem – Key distribution – Key management – Diffie Hellman key exchange - ElGamal cryptosystem – Elliptic curve arithmetic-Elliptic curve cryptography.

UNIT IV   MESSAGE AUTHENTICATION AND INTEGRITY   9

Authentication requirement – Authentication function – MAC – Hash function – Security of hash function and MAC – SHA –Digital signature and authentication protocols – DSS- Entity Authentication: Biometrics, Passwords, Challenge Response protocols- Authentication applications - Kerberos, X.509

UNIT V   SECURITY PRACTICE AND SYSTEM SECURITY   9

Electronic Mail security – PGP, S/MIME – IP security – Web Security - SYSTEM SECURITY: Intruders – Malicious software – viruses – Firewalls.

                                                           TOTAL   45   PERIODS
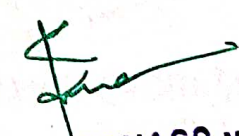
OUTCOMES:
At the end of the course, the student should be able to:
- Understand the fundamentals of networks security, security architecture, threats and vulnerabilities
- Apply the different cryptographic operations of symmetric cryptographic algorithms
- Apply the different cryptographic operations of public key cryptography
- Apply the various Authentication schemes to simulate different applications.
- Understand various Security practices and System security standards

Figure:Course Outcomes are defined in Syllabus by Anna University.

