GEETHANJALI COLLEGE OF ENGINEERING AND TECHNOLOGY (UGC AUTONOMOUS)

Department of Electronics and Communication Engineering.

Minutes of the Board of Studies (BoS) Meeting

Virtual Meeting: https://meet.google.com/zgt-jvkd-ypo **Time:** 11:00 AM

Date: June 30, 2021

Members Present

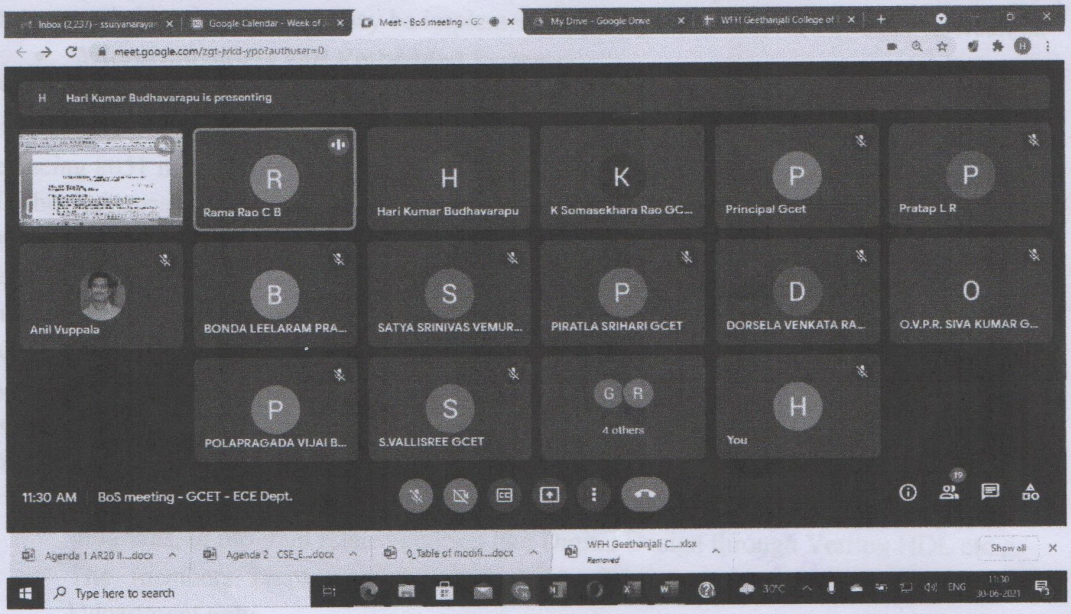
JNTUH Nominee : Dr. L. Pratap Reddy, Professor, ECED, JNTUH, Hyderabad
Subject Expert1 (from Academia) : Dr. C. B. Rama Rao, Professor, ECED, NIT Warangal
Subject Expert2 (from Academia) : Dr. Anil Kumar Vuppala, IIIT, Hyderabad
Subject Expert3 (from Industry) : Sri C. Ramesh Reddy, Scientist "G", RCI, DRDO, Hyderabad
Chairman, College Academic Council: Dr. S. Udaya Kumar, Principal, GCET
Chairman, ECE Dept BoS : Dr. S. Suryanarayana, HoD, ECE, GCET
Dean-SE&CE : Prof. B. Hari Kumar, Professor, ECED, GCET
GCET Alumni Representative : Mr. RVNR Suneel Krishna

Internal Members of the ECE Dept. GCET:

1. Dr. R. S. Raju, Professor
2. Mr. K. Somasekhara Rao, Professor
3. Dr. P. Vijai Bhaskar, Professor
4. Dr. P. Srihari, Professor
5. Dr. B. Leelaram Prakash, Professor
6. Mr. OVPR Siva Kumar, Professor
7. Dr. V. Satya Srinivas, Associate Professor
8. Mr. D.V. Rami Reddy, Associate Professor
9. Ms. G. Sreelaxmi, Associate Professor
10. Dr. Vallisree, Associate Professor

