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DEPARTMENT OF INFORMATION TENCHNOLOGY & COMPUTER APPLICATIONS

CIRCULAR

Date: 22.03.2024

The Department of Information Technology and Computer Applications is scheduled to conduct a Board of Studies (BoS) meeting for the conventional B. Tech, BCA, and MCA programmes, as well as for the ODL/OL BCA and MCA programs on 30.03.2024 at 09:30 AM in blended mode.

Zoom Link:

https://us06web.zoom.us/j/89482600035?pwd=7EmwjUXgZimIcxdQoOM7zFmj39XCTA.1

All the members are requested to make it convenient to attend the meeting.
Venue: ATF-6, 3rd Floor, U BLOCK, VFSTR
The members are:

S.No.	Name & Address of the Expert	Contact Details	Member
1	Dr. N. Veeranjaneyulu Professor & Head Department of Information Technology & Computer Applications VFSTR Deemed to be University	Mobile:9347162038 Mail-id : hodit@vignan.ac.in	Chairperson
2	Dr. R. B.V. Subramaanyam Professor Department of CSE, NIT Warangal-506004, Telangana.	Mobile: +91 9491346969 Mail-id : rbvs66@gmail.com	External Member (Academic)
3	Dr. B. Premamayudu Associate Professor, Department of Computer Science, Central University of Tamil Nadu, Tiruvarur, Tamil Nadu	Mobile:+91 9440006478 Mail-id : premamayudu@gmail.com	External Member (Academic)
4	Dr. R. Rajeswara Rao Professor &Vice-Principal JNTU-GV College of Engineering, Vizianagaram	Mobile: +91 : 9959559456 Mail-id : rrraao.cse@jntukucev.ac.in	External Member (Academic)
5	Dr. P. Anil Assistant Professor Department of CSE, National Institute of Technology Calicut, Kozhikode, Kerala, India, 673601.	Mobile: 93814 55231 Mail-id: anilpinapati@nitc.ac.in	Special invitee

6	**Mrs. G. Hema Vineela** Senior Principal Applications Engineer, Oracle, Hyderabad	Mobile:9849040726 Mail-id: hemavineelag@gmail.com	Special invitee
7	**Dr. K. Santhi Sri (BCA)** Associate Professor Department of IT&CA VFSTR Deemed to be University	Mobile: 9297105269 Mail-id : srisanthi@gmail.com	Member Secretary
8	**Dr. K. Sujatha** Associate Professor Department of IT&CA VFSTR Deemed to be University	Mobile:9989728642 Mail-id : sujatha_kamepalli@yahoo.com	Nominee of Dean, SOCI
9	**Dr. P. Subbarao** Associate Professor Department of IT&CA VFSTR Deemed to be University	Mobile:8978883898 Mail-id : subbarao.peram@gmail.com	Internal Member
10	**Mr. K. Praveen Kumar** Assistant Professor Department of IT&CA VFSTR Deemed to be University	Mobile:9290236544 Mail-id: praveenkumarkazipeta@gmail.com	Internal Member
11	**Mr. Sk. Nyamathulla** (Online Programmes) Assistant Professor Department of IT&CA VFSTR Deemed to be University	Mobile:9885423099 Mail-id: nyamath.j@gmail.com	Nominee from CDOE
12	**Mrs. K. Gayathri (MCA)** Assistant Professor Department of IT&CA VFSTR Deemed to be University	Mobile:8555041186 Mail-id: gayathri.k2@gmail.com	Nominee of Dean, R&D
13	**Mr. M. Srikanth Yadav** Assistant Professor Department of IT&CA VFSTR Deemed to be University	Mobile:8121827423 Mail-id: srikanthyadav.m@gmail.com	Internal Member
14	**Mr. B. Naga Sudheer** Assistant Professor Department of IT&CA VFSTR Deemed to be University	Mobile:9346727904 Mail-id: sudheer.bandlamudi44@gmail.com	Internal Member

Agenda of the BoS Meeting:

1. Minor Revision of R22 Credit Structure & Curriculum (C24).
2. Curriculum revision of MCA (C24) conventional and Online programmes
3. Introduction of BCA Honours from 2024-25 academic year onwards
4. Approval of list of NPTEL Courses.
5. Any other points based on the requirements.

Chairperson

Dr. N. Veeranjaneyulu
Professor & Head
Dept. of Information Technology & Computer Applications
VFSTR Deemed to be University
VADLAMUDI - 522 213, A.P., India.

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DEPARTMENT OF INFORMATION TENCHNOLOGY & COMPUTER APPLICATIONS

Date: 30.03.2024

Minutes of Board of Studies Meeting

The Department of Information Technology and Computer Applications conducted a Board of Studies (BoS) meeting for the conventional B. Tech, BCA, and MCA programmes, as well as for the ODL/OL BCA and MCA programs on 30.03.2024 at 09:30 AM in blended mode.