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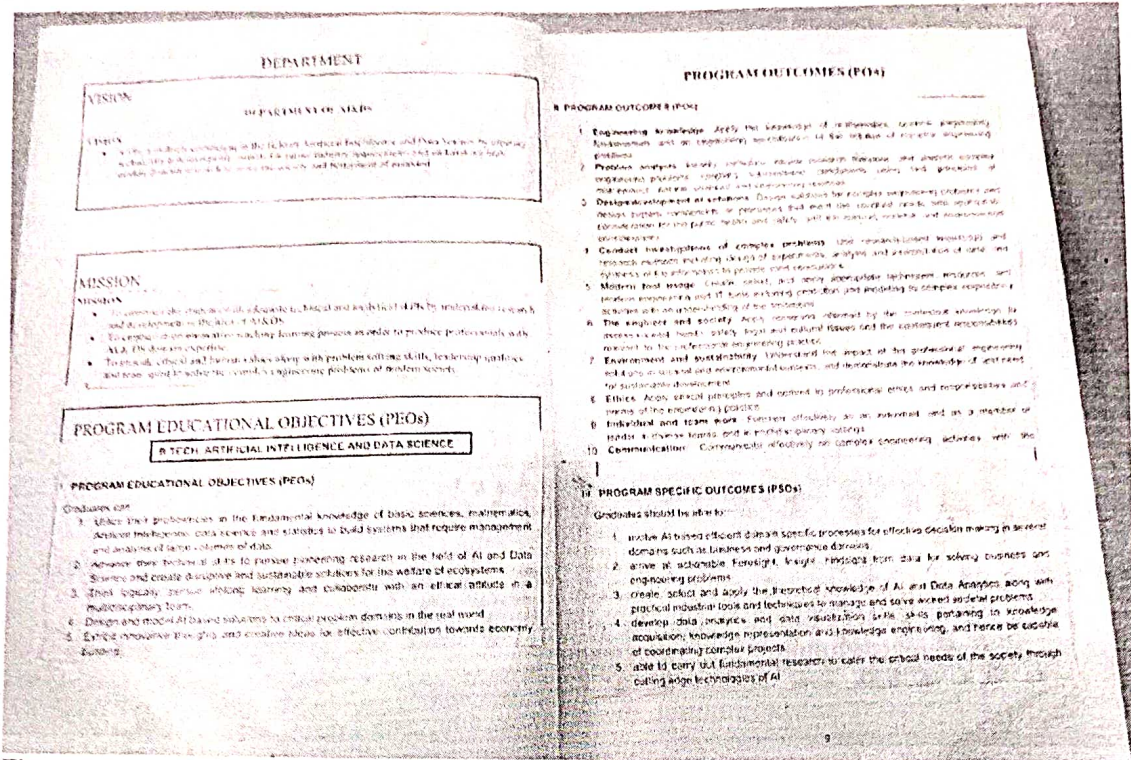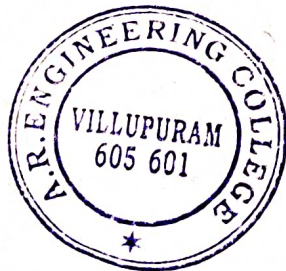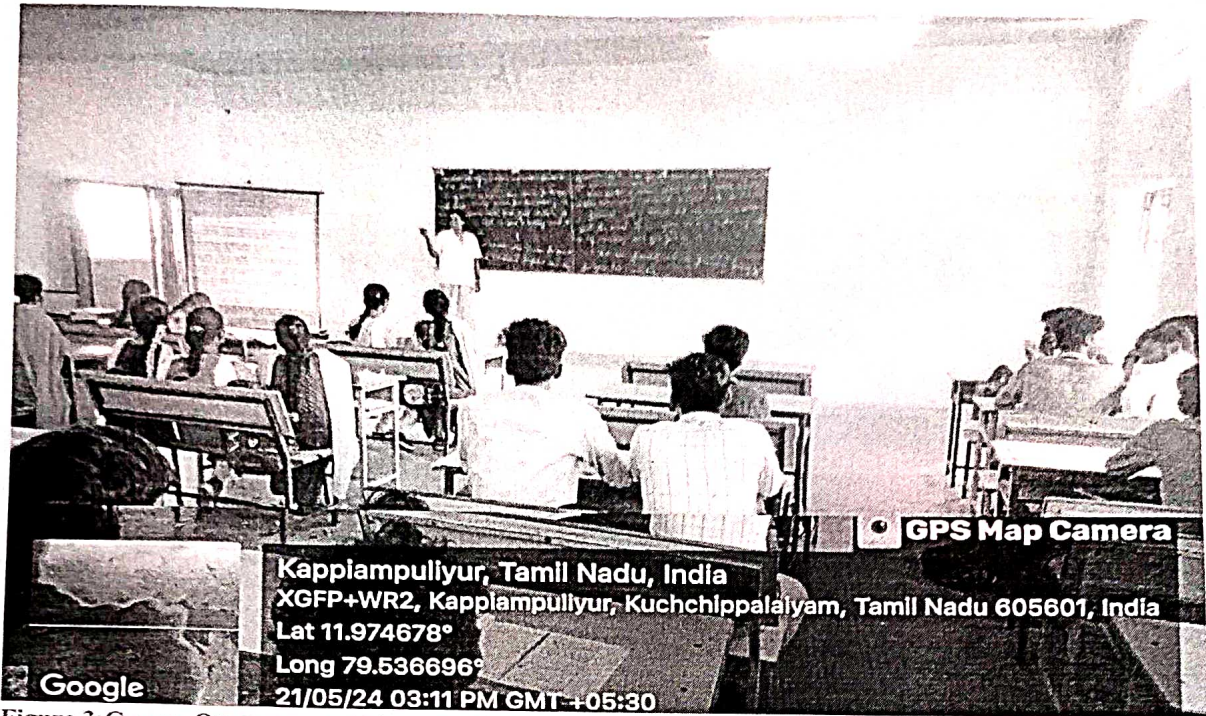