Agenda:

1. Syllabus of B.Tech. ECE Courses and Service Courses of III B.Tech I & II Semester and IV B.Tech of I & II Semester under AR20 Curriculum.
2. Panel of Examiners for Paper Setting and Paper Valuation for the Academic Year 2021-22



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Minutes:

Welcoming Members by HoD: Dr. S. Suryanarayana

Dr. S. Suryanarayana welcomed all BoS members to the Meeting. Prof. B. Hari Kumar explained the changes incorporated in the course structure and in the syllabi of I and II year courses of AR20 as per the suggestions given by the members during the BoS meeting held on 5th November 2020. He thanked the members for ratifying the same. He also mentioned that the course structure and the syllabi of ECE courses and Service courses offered by ECE department up to II Year II semester along with the Open Electives offered by ECE department were ratified by the College Academic Council.

After that brief review, points given in the Agenda were discussed as detailed below:

1. **Discussion and seeking the Approval of Syllabus of ECE Courses and Service Courses of III B.Tech I & II Sem and IV B.Tech I & II Sem offered under AR-20**

Prof B. Hari Kumar presented the syllabi of all the courses of B.Tech III and IV year ECE and service courses that are offered by ECE department. He informed to all the members that the syllabus in most of the courses has been retained as in AR18 and displayed the contents where the changes were made. Syllabuses of new courses were also displayed. The forum in principle approved the syllabus of AR-20 courses with the following suggestions and recommendations.

- **Computer Architecture and Microprocessors:**

Prof. K. Somasekhara Rao explained about the contents included in the course, and the reasons for combining the Computer Architecture with Microprocessors. Prof. C B Rama Rao pointed out that only first unit is on Computer Architecture. Dr. L. Pratap Reddy and all the other External BoS members suggested to change the title as "Microprocessors and its interfacing" and also suggested to give more focus on interfacing of microprocessor with external peripherals by removing the topics on Computer Architecture in Unit I. Dr. S. Udaya Kumar informed the members that syllabus has been framed by taking the course module offered by IITB as reference.

As the course structure is already approved and ratified, it is suggested that the modifications recommended by the members may be implemented during the next revision of the curriculum.

- **Microcontrollers and Embedded Systems:**

Prof. K. Somasekhara Rao explained about the contents included in the course, and the reasons for combining the Microcontrollers and Embedded Systems. Sri C. Ramesh Reddy suggested replacing 8051 microcontroller by basic ARM controller as ARM is the basic controller used in all the industrial applications like process automation, avionics, defense applications etc. Dr. L. Pratap Reddy and Dr. Anil Kumar Vuppala also agreed for the inclusion of ARM keeping the requirement of industry in the present context. Dr. Anil Kumar Vuppala also suggested to have Computer Architecture and Computer Organization as an open elective to ECE students by CSE Department, by offering Microprocessors and its interfacing, Embedded Systems from ECE Department. Dr. S. Udaya Kumar informed the members that if any technical related course is offered as open elective, students are not showing interest to opt the course.

- Members suggested to give provision for internal marks to assignments on coding the programs, in program related courses like Digital Design through Verilog HDL etc.,
- The members recommended offering of all the Professional Electives by the Department only.

- Members suggested introducing Professional Electives from Signal Processing Group to accommodate courses like Artificial Intelligence, Machine Learning, Deep Learning, Neural Networks, Speech Processing, Computer Vision applications, Signal Processing with Artificial Intelligence, Biomedical Signal Processing, Advanced Signal Processing, in order to have an additional advantage for students when they join in software/core related jobs. Dr. L. Pratap Reddy said that Digital Image Processing and its applications using ML, DSP algorithms with ML in Medical Image Processing and Stock Market Analysis are the upcoming technologies.
- Dr. L. Pratap Reddy recommended to put forward a proposal to Academic Council for approval on incorporating an evaluation metric associated with lab component for certain theory courses where there is no laboratory offered in curriculum. This may give a provision for students to submit compiled and executed codes in the form of tutorials.
- Dr. C. B. Rama Rao suggested to offer Basic Electronics Course as one of the core courses to ME and CE students.

