

-Estat u/s 3 of UGC Act 1956

# DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Date: 05.06.2023

### Minutes of Board of Studies Meeting

Board of Studies (BoS) meeting for the M.Tech - CSE programme was conducted in the blended mode from 10.00 AM to 12.00 Noon on 03.06.2023. (Physical meeting: NB - 304, Third floor, Nagarjuna Block, VFSTR and virtual meeting link: https://us06web.zoom.us/j/83205405920?pwd=VFNaZEN3NTNIa3VJZm52R3RsSHRKQT0

#### Agenda of the BoS Meeting:

- 1. Discussion and approval of M. Tech CSE Program Course Structure and Contents.
- 2. Finalization of NPTEL courses for R20 students.
- 3. Any other point with the permission of the chair.

The following members were present either thorough offline or online.

S. No	Name of the Member	Designation	Role	Signature
1	Dr. K.V. Krishna Kishore	Dean SoC&I, Professor & HoD	Chairperson	Cofamin
2	Dr. Salman Abdul Moiz, SCIS, University of Hyderabad. salman@uohyd.ac.in +91 98850 49992	Professor	Member	Salone
3	Dr. Saroj Kr. Biswas NIT Silchar, saroj@nits.ac.in +91 95087 27987	Associate Professor	Member	Online
4	Dr. Saravanan Chandran NIT Durgapur, cs@cse.nitdgp.ac.in +91 94347 88036	Associate Professor	Invited Member	Online
5	Dr. S. V. Phani Kumar	Sr. Associate Professor	Member S	Shik
6	Dr. M. Umadevi	Associate Professor	Member	Ra a.M
7	Dr. Oqail Ahamad	Assistant Professor	Member	WE
8	Ms. B. Suvarna	Assistant Professor	Member	8

9	Mr. D.Yakobu	Assistant Professor	Invited Member (Nominee – Dean R&D)	Bund
11	Mr. S. Deva Kumar	Assistant Professor	Secretary (Ex-officio)	50 cm Km

#### Minutes of the meeting:

- Dr. K.V. Krishna Kishore, BoS Chairman, has initiated the meeting with his opening remarks, hearty welcomed all the internal and external members of the M.Tech. CSE BoS and presented the glimpses of R22 Regulations.
- Mr. S Deva Kumar, M.Tech. Program Coordinator has given a detailed presentation on R22 M.Tech. CSE curriculum. He also stressed the practices to be adopted in the conduction of R22 course contents delivery. Mr. S Deva Kumar, Program Coordinator presented the deviations from R20 Regulations and also he presented comparative analysis of R M.Tech. CSE Course Structure with AICTE model curriculum. The M.Tech. CSE course structure is attached as Annexure I.
- A major shift in R 22 from R 20, is adoption of continuous learning and assessment based on attainment of Targets.
- As per R 22, Students are eligible to get their degree only by acquiring a minimum of 68 credits.
- In addition to that, students have options to obtain Add-on Certification degree by acquiring an additional 12 more credits.
- 40% of course content revised in R22 course content compared to R 20 course content.
- Dr. Saroj Kumar Biswas has suggested to offer Internet of Things in Semester One and advised looking after the possibility of including one Mathematical related course in the first year.
  - As per suggestion, IoT is included, and required Mathematical component is offered in Audit course.
- Dr. Saravanan Chandran has suggested renaming the course Design and Analysis of Algorithms as Data Structures and Algorithms and suggested incorporating some advanced topics of Data Structures. He also suggested offering specializations in M.Tech. Program based on opted department elective courses.
  - As per suggestion, stream-wise department electives are formed.
- Dr. Salman Abdul Moiz suggested comparing the AICTE basic mandate about Add-on Certification offered by VFSTR. Also advised to offer the course only based on pre-

requisite. If shortage of credits is a problem for the floating of pre-requisite, then he suggested to offer few courses as a part of bridge course or refresher course.

As per suggestion, verified AICTE mandate, R 22 is compliance with AICTE mandate.

