VIGNAN'S
Foundation for Science, Technology & Research
UNIVERSITY
(Estd u/s 3 of UGC Act of 1956)

Department of Electronics and Communication Engineering

Date: 11.07.2017

Minutes of the Board of studies (BOS) meeting for MTech Embedded Systems(ES) held on 11/07/2017 in Sravanthi Seminar Hall

The following are the members presented for the meeting.

1)	Dr. N. V. S. N. Sharma	- External member fromProfessor ECE NIT Warangal
2)	Mr.P.Haribabu	- External member from ScientistCDAC Bangalore.
3)	Dr.S.V. Rangarajan	- External member fromIndustry.
4)	Dr.N.Usha Rani	- Professor & HOD,ECE
5)	Dr.B.Seetharamanjaneyulu	- Professor
6)	Dr.T.Pitchaiah	- AssociateProf
7)	Mr.P.J.Reginald	-Assistant Prof

The following views were expressed by the external members

1)   Dr.S.V.Rangarajan insisted the exposure of industry practices for faculty, importance of feedback from old students & industrialpersons.

2)   Dr.S.V.Rangarajan and Mr.P.Haribabu insisted about creating the interest among faculty to improve industrial exposure.

3)   Board of members asked about clarification regarding Electives, and was asked to introduce innovative and emerging electives like which are useful for Industry application.

4)   Dr.N.Usha Rani given clarification regarding advanced subjects proposed in new regulations,

5) Dr.N.Usha Rani discussed about, the new included courses. The new subject was briefly addressed by Mr.P.J.Reginald and panel members expressedacceptance.

6) Dr. N. V. S. N. Sharma, Dr.S.V.Rangarajan and Mr.P.Haribabuexpressed satisfaction for the courses included

7) The Team suggested that the course Design Internet of things should be covered through casestudies.

8) Finally concluded that it has to be more strengthened and both faculty and students are to be made responsible forthat.

Outcomes:

1. BOS members approved the revised curriculum (Structure, Syllabus and regulations) of MTech, Embedded Systems and it follows Choice Based Credit System.CourseStructure is provided in AppendixA.

2. Major restructuring has taken place in the Curriculum with theory courses integrated with laboratorysessions.

3. All the Courses in the Curriculum are designed to fall under either of the domains of employability (or) skill development (or) Entrepreneurship. The mapping of the courses with employability or skill development is provided in AppendixB.

4. In all the courses of the revised curriculum (R17) substantial changes are made in the content in addition to the inclusion the list of new courses provided in AppendixC.

5. The percentage of revision from R14 to R17 is 30%.

6. Stakeholder's feedback is collected, analyzed and given utmost priority while designing the curriculum and their suggestions areimplemented.

Appendix A
Course Structure -M.Tech (Embedded Systems) 2017 Regulation

I Year - I Semester

Course Code	Course Title	L	T	P	C
Professional Core	Microcontrollers for Embedded System	3	-	3	5
Professional Core	Embedded System Design Concepts	3	1	-	4
Professional Core	Embedded Programming	3	-	3	5
Professional Core	Embedded Networking	3	1	-	4
	Total Core Credits				18
Professional Elective	Elective Course – I	3			3
Professional Elective	Elective Course – II	3			3
	Total Elective Credits				6
	Total Semester Credits				24

I Year - II Semester

Course Code	Course Title	L	T	P	C
Employability	Research Methods	3	-	-	3
Professional Core	Ad-hoc Sensor Networks	3	-	3	5
Professional Core	Design of IoT systems	3	-	3	5
Professional Core	Embedded Linux	3	1	-	4
Professional Core	Embedded System Design with FPGA	3	1	-	4
	Total Core Credits				21
Professional Elective	Elective Course - III	3			3
Professional Elective	Elective Course - IV	3			3
	Total Elective Credits				6
	Total Semester Credits				27

Note : The courses that are highlighted denotes implementation of "Choice Based Credit System(CBCS)".

