Geethanjali College of Engineering and Technology
Cheeryal, Keesara (M), Medchal Dist. 501301

Department of Computer Science Engineering

Board of Studies Meeting Minutes

Venue: Online(https://meet.google.com/fzy-cnka-icy)

Date: 10-07-2021

Time: 09:30 am to 12:00 pm

External BoS members:

Digitally signed by G. Vijayakumari
DN: cn=G. Vijayakumari, o=JNTUHCEH, ou=Dept. of CSE, email=vijayakumari.gunta@gmail.com, c=IN
Date: 2021.10.11 11:39:52 +05'30'

1. **Dr. G. Vijaya Kumari**, Professor & Director, JHUB, JNTUH.
2. **Dr. S. Bapi Raju**, Professor, IIITH.
3. **Dr. N. Arvind**, Assistant Professor, IITH.
4. **Mr. M. Goutham**, Senior Director, Oracle, Hyderabad.
5. **Mr. Kumar Mynampati**, Associate Vice-President, Infosys

Internal Faculty:

1. **Dr. S. Udaya Kumar**, Principal, GCET
2. **Dr. V. Madhusudhan Rao**, Professor and Dean of School of CS&I, GCET
3. **Dr. A. Sree Lakshmi**, Professor and Head CSE, GCET**(BoS Chairperson)**
4. **Dr. K. Srinivas**, Professor and Head IT, GCET
5. **Dr. B. V. Swathi**, Professor, GCET
6. **Dr M Shanthi**, Professor, GCET
7. **Dr.A.Gagandeep**, Professor, GCET
8. **Dr.L.Venkateswarlu**,Profcssor, GCET
9. **Dr Sugandha Singh**, Professor, GCET
10. **Ravikanth T**,Professor, GCET
11. **Dr. G. Somasekhar**, Associate Professor, GCET
12. **Dr. A. Hari Prasad Reddy**, Associate Professor, GCET
13. **Dr. K. Kamakshaiah**, Associate Professor, GCET
14. **Dr. Rajesh Kumar Srivastava**, Associate Professor, GCET
15. **Dr. Puja S. Prasad**, Associate Professor, GCET
16. **Mrs G. Lokeshwari**,Associate Professor, GCET
17. **Mr. M. Srinivas**, Associate Professor, GCET
18. **Mr. M. Raja Krishna Kumar**, Associate Professor, GCET
19. **Mr. V. Shiva Narayana Reddy**, Associate Professor, GCET

20. **Ms. C. Esther Varma**, Associate Professor, GCET
21. **Mr M Vijay Bhaskar Reddy**, Associate Professor, GCET
22. **Mr E Mahender**,Assistant Professor, GCET
23. **Mr K Naresh Babu**,Assistant Professor, GCET
24. **Mr Kandhi Vijay Kumar**,Assistant Professor, GCET
25. **Ms N Radhika Amareshwari**,Assistant Professor, GCET
26. **Mrs P Lalitha**,Assistant Professor, GCET
27. **Ms U Sadhana**,Assistant Professor, GCET
28. **Ms Y Swathi Tejah**,Assistant Professor, GCET
29. **Mr Sri Kanth**,Assistant Professor, GCET
30. **Ms Lavanya Maguluri**, Assistant Professor, GCET
31. **Ms Aparna ~~Mangari~~ Ponnuru**, Assistant Professor, GCET 16/08/21

Agenda:

- **Approval of previous BoS meeting minutes held on 31-10-2020**
- **AR21 B.Tech-CSE program structure with minor adjustments from AR20 B.Tech-CSE program structure as approved by BoS through e-mail on 09-04-2021.**
- **Approval of Syllabus for III and IV year of B.Tech-CSE , B.Tech-CSE(AIML), B.Tech-CSE(IoT), B.Tech-CSE(DS), B.Tech-CSE(CS) of AR20 regulation and B.Tech-CSE of AR21 regulation.**
- **Approval of Service courses for III year and IV year of B.Tech-ECE, EEE, ME, CE, FE of AR20 regulation.**
- **Approval of AR16, AR18, AR20(III and IV year),AR21(III and IV year) equivalent courses.**
- **Any other item with the permission of the committee.**

Minutes of meeting:

Prof. (Dr) A Sreelakshmi, Head of Department CSE, chaired the meeting and welcomed all the members to the BoS meeting. External members of the BoS are formally introduced. Having confirmed the quorum of the meeting, the agenda of the meeting was taken up for discussion.