- In the R 22 regulations, students have a possibility to acquire specializations by the successful completion of mandatory electives of 12 credits in the thrust areas of Artificial Intelligence and Machine Learning (AI&ML), Data Science, and Cyber Security.
- The curriculum encompasses the courses that enable employability or entrepreneurship or skill development, is provided in Appendix- II.
- The Member secretary presented the list of SWAYAM-NPTEL courses for R20 and R 22 M. Tech CSE students. These courses shall be chosen under MOOCs courses. It was noted that this is a regular practice to encourage self-learning among the students. After thorough discussion, members have approved the list of SWAYAM-NPTEL courses. The list is attached as Annexure-III.
- BoS Members approved the revised regulations, curriculum structure, syllabi of M.Tech., CSE programme.
- Finally, the Chairperson appreciated the efforts and invaluable contribution of External members in the process of finalizing R 22 M.Tech. CSE Course Contents.

As no other points for discussion, the meeting was adjourned.

Mr. S. Deva Kumar

Asst. Professor, Department of CSE,

VFSTR Deemed to be University.

Chairperson

Dr. K.V.Krishna Kishore

Dean, SoCI, Professor & Head, CSE, VFSTR Deemed to be University.

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School of Computing & Informatics
VIGNAN\*S FOUNDATION
FOR SCIENCE, TECHNOLOGY AND RESEARC
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# DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

#### Annexure T

Program: M. Tech

Regulation: R22

#### **COURSE STRUCTURE**

S. No.	Course Title	L	T	P	(
1	Data Structures and Algorithms	3	0	2	
2	Machine Learning	3	0	2	1
3	Internet of Things	3	0	2	1
4	Department Elective – 1	2	0	2	
5	Department Elective – 2	2	0	2	
6	Cyber Security	0	2	2	
7	Employment Orientation Program	0	2	2	
8	Audit Course – 1	1	0	0	
	C III.	14	4	14	2
	Grand Total		32		2
ear II Se	mester				
S. No.	Course Title	L	T	P	-
1	Cloud Computing	3	0	2	
2	Big Data and Analytics	3	0	2	
3	Department Elective – 3	2	0	2	
4	Department Elective – 4	2	0	2	
5	Research Methodology & IPR	0	2	2	1
6	Inter-Departmental Project	0	1	3	1
7	Teaching Activity	0	0	4	1
8	Audit Course – 2	1	0	0	(
	Total	11	3	17	2
9	Add-on Degree – 1	3	0	2	4
	Grand Total	14	3	19	2
	Grand Total		36		2
ear I Se	mester				
S. No.	Course Title	L	T	P	(
1	Project / Internship	0	2	24	(
2	Add-on Degree – 2 (MOOCs Course)	4	0	0	4
	Grand Total	4	2	24	4
	emester				
S. No.	Course Title	L	T	P	(
1	Project / Internship	0	2	24	2
2	Add-on Degree – 3 (MOOCs Course)	4	0	0	4
	Grand Total	4	2	24	3

## Department Electives - Stream-wise

## Artificial Intelligence and Machine Learning

S. No.	Course Title	L	Т	P	C
1	Artificial Intelligence	2	0	2	3
2	Artificial Neural Networks	2	2	0	3
3	Deep Learning	2	0	2	3
4	Computer Vision	2	0	2	3
5	Pattern Recognition	2	2	0	3
6	Digital Image Processing	2	0	2	3

#### **Data Science**

S. No.	Course Title	L	T	P	C
1	Data Handling and Visualization	2	0	2	3
2	Statistical Foundations of Data Science	2	0	2	3
3	Natural Language Processing	2	2	0	3
4	Deep Learning	2	0	2	3
5	Time Series Analysis and Forecasting	2	0	2	3
6	Kernel Methods for Pattern Analysis	2	0	2	3

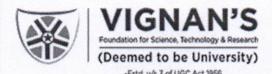
## **Cyber Security**

S. No.	Course Title	L	T	P	C
1	Wireless Sensor Networks	2	0	2	3
2	Mobile Adhoc Networks	2	0	2	3
3	Blockchain Technologies	2	0	2	3
4	Mobile and Wireless Security	2	0	2	3
5	Advanced Cryptography	2	0	2	3
6	Digital Forensics	2	0	2	3

Chairperson

Dr. K.V.Krishna Kishore Dean, School of Computing and Informatics, Professor & Head, Dept. of CSE,

VFSTR Deemed to be University, Vadlamudi.