II Year- I & II Semesters

Course Code	Course Title	L	T	P	C
I Semester					
Project/Internship	Project/ Internship Phase - I	-	-	-	15
II Semester					
Project/Internship	Project/ Internship Phase - II	-	-	-	15

Electives Courses

Course	Course Title	L	T	P	C
Elective	Introduction To Internet Of Things	3	1	-	4
Elective	Soft Computing	3	1	-	4
Elective	Adaptive Signal Processing	3	1	-	4
Elective	System On Chip Design	3	1	-	4
Elective	Digital Image And Video Processing	3	1	-	4
Elective	Data Communications	3	1	-	4
Elective	Neural Networks & Fuzzy Systems	3	1	-	4
Elective	Scripting Languages(Common To VLSI)	3	1	-	4
Elective	Risc Processors Architecture And Programming	3	1	-	4
Elective	Micro Electro Mechanical System	3	1	-	4
Elective	Dsp Processors	3	1	-	4
Elective	Computer Architecture And Parallel Processing	3	1	-	4
Elective	Robotics And Automation	3	1	-	4
Elective	Cryptography And Network Security	3	1	-	4
Elective	Smart Instrumentation	3	1	-	4
Elective	Wireless Communications And Networks	3	1	-	4

Note : The courses that are highlighted denotes implementation of "Choice Based Credit System(CBCS)".

Signature Of BOS Chairman

APPENDIX – B

List of courses that enable employability or entrepreneurship or skill development in the R-17 M.Tech – Embedded Systems

Sl.No	Course Name	Core / Elective	Year	Employability / Skill Development/Entrepreneurship
1	Analysis of Power analog circuit Converters	Core	I	Skill development
2	Digital Control of Microprocessors	Core	I	Employability
3	Nano-Electronics	Core	I	Employability
4	Nano-Optics	Core	I	Employability
5	Formal Verification of Digital Hardware & Embedded Software	Core	I	Skill development
6	FPGAs Physical Design	Core	I	Skill development
7	System Level Design & Modeling	Core	I	Skill development
8	Computer Arithmetic & Micro-architecture Design	Core	I	Employability
9	Neural, Fuzzy Systems & Genetic Algorithms	Elective	I	Skill development
10	Parallel & distributed systems	Elective	I	Employability
11	New Renewable Energy Sources & Technology	Elective	I	Entrepreneurship

12	Modern Control Theory	Elective	I	Skill development
13	Network on Chip	Elective	I	Skill development
14	Hardware Security	Elective	I	Skill development
15	Bio Sensors and Circuits	Elective	I	Skill development
16	Programmable Logic Controllers and Their Applications	Elective	I	Employability
17	Embedded System Integration	Elective	I	Employability
18	Microprocessor & Microcontrollers	Elective	I	Employability

Note: The Courses that are highlighted denotes implementation of "Choice Based Credit System(CBCS)".
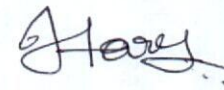
Signature Of BOS Chairman

APPENDIX - C
List of new courses in the R-17 Regulations
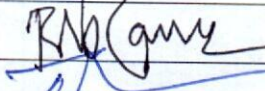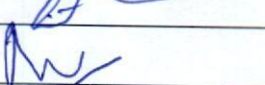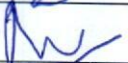## M.Tech – Embedded Systems

Sl. No	Course Name	Year
1	Microcontrollers for Embedded System	I
2	Embedded System Design Concepts	I
3	Embedded Programming	I
4	Embedded Networking	I
5	Research Methods	I
6	Ad-hoc Sensor Networks	I
7	Design of IoT systems	I
8	Embedded Linux	I
9	Embedded System Design with FPGA	I
10	Introduction To Internet Of Things	I
11	Soft Computing	I
12	Adaptive Signal Processing	I
13	System On Chip Design	I
14	Digital Image And Video Processing	I
15	Data Communications	I
16	Neural Networks & Fuzzy Systems	I
17	Scripting Languages(Common To Vlsi)	I
18	Risc Processors Architecture And Programming	I
19	Micro Electro Mechanical System	I
20	Dsp Processors	I
21	Computer Architecture And Parallel Processing	I
22	Robotics And Automation	I
23	Cryptography And Network Security	I
24	Smart Instrumentation	I
25	Wireless Communications And Networks	I

The following are the members present for the board of studies meeting held at Department of Electronics and Communication Engineering on 11-07-2017

External Members:

Sl. No.	Name of the Member	Designation	Signature
1.	Dr. N. V. S. N. Sharma	Professor ECE NIT Warangal	
2.	Mr .P.Haribabu	Scientist CDAC Bangalore	
3.	Dr.S.V. Rangarajan	Industry	

Internal Members:

Sl. No.	Name of the Member	Designation	Signature
1.	Dr.N.Usha Rani	Professor and HOD	
2.	Dr.B.Seetharamanjaneyulu	Professor	
3.	Dr. T.Pitchaiah	Associate. Prof	
4.	Mr.P.J.Reginald	Assistant Prof	

BOS CHAIRMAN