The following points were discussed and approved during the meeting:

1. **Approval of previous BoS meeting minutes held on 31-10-2020.**
   Head of Department apprised the board members regarding the minutes of the BoS meeting held on 31-10-2020 that the suggestions made by the board have been duly incorporated in the course structure and syllabus of AR20 regulation I and II year for CSE, and specializations under CSE:- AIML, DS, CS and IoT.

2. **AR21 B.Tech-CSE program structure with minor adjustments from AR20 B.Tech-CSE program structure as approved by BoS through e-mail on 09-04-2021**
   - B.Tech-CSE(AIML) program is approved by AICTE with an increase in intake from 60 to 180.
   - Minor adjustments in the form of shuffling of courses for load balancing in AR20 B.Tech-CSE program structure as approved by BoS through e-mail have been incorporated and applicable from the A.Y:2021-22. The e-mail approvals of the BoS members is presented.
3. **Approval of Syllabus for III and IV year of B.Tech-CSE , CSE(AIML), CSE(IoT), CSE(DS), CSE(CS) of AR20 regulation.**
   - With reference to previous BoS meeting held on 31-10-2020, the approved program structures for **B.Tech-CSE , CSE(AIML), CSE(IoT), CSE(DS), CSE(CS) of AR20 regulation** was presented. Professional electives for all specializations and syllabus of all III year and IV year courses is put for approval in current BoS.
   - The board members have given their approval for the program structure with regards to professional electives.
   - The syllabus related to III and IV year courses is presented and BoS members approved them with few suggestions. The suggestions are noted for updating in the curriculum.
   - The detailed description on syllabus of the courses offered for III and IV year for CSE and its allied branches, discussed in BoS meeting, is as follows:

B.Tech. -CSE

THIRD YEAR SEMESTER-I

S.No.	Course Title	Changes made compared with AR18 regulation
1	Software Engineering	No change
2	Computer Networks	No change
3	Artificial Intelligence	Textbook is changed. 25% of the syllabus has changed as per the text book.
5	Software Engineering Lab	No change
6	Computer Networks Lab	No change
7	Artificial Intelligence Lab	No change
10	Internship	Internship is made mandatory for students since AR18.
11	Introduction to Cyber Security	The course is being offered to students across all branches. The syllabus is as proposed by the JNTUH. However, there will be no assessment and credits as it is a mandatory course

THIRD YEAR SEMESTER-II(CSE related courses)

S.No.	Course Title	Changes made compared with AR18 regulation
1	Internet of Things	No change
2	Statistics for Machine Learning	Course included as per suggestion given in the previous BoS. Syllabus has been approved by Mathematics BoS.
3	**Professional Elective – I**	
	Information Retrieval	No change

	Systems	
	Design Patterns	No change
	Advanced Computer Architecture	Course has been offered exclusively for CSE students. Syllabus same as JNTUH.
	Cryptography and Network Security	No change
4	**Professional Elective II**	
	Principles of Programming Languages	No change
	Distributed Systems	No change
	Computer Graphics	No change
	Information Security	Advanced concepts have been included as students will be studying Cryptography and Network Security
6	Internet of Things Lab	No change
7	Statistics for Machine Learning Lab	Lab experiments will be implemented using R tool

FOURTH YEAR SEMESTER-I

S.No	Course Title	Changes made compared with AR18 regulation
1	Big Data Analytics	No change
2	Machine Learning	Offered as core course with lab. Textbook has been changed. 80% of the syllabus is changed and framed based on other premium University syllabus
3	Cloud Computing	No change
4	**Profcssional Elective – III**	
	Web Services	Everything is same except that RESTful is included as it is one of the latest Technologies
	Mobile Application Development	No change
	Digital Image Processing	Subject offered n different semester in AR18. Syllabus same as AR18.
	Deep Learning	30% change in syllabus due to overlapping of topics in AI and ML courses.
5	**Professional Elective – IV**	
	Distributed Databases	No change
	IoT Analytics	Syllabus framed based on other universities syllabus.
	Software Testing Methodologies	No change
	Computational Intelligence	Title was previously Fuzzy logic. It is changed in order to justify the content in the subject.
6	Big Data Analytics Lab and Cloud Computing Lab	Included experiments using different cloud service providers like Amazon, AWS and Google App. Engine
7	Machine Learning Lab	No change