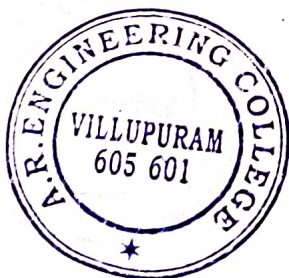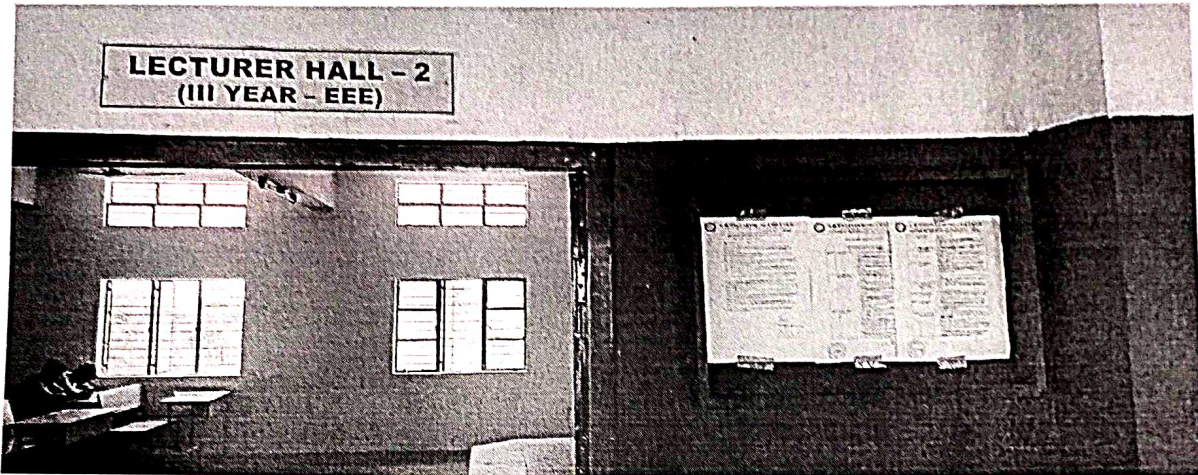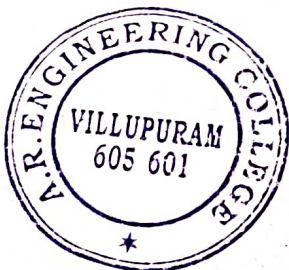Vadakuchipalayam,Kappiyampuliyur post,Villupuram-605601,Tamilnadu.

