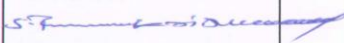



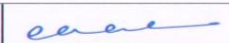





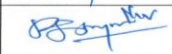






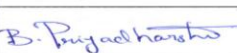
Name of the Board **Information Technology**

Minutes of 7th Board of Studies and Programme Assessment Committee Meeting

Venue : Principal Conference Hall
Date of the meeting : 17.12.2016

Members Present:

S.No.	Name& Designation	Official Address	Signature
Chairman			
	Dr. S.Ramakrishnan, Professor & Head	Dept. of Information Technology, Dr.Mahalingam College of Engineering and Technology, Pollachi-642003	
Convener			
	Mr. A.S.Muthanantha Murugavel, Assistant Professor (SG)	Dept. of Information Technology, Dr.Mahalingam College of Engineering and Technology, Pollachi-642003	
External Members			
University Nominee			
	Dr. P.Uma Maheswari, Professor	Department of Computer Science Technology, A Engineering, MH Campus, College of Engg, Anna University, Chennai - 600 044.	 17/12/16
Academia			
	Dr. K. Baskaran, Professor	Government College of Technology, Thadagam Road, PN Pudur, Coimbatore- 641013	 17/12/2016
Industry			
	Mr. Sivaramakrishnan, Global Practice Head,	Tata Consultancy Services, Velachery, Chennai - 600 042	
	Mr. Mathar Badusha, Alumnus, Director,	AssistarZ Networks Pvt Ltd, Dr. Radhakrishnan Road, Gandhipuram, Coimbatore - 641012	

Internal Members			
Faculty members			
1	Dr. M. Mohamed Raseen Associate Professor	Dept. of Information Technology, Dr.Mahalingam College of Engineering and Technology, Pollachi-642003	
2	Ms.L.Meenachi, Assistant Professor(SS)	Dept. of Information Technology, Dr.Mahalingam College of Engineering and Technology,Pollachi-03	
3	Mr.P.Sathiyamurthi, Assistant Professor(SS)	Dept. of Information Technology, Dr.Mahalingam College of Engineering and Technology,Pollachi-03	
4	Ms.S.Nithya, Assistant Professor(SS)	Dept. of Information Technology, Dr.Mahalingam College of Engineering and Technology,Pollachi-03	
5	Ms.S.Ponni @ Sathya Assistant Professor	Dept. of Information Technology, Dr.Mahalingam College of Engineering and Technology,Pollachi-03	
6	Mr.K.Balasamy, Assistant Professor	Dept. of Information Technology, Dr.Mahalingam College of Engineering and Technology,Pollachi-03	
7	Ms.R.Menaha, Assistant Professor	Dept. of Information Technology, Dr.Mahalingam College of Engineering and Technology,Pollachi-03	
8	Mr. J. Ramprasath Assistant Professor,	Dept. of Information Technology, Dr.Mahalingam College of Engineering and Technology,Pollachi-03	
Special Invitees			
1	Ms.R.Raga Rakshitha Final Year B.Tech.IT	Dept. of Information Technology, Dr.Mahalingam College of Engineering and Technology, Pollachi-03	
2	Ms.B.Priyadarshini Final Year B.Tech.IT	Dept. of Information Technology, Dr.Mahalingam College of Engineering and Technology, Pollachi-03	


Convener
[Mr. A.S. MUTHANANTHA MURUGAVEL]

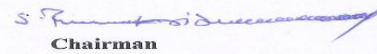

Chairman
[Dr. S. RAMAKRISHNAN]

Points Discussed:

S.No.	Content	Points discussed and conclusions
1.	Welcome Address	Programme Assessment Dr.S.Ramakrishnan, professor & HoD-IT welcomed the members for the 7 th BoS meeting
2.	NBA Visit	<ul style="list-style-type: none"> It was gladly informed to the members that the department got accredited for the third time by NBA The strength of the department and suggestions on further strengthening the department were discussed The members congratulated for the success of NBA accreditation
3.	Online Certification	<ul style="list-style-type: none"> The students' participation in online certification was presented to the members. It is appreciated by the members for the mechanism introduced to the students in equipping themselves
4.	Industry Collaboration	<ul style="list-style-type: none"> Industry collaboration with various IT industries as part of curriculum design was presented to the members The members appreciated the faculty team for the step taken for industry involvement in curriculum design, placement and internship. It is noted that, it will help to minimize the gap between academia and industry The experts suggested providing coding practice to the students, to get placed in Product Companies.
5.	Students Performance in End Semester Examination(ESE)	<ul style="list-style-type: none"> Student's performance during the academic year 2015-2016 odd and even semesters were presented during the meeting and the question papers were reviewed
6.	Placement and Internship	<ul style="list-style-type: none"> The placement and internship details for the batch 2012- 2016 were presented to the members The placement details for the batch 2013- 2017 till date were also presented
7.	PEOs and POs	<ul style="list-style-type: none"> The attainments of PO, PEO through direct and indirect assessment were reviewed. The discussion happened about the how the process of assessments has done
8.	PSOs	<p>department was reviewed and approved by the members as follows</p> <ul style="list-style-type: none"> ❖ PSO1: Open Source Software Able to develop customized solutions for real world problems using open source software ❖ PSO2: Data Science Able to manage, store, retrieve and analyze the voluminous data efficiently
Curriculum and Syllabus		
9.	2011 Regulation	The following two new electives were added in the 2011 regulation curriculum, <ul style="list-style-type: none"> Agile Software Development Social Network Analysis
10.	2014 & 2016 Regulation	<ul style="list-style-type: none"> The curriculum for 2014 & 2016 regulation were finalized. As per the suggestions from the NBA experts, more number of lab components and project components are added in the curriculum. The elective courses with lab component are introduced in the curriculum.
11.	Information Coding Technique	<ul style="list-style-type: none"> The members suggested to include image processing concepts and subband coding in the course. It will help them to do projects in the area of image processing
12.	Web Technology	<ul style="list-style-type: none"> It is suggested to include Angular JS concept in unit IV. The importance of including Angular JS in the course was also discussed
13.	Cloud Computing	Panel members suggested to change the order of the units in the course as follows, <ul style="list-style-type: none"> The fundamentals of virtualization concepts from unit II to unit I Cloud computing basics from unit I to unit II
14.	Social Network Analysis	<ul style="list-style-type: none"> The members recommended to redesign the course syllabus by including the basic concepts of social network analysis to understand the concepts with real time applications
15.	Reordering of Courses	<ul style="list-style-type: none"> The board members' advised that, the course Cloud Computing theory and laboratory in 6th semester can be swapped with Mobile Application Development theory and laboratory course that falls in 7th semester