FOURTH YEAR SEMESTER-II

S.No.	Course Title	Changes made compared with AR18 regulation
1	**Professional Elective V**	
	Human Computer Interaction	No change
	Software Project Management	No change
	Data Warehousing and Data Mining	No change
	Digital Forensics	Not included in AR18 regulation. Syllabus as per JNTUH syllabus from Computer Forensics

B.Tech-CSE(AIML):

The following are the newly introduced courses for B.Tech –CSE(AIML) and courses whose syllabus is changed with respect to B.Tech-CSE syllabus

THIRD YEAR SEMESTER-I

- Theory of Computation course is offered as professional Elective-I whereas it is a compulsory course for B.Tech-CSE

THIRD YEAR SEMESTER-II

- Cryptography and Network Security course is core course for AIML.
- Optimization Techniques and Natural Language processing are offered as professional electives and its syllabus is same as AR18.

IV YEAR SEMESTER-I

- Computational Intelligence is offered as a core course for AIML. The title "Fuzzy Logic" approved in previous BoS is changed to Computational Intelligence to match the syllabus content which includes the concepts of Fuzzy Logic along with evolutionary computation. Some part of syllabus is taken from IIT Bhuvaneshwar syllabus.
- Deep Learning is offered as a core course for AIML. 30% syllabus is changed from AR18 due to overlapping of topics. Deep Learning Lab is introduced for the first time. Faculty are getting trained in the area of deep learning.
- Bioinformatics is offered as Professional elective-IV which deals with applications of AIML. Syllabus is taken from other premier universities.

IV YEAR SEMESTER-II

- IoT Analytics and AI for Cyber Security are the new courses offered as professional elective-V. Syllabus is taken from other premier universities

B.Tech-CSE(DS):

The course structure for Data Science is almost similar to B.Tech-CSE(AIML) syllabus but with a few differences as below (courses similar to B.Tech. AIML are not mentioned explicitly):

III YEAR SEMESTER-I

- DWDM theory and lab is offered as a core course for DS in III year I Semester but as a Professional Elective for AIML.

III YEAR SEMESTER-II

- Information security is offered as elective for DS students
- Cryptography and Network Security is core course for AIML and is offered as professional elective for DS.

IV YEAR SEMESTER-I

- IoT is offered as core for DS and the syllabus is same as that of CSE.

IV YEAR SEMESTER-II

- Big Data Security and Business Intelligence and Analytics is offered for DS are offered as professional elective courses in VI-year II Semester.
- The syllabus for Business Intelligence and Analytics is framed based on VIT syllabus.

B.Tech-CSE(CS):

The following are the newly introduced courses for B.Tech –CSE(CS) and courses whose syllabus is changed with respect to B.Tech-CSE syllabus

III YEAR SEMESTER-I

- Cryptography is offered in III-year I Semester exclusively for CS specialization. This syllabus includes two units of Number theory and three units of Cryptography. Lab is also associated with this course where students implement cryptography algorithms using Java.
- The syllabus of Information Security in III-year I Semester is changed in order to make it as continuity course after Cryptography.

III YEAR SEMESTER-II

- Digital Forensics is offered in III-Year II Semester AR20 as a compulsory course for CS but elective for other specializations. Syllabus is same as B.Tech-CSE.
- In III-Year II Semester, Quantum Computing and Cryptography is offered to CS students as professional elective-I and Secure Coding and Database Web Security as professional elective-II along with Information Security Lab and Digital Forensics Lab.

IV YEAR SEMESTER-I

- In IV-Year I Semester, Block Chain Technologies with Lab and is offered exclusively for CS students. Cyber Security and Cyber Laws is also offered as an exclusive core course. The syllabus for Cyber Security and Cyber Laws is framed taking reference from other premier universities syllabus. Block Chain Technologies syllabus is framed from IITK, KL University syllabus, NPTEL.
- Ethical Hacking is offered as an professional elective-III and Mobile and Wireless Network Security as professional Elective-IV exclusively for CS students.