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Venue: ATF-6, 3rd Floor, U BLOCK, VFSTR

Agenda of the BoS Meeting:

1. Minor Revision of R22 Credit Structure & Curriculum.
2. Curriculum revision of MCA (C24) conventional and Online programmes
3. Introduction of BCA Honours from 2024-25 academic year onwards
4. Approval of list of NPTEL Courses.
5. Any other points based on the requirements.

The following members were present either thorough offline or online.

S.No.	Name & Address of the Expert	Member	Signature
1	**Dr. N. Veeranjaneyulu** Professor & Head Department of Information Technology & Computer Applications VFSTR Deemed to be University	Chairperson	N.Veeenjaw.
2	**Dr. R. B.V. Subramaanyam** Professor Department of CSE, NIT Warangal-506004, Telangana.	External Member (Academic)	online
3	**Dr. B. Premamayudu** Associate Professor, Department of Computer Science, Central University of Tamil Nadu, Tiruvarur, Tamil Nadu	External Member (Academic)	online

4	**Dr. K. Santhi Sri (BCA)** Associate Professor Department of IT&CA VFSTR Deemed to be University	Member Secretary	for Ch.Sive Koswaelo
5	**Dr. K. Sujatha** Associate Professor Department of IT&CA VFSTR Deemed to be University	Nominee of Dean, SOCI	
6	**Dr. P. Subbarao** Associate Professor Department of IT&CA VFSTR Deemed to be University	Internal Member	
10	**Mr. K. Praveen Kumar** Assistant Professor Department of IT&CA VFSTR Deemed to be University	Internal Member	
11	**Mr. Sk. Nyamathulla** (Online Programmes) Assistant Professor Department of IT&CA VFSTR Deemed to be University	Nominee from CDOE	
12	**Mrs. K. Gayathri (MCA)** Assistant Professor Department of IT&CA VFSTR Deemed to be University	Nominee of Dean, R&D	
13	**Mr. M. Srikanth Yadav** Assistant Professor Department of IT&CA VFSTR Deemed to be University	Internal Member	
14	**Mr. B. Naga Sudheer** Assistant Professor Department of IT&CA VFSTR Deemed to be University	Internal Member	

Chairperson Dr. N. Veeranjaneyulu, Professor and Head, Department of IT & CA, VFSTR opened the meeting by welcoming and introducing the external members, invitees to the internal members. Chairperson presented about the NEP 2020 Compliant Regulation - R22 which emphasis on creating learning centric (continuous learning and continuous assessment model), offering B.Tech., B.Tech. with Honours/ Research Honours/ Minor/ Add-on Diploma, Dual degree (B.Tech. + M.Tech./MBA, or M.Tech. + Ph.D.), providing multiple entry and multiple exits.

The following points were discussed in the BoS meeting:

1. Extension of Regulation R22- Common Features
2. Extension of Regulation R22- New Features
3. Credits Distribution for Various categories of courses
4. Credits distribution for Basic Sciences, Compulsory Audit Courses
5. Credit Distribution
6. Qualifying Criteria
7. Relative Grading Range
8. Minor Revision of R22 Credit Structure & Curriculum
9. Review on Proposed C24 MCA Curriculum Structure for both conventional and online programmes.
10. Implementation of BCA Honours from 2024-25 onwards
11. Approval of list of NPTEL Courses.

The following resolutions made after the discussion:

1. After deliberations, the BoS approved minor revisions in the R22 Credit Structure & Curriculum of the B.Tech. (IT) Programme. The revised Credit Structure and Curriculum are provided in Appendix-I.

2. The BoS approved the Proposed C24 MCA Curriculum Structure for both conventional Programmes and online Programmes. The salient features include the reorganization of courses across semesters and offering two streams in the elective category (General and AI&ML). The Proposed C24 MCA Curriculum Structure is provided in Appendix-II.

3. BoS members have suggested the possibility of repositioning Environmental Studies or Management Studies to the second or third year, considering the substantial number of subjects and credits currently allocated in the first year.

4. BoS members suggested introducing the Machine Learning course in place of the Data Mining course for III B.Tech (IT) and III BCA programmes.

5. Recommended consolidating Data Mining and Machine Learning into a single subject and restructuring the syllabus accordingly.

6. Proposed incorporating Compiler Design into Theory of Computation, highlighting the importance of understanding how compilers work to enhance students' practical skills.

7. Suggested moving Cryptography and Network Security to the third year instead of the fourth year, enabling students to explore more advanced courses in their final year.

8. Proposed integrating Deep Learning into core subjects and transferring Cloud Computing and Big Data Analytics to department electives, alongside introducing a data visualization course to align with current market trends.

9. BoS members approved implementing the BCA Honours (4-Year programme equivalent to B. Tech) *from the Academic year 2024-25 onwards.* SUPPLEMENT REGULATION FOR PURSUING BCA HONOURS can be found in Appendix – 3.

10. After deliberations, the modifications proposed in CA1 and CA2 of online programmes were approved. CA1 descriptive and CA2 MCQs, along with the pattern of change in the summative assessment question paper (BTL), were also approved.