It is decided that the above suggestions made by the members may be implemented during the next revision of the curriculum.

- **Digital Signal Processing:**

Dr. Anil Kumar Vuppala suggested to include the topic on Introduction of Finite Word Length effects and Introduction on DSP Processors in Unit V by removing the topic on multirate signal processing.

- Members suggested to offer at least one VLSI related course (VLSI Design) as core course with associated lab in the next revision of the syllabus.
- **Electronic Instrumentation and Measurements:**

Dr. C. B. Rama Rao suggested including the topics on Spectrum Analyzer, Waveform Analyzer, Network Analyzer, Q-meters in the course.

- Members suggested to change the title of "Electronic Sensors" as "Sensors and Transducers". Sensors and Transducers by DVS Murthy can be considered as one of the prescribed text books.
- Members suggested to change the title of "IoT using Smart Sensors" as "IoT and Applications".
- Members suggested to offer IC Applications as one of the core courses to CSE related branches to make them familiar with all ICs of Logic gates to Memories.

As the course structure is already approved and ratified, it is suggested that the modifications recommended by the members may be implemented during the next revision of the curriculum.

Syllabi for all other courses including the service courses offered by the department were approved by the members without any changes.

2. Discussion and seeking the Approval of Panel of Examiners for Paper Setting and Paper Valuation for the Academic Year 2021-22

Prof B. Hari Kumar presented the Panel of Examiners for Paper Setting and Paper Valuation for the Academic Year 2021-22. The forum has ratified the list.

The meeting is concluded at 2 PM with vote of thanks proposed by Dr. S. Suryanarayana.

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2. With the introduction of FOURTH stream of Professional Electives, namely "Emerging Areas", the course codes of few courses including service courses offered to other departments are revised as per the details given in the table:

Course Codes in the Structure	Revised Course Codes in the Structure
------	20EC31007 Artificial Neural Networks
20EC31007 Internship	20EC31008 Internship
20EC31008 Embedded Systems and IoT (CSE-IoT)	20EC31009 Embedded Systems and IoT (CSE-IoT)
------	20EC32006 Principles of Machine Learning
20EC32006 Computer Architecture and Microprocessors (EEE)	20EC32007 Computer Architecture and Microprocessors (EEE)
-------	20EC41006 Robotic Process Automation
20EC41006 Digital Image and Video Processing	20EC41007 Digital Image and Video Processing
20EC41007 Internet of Things using Smart Sensors	20EC41008 Internet of Things using Smart Sensors
20EC41008 ASIC Design	20EC41009 ASIC Design
20EC41009 Adaptive Signal Processing	20EC41010 Adaptive Signal Processing
20EC42001 5G Mobile Communication	20EC42001 Radar Systems
20EC42002 Radar Systems	20EC42002 Mixed Signal Circuit Design
20EC42003 Mixed Signal Circuit Design	20EC42003 5G Mobile Communication
20EC22007 Analog Circuits (EEE)	20EC22005 Analog Circuits (EEE)
20EC41011 Digital Signal Processing (EEE)	20EC41013 Digital Signal Processing (EEE)
20EC41012 Microcontrollers and Embedded Systems (EEE)	20EC41014 Microcontrollers and Embedded Systems (EEE)
20EC41009 Project Seminar	20EC41011 Project Seminar
20EC41010 Mini Project	20EC41012 Mini Project

3. As per the suggestions given by the members, the syllabus in the course "Digital Signal Processing" is modified by adding the topic on "Introduction on DSP Processors" and removing the topic on "multirate signal processing".

4. The syllabus of all the courses after incorporating the suggested modifications is enclosed with this.