Figure 1:Program Outcomes displayed on website

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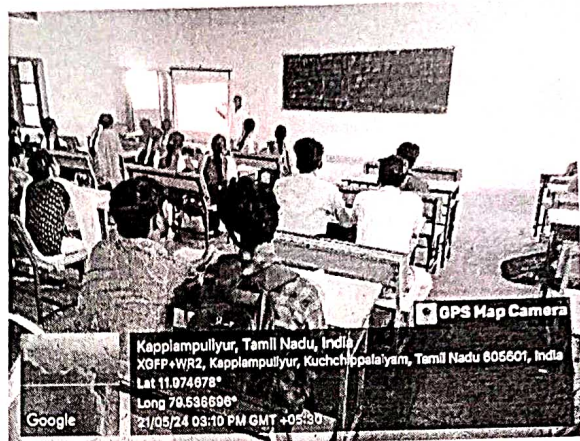Vadakuchipalayam,Kappiyampuliyur post,Villupuram-605601,Tamilnadu.

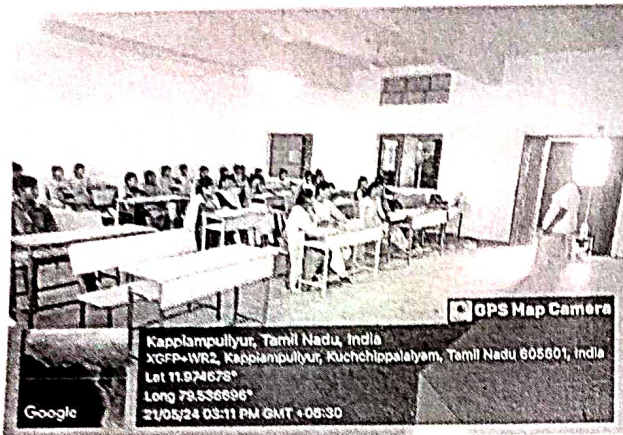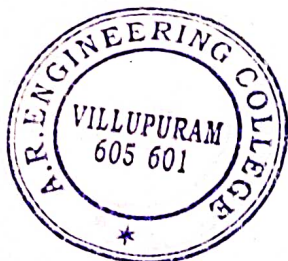**Figure 2:Program Outcomes in Curriculum /Regulations books**