Convener

[Mr. A.S. MUTHANANTHA MURUGAVEL]


Chairman

[Dr. S. RAMAKRISHNAN]

SEMESTER – V

Course Code: 141IT0501	Course Title: INFORMATION CODING TECHNIQUES	
Core	L : T : P : C	3 : 2 : 0 : 4
Type: Theory	Total Contact Hours:	75 Hours

Prerequisites: The student should have undergone the course:

- > 141IT0303 Basic Communication Engineering

Course Objectives

The course is intended to:

1. Explain the fundamentals
2. Evaluate the text coding
3. Describe the concepts of image coding
4. Apply subband coding and wavelets
5. Analyze audio and video coding techniques

Unit I – INTRODUCTION

9+6

Introduction to Information Theory – Average Information – Uniquely Decodable Codes – Prefix Codes – Kraft Mcmillan Inequality – Algorithmic Information Theory – Minimum Description Length Principle - Huffman Coding: Algorithm, Minimum Variance, Optimality, Length – Adaptive Huffman Coding: Encoding and Decoding Procedure – Applications of Huffman Coding

Unit II - TEXT CODING

9+6

Arithmetic Coding: Introduction-Coding a Sequence, Generating and Deciphering a Tag – Comparison of Huffman and Arithmetic Coding – Adaptive Arithmetic Coding – Applications – Dictionary Technique: Static Dictionary – Diagram Coding – Adaptive Dictionary – LZ Approach – LZW Algorithm: Encoding and Decoding

Unit III - IMAGE CODING

6+6

Lossless Compression: Introduction- JPEG Standards – Multiresolution Approaches – Progressive Image Transmission – Facsimile Encoding – Run Length Coding – Transform Coding: Introduction – Linear Transforms – KL Transform – DCT Transform – Quantization and Coding of Transform Coefficients – Application to Image

S.P. [Signature]
BoS Chairman
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Compression

Unit IV - SUBBAND CODING AND WAVELETS

9+6

Subband Coding: Introduction-Filters used in Subband Coding-Basic Subband Coding Algorithm – Design of Filter Banks – Polyphase Decomposition – Bit Allocation – Application: G.722 – Wavelet Based Compression: Introduction – Wavelets – Multiresolution Analysis and the Scaling Function – Image Compression using Wavelets – EZW and SPHIT

Unit V - AUDIO AND VIDEO CODING

12+6

Audio Coding: Spectral Masking – Temporal Masking – Psychoacoustic Model – MPEG Audio Coding: L1, L2 and MP3 – Dolby AC3 – Speech Compression: Vocoders – LPC – CELP – Sinusoidal Coders – MELP – Wideband Speech Compression – Video Compression: Introduction, Motion Compensation – Video Signal Representation – H.261 – MPEG-4 Video Standards – H.263

Course Outcomes

At the end of the course students will be able to:

- CO1: Explain the fundamentals of information coding theory
- CO2: Evaluate the arithmetic and dictionary coding
- CO3: Describe the concepts of image coding using lossless compression and transform coding
- CO4: Apply subband coding and wavelets in image compression
- CO5: Analyze various audio and video coding techniques and its effectiveness

Text Book:

1. Khalid Sayood, "Introduction to Data Compression", Elsevier - Morgan Kaufmann, Fourth Edition, 2012

Reference Books:

1. Simon Haykin, "Communication Systems", John Wiley & Sons, Inc., Fifth Edition 2009
2. Fred Halsall, "Multimedia Communications, Applications Networks Protocols & Standards", Pearson education, 2008
3. David Salomon, "Data Compression: The Complete Reference", Springer, Fourth Edition, 2011
4. Ranjan Bose, Information Theory, Coding and Cryptography, McGraw-Hill Education, 2008


BoS Chairman