IV YEAR SEMESTER-II

- AI for Cyber Security is offered as professional elective in IV –II which is also offered as elective for AIML students.

B.Tech-CSE(IoT):

The following are the newly introduced courses for B.Tech–CSE(IoT) and courses whose syllabus is changed with respect to B.Tech-CSE syllabus

III YEAR SEMESTER-I

- The course "Microcontroller and Embedded system" in III-year I Semester, approved in previous BoS is renamed as "Embedded Systems and IoT" as the syllabus content is designed with the concepts of Microcontrollers, Embedded

systems and introduction to IoT as required for CSE students. This course is approved by ECE BoS making it relevant to CSE and as a continuity to course "Smart Sensors and Instrumentation"

- IoT architecture and Protocols is offered as an exclusive professional elective for IoT students.

III YEAR SEMESTER-II

- Wireless Sensor Networks is offered as a core course for IoT students. This course is offered with Lab.

IV YEAR SEMESTER-I

- IoT Applications is a core course, IoT Infrastructure Management, IoT for Architects are offered as professional electives exclusively for IoT students.

IV YEAR SEMESTER-II

- Industrial IoT, is offered as Professional elective exclusively for IoT students in IV-year II Semester.
- Business intelligence and Analytics is also offered as professional elective which is also offered for DS students.

4. **Approval of Service courses for III year and IV year of B.Tech. ECE,EEE,ME,CE,FE of AR20**
   The courses and syllabus of service courses have been discussed and approved.
5. **Approval of AR16, AR18, AR20(III and IV year) and AR21(III and IV year) equivalent courses.**
   HoD presented the equivalent courses that a student must study if he has rejoined in a different regulation. If 80% of the syllabus is similar, then the courses are said to be equivalent else not equivalent. The equivalent courses between AR16,AR18 and AR20 is being approved.
6. **Any other item with the permission of the committee.**
   With the permission of the board members, HoD presented the list of Panel members for paper setting and paper correction. The members are selected based on their experience and only from autonomous institutions or universities.

BoS members approved the above discussions in six items with the following suggestions

➢ **Suggestions by external BoS members**

1. Mr Goutham enquired about the duration of Internship to be done by students in III year I Semester and suggested that internship of one month would not be sufficient for considerable outcome.
   It was clarified that the Internship will be for a duration of one month, but students will be continuing during weekends. Major project would be of a semester duration.
2. Dr.Bapi Raju enquired regarding the process of assessment used for Internships.
   The process of assessment is being clarified specifying that the internship will be assessed by an internal committee formed with professors for 100marks based on the quality of the project, whether it was done in the industry or government sector or research organizations, students presentation, seminar, and report submitted.

3. Dr Bapi Raju suggested 'A Modern approach for AI' text book by Peter Russel for Deep Learning course offered for IV year I Semester B.Tech -AIML and B.Tech-DS.
4. Sir also suggested reframing the syllabus of AI for Cyber Security for IV year II SemesterB.Tech-CS as the first 2 units are very generic in terms of knowledge related to AI. The 3rd and 4th units deal with Cyber Security. But the 5th unit is not related to the remaining syllabus. "ML for Cyber Security" is suggested instead of "AI for Cyber Security" as many universities are offering it and good set of text books are also available for it.
5. It was also suggested to mention the year of publishing for all textbooks and reference books.
6. Dr Bapi Raju suggested that the syllabus for Quantum Computing and Cryptography offered for III-year II Semester B.Tech-CS needs to be reframed. The following sequence of units may be considered: Unit 4, Unit 3, Unit 1, Unit 2, Unit5 or to reframe the contents.
7. Dr. N Aravind mentioned that the syllabus of Information Security offered for III-year I Semester B.Tech-CS does not cover all the basics like data integrity, hashing, authentication, key management etc. The Cryptography and Network Security syllabus offered for other specializations is having proper contents which can be offered for CS students. A few network security concepts may be included in Information Security course.