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#### **Annexure II**

### List of Courses that Enables Employability or Entrepreneurship or Skill Development

S. No.	Year and Semester	Course Title	Employability / Entrepreneurship / Skill development
1.	I Year I Semester	Data Structures and Algorithms	Skill development
2.	I Year I Semester	Machine Learning	Skill development
3.	I Year I Semester	Internet of Things	Employability
4.	I Year I Semester	Cyber Security	Skill development
5.	I Year I Semester	Employment Orientation Program	Employability
6.	I Year I Semester	Audit Course – 1	Employability
7.	I Year II Semester	Cloud Computing	Skill development
8.	I Year II Semester	Big Data and Analytics	Employability
9.	I Year II Semester	Research Methodology & IPR	Employability
10.	I Year II Semester	Inter-Departmental Project	Employability
11.	I Year II Semester	Teaching Activity	Employability
12.	I Year II Semester	Audit Course – 2	Employability
13.	Department Elective	Artificial Intelligence	Skill development
14.	Department Elective	Artificial Neural Networks	Skill development
15.	Department Elective	Deep Learning	Skill development
16.	Department Elective	Computer Vision	Skill development
17.	Department Elective	Pattern Recognition	Skill development
18.	Department Elective	Digital Image Processing	Skill development
19.	Department Elective	Data Handling and Visualization	Skill development
20.	Department Elective	Statistical Foundations of Data Science	Skill development
21.	Department Elective	Natural Language Processing	Skill development
22.	Department Elective	Deep Learning	Skill development
23.	Department Elective	Time Series Analysis and Forecasting	Skill development
24.	Department Elective	Kernel Methods for Pattern Analysis	Skill development
25.	Department Elective	Wireless Sensor Networks	Skill development

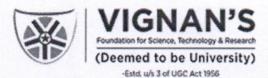
26.	Department Elective	Mobile Adhoc Networks	Skill development
27.	Department Elective	Blockchain Technologies	Skill development
28.	Department Elective	Mobile and Wireless Security	Skill development
29.	Department Elective	Advanced Cryptography	Skill development
30.	Department Elective	Digital Forensics	Skill development

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	Annexure III							
Course Name	SME Name	Institute	Co-ordinating Institute	Duration				
Reinforcement Learning	Prof. Balaraman Ravindran	IITM	IITM	12 Weeks				
Social Network Analysis	Prof. Tanmoy Chakraborty	IITD	IITD	12 Weeks				
Deep Learning - IIT Ropar	Prof. Sudarshan Iyengar Prof. Padmavati	IIT Ropar	IITM	12 Weeks				
Natural Language Processing	Prof. Pawan Goyal	IITKGP	IITKGP	12 Weeks				
Ethical Hacking	Prof. Indranil Sengupta	IITKGP	IITKGP	12 Weeks				
Statistical Learning For Reliability Analysis	Prof. Monalisa Sarma	IITKGP	IITKGP	12 Weeks				
Cyber Security and Privacy	Prof. Saji K Mathew	IITM	IITM	12 Weeks				
Parameterized Algorithms	Prof. Neeldhara Misra Prof. Saket Saurabh	IIT Gandhinagar IMSC	IITM	12 Weeks				
Computational Complexity	Prof. Subrahmanyam Kalyanasundaram	IIT Hyderabad	IITM	12 Weeks				
Privacy And Security in Online Social Media	Prof. Ponnurangam Kumaraguru	IIITH	IITM	12 Weeks				
Cloud Computing	Prof. Soumya Kanti Ghosh	IITGP	IITKGP	12 Weeks				
Deep learning for Computer Vision	Pro. Vineeth N Balasubramanian	IITH	IITH	12 Weeks				
Programming in JAVA	Prof. Debasis Samanta	IITGP	IITKGP	12 Weeks				
Software Testing	Prof. Meenakshi D'souza	IIITB	IIITB	12 Weeks				

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