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Figure 3:Course Outcomes and Program Outcomes are displayed in Class rooms

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Figure 4:Course Outcomes and Program Outcomes are displayed in Department Notice Board

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Figure 5:Program Outcomes and Course Outcomes displayed in Student Induction program

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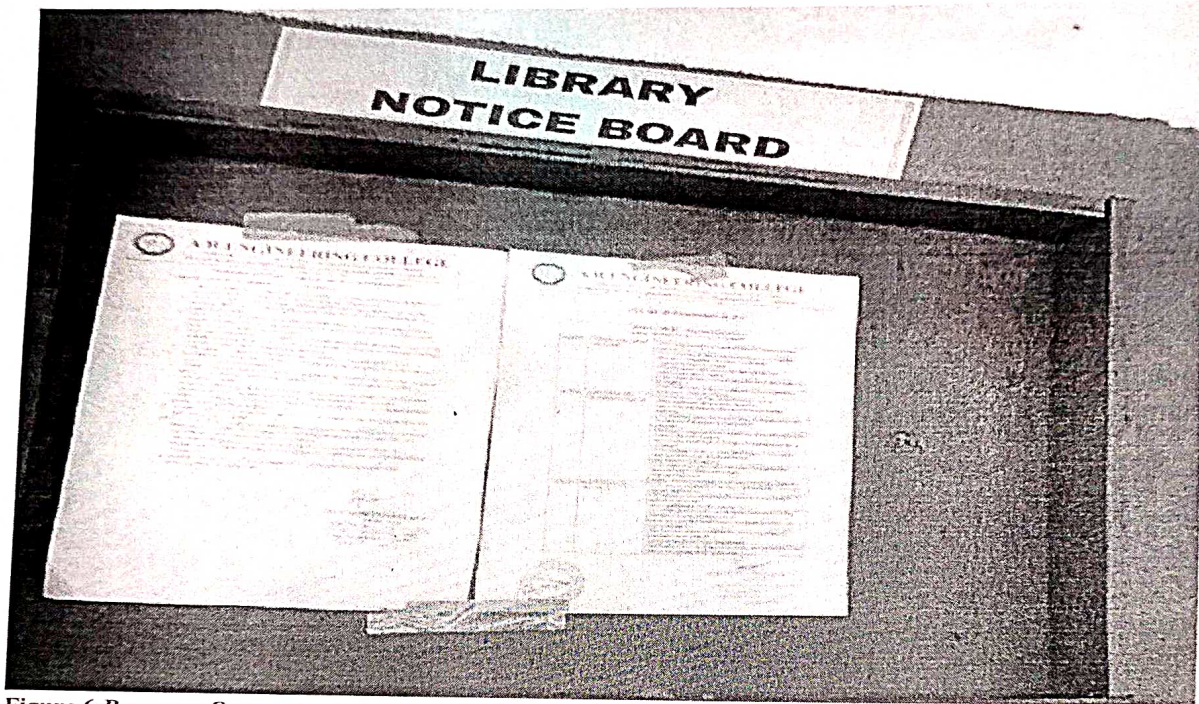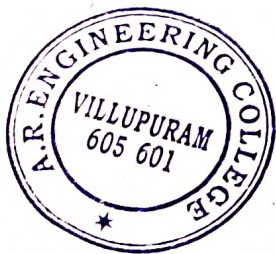Vadakuchipalayam, Kappiyampuliyur post, Villupuram-605601, Tamilnadu.
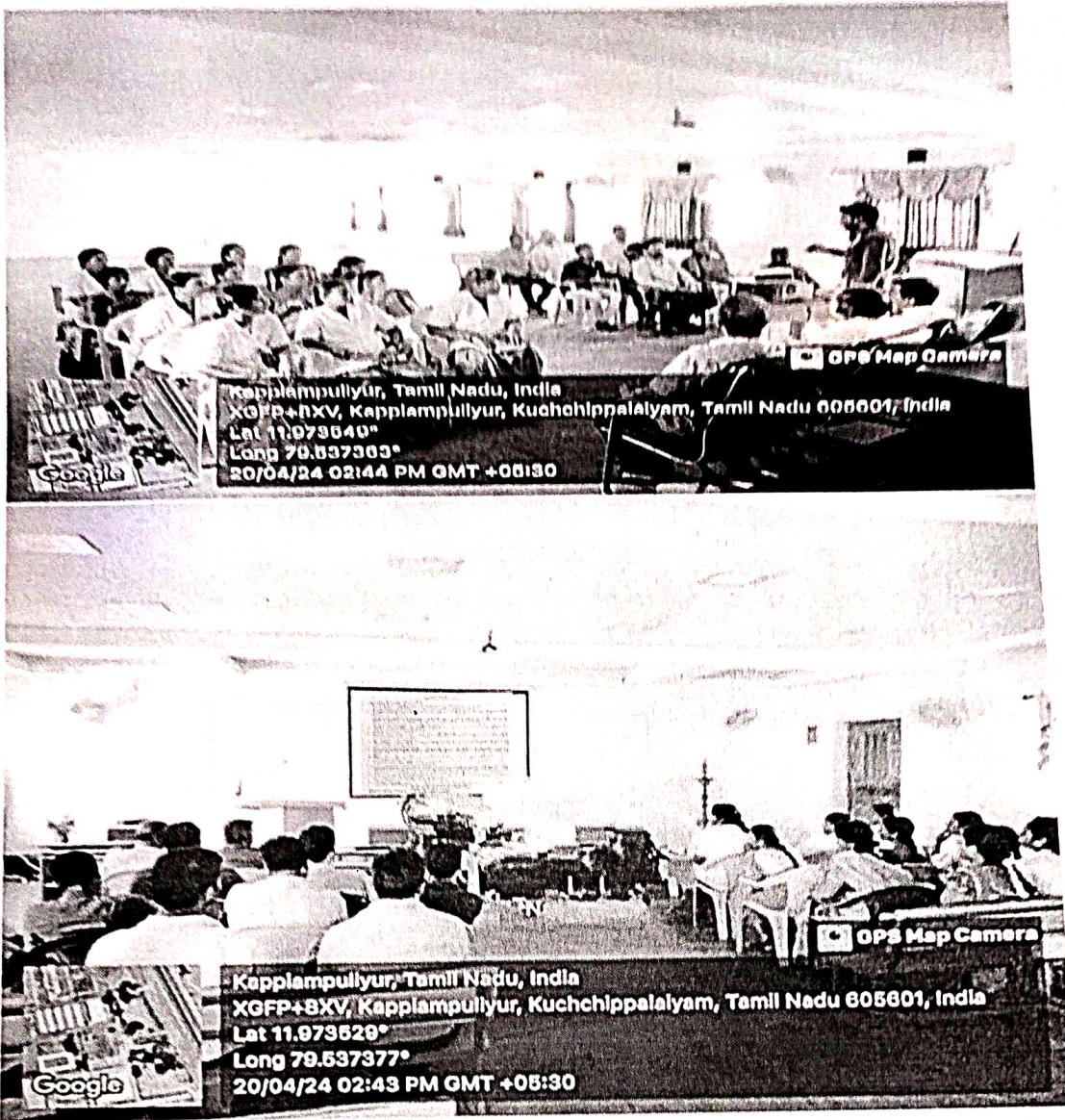
Figure 6: Program Outcomes and Course Outcomes displayed in Library Notice Board

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Figure 7: Co-Po displayed in Faculty Meetings

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