11. BoS members approved the following list of NPTEL courses.

S.No.	Name of the Course	Credits
1	Introduction To Industry 4.0 And Industrial Internet Of Things	3
2	Principles of Management	3
3	Block- Chain and its Applications	3
4	Foundations of Cryptography	3
5	An Introduction to Artificial Intelligence	3
6	Introduction To Internet Of Things	3
7	Programming in Modern C++	3
8	Social Networks	3
9	Games and Information	3
10	Business Intelligence & Analytics	3

Based on the feedback from various stakeholders and suggestions given by the members, the Chairperson of BoS told that, those fruitful suggestions would be incorporated appropriately in the curriculum and syllabi of the regulation R22 and this will be recommended to the Academic Council of VFSTR for the approval.

There being no further points for discussion, the Chairperson thanks all the external, internal, invited members and announced that the meeting was adjourned.

Member Secretary

Chairperson

Dr. N. Veeranjaneyulu
Professor & Head
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APPENDIX I
Minor revision in B. Tech (IT) curriculum of R22 (C24)

I Year I Semester Structure

S. No.	Course Title	C	Course Category
1.	Mathematics – I / Mathematics – II	4	Basic Sciences
2.	Physics / Chemistry	4	Basic Sciences
3.	Basic of Electrical & Electronics Engineering / Engineering Graphics	3	Basic Engineering
4.	IT Tools and Cyber Security	2	Basic Engineering
5.	Programming in C	4	Basic Engineering
6.	English Proficiency & Communication Skills (PET)	1	Humanities
7.	Environmental Studies / Management Studies	3	Basic Sciences / Humanities
8.	Orientation Session-1, Constitution of India, Physical Fitness	3	Audit Courses
	Total	**24**	

I Year II Semester Structure

S. No.	Course Title	C	Course Category
1.	Mathematics – I / Mathematics – II	4	Basic Sciences
2.	Physics / Chemistry	4	Basic Sciences
3.	Basic of Electrical & Electronics Engineering / Engineering Graphics	3	Basic Engineering
4.	Python Programming	3	Basic Engineering
5.	Technical English Communication	3	Humanities
6.	Environmental Studies / Management Studies	3	Basic Sciences / Humanities
7.	Orientation Session-2, Universal Human Values, Indian Knowledge Systems	3	Audit Courses
	Total	**23**	

II Year I Semester Structure

S. No.	Course Title	C	Course Category
1.	Discrete Mathematics Structures	3	Basic Sciences
2.	Data Structures	4	Basic Engineering
3.	Database Systems	4	Professional Core
4.	Object Oriented Programming	4	Professional Core
5.	Computer Organization	3	Professional Core
6.	Web Technologies	3	Professional Core
7.	Design Thinking & Engineering Orientation	1	Basic Engineering
8.	Life Skills	1	Audit Courses
	Total	**23**	

II Year II Semester Structure

S. No.	Course Title	C	Course Category
1.	Probability and Statistics	4	Basic Sciences
2.	Operating Systems	4	Professional Core
3.	Design and Analysis of Algorithms	4	Professional Core
4.	Software Engineering and Testing	3	Professional Core
5.	Web Application Development	3	Professional Core
6.	Field Projects / IDP	1	Project
7.	Open Elective -1	3	Open Elective
	Total	**22**	

III Year I Semester Structure

S. No.	Course Title	C	Course Category
1.	Mathematics for Data Science	4	Basic Sciences
2.	Computer Networks	4	Professional Core
3.	Department Elective-1	4	Department Elective
4.	Department Elective-2	3	Department Elective
5.	Open Elective – 2	3	Open Elective
6.	Soft Skills Laboratory	1	Humanities
7.	Industry Interface Course (Modular Course)	1	Department Elective
8.	BEC Certification	1	Humanities
	Total	**21**	

III Year II Semester Structure

S. No.	Course Title	C	Course Category
1.	Machine Learning	4	Professional Core
2.	Cryptography and Network Security	4	Professional Core
3.	Theory of Computation & Compiler Design	3	Professional Core
4.	Department Elective - 3	4	Department Elective
5.	Open Elective – 3	3	Open Elective
6.	Quantitative Aptitude and Logical Reasoning	2	Humanities
7.	Field Projects / IDP	1	Project
	Total	**21**	

IV Year I Semester Structure

S. No.	Course Title	C	Course Category
1.	Deep Learning	4	Professional Core
2.	Big Data Technologies	3	Professional Core
3.	Department Elective - 4	4	Department Elective
4.	Department Elective - 5	4	Department Elective
5.	Department Elective - 6	4	Department Elective
6.	Professional Ethics	2	Humanities
	Total	**21**	

IV Year II Semester Structure

S. No.	Course Title	C	Course Category
1.	Internship / Project Work	12	Project
	Total	**12**	

Chairperson

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APPENDIX II

Proposed C24 MCA Programme: Credit & Curriculum Structure

I Year I Semester Structure

S. No.	Course Title	C	Course Category
1.	Data Structures	4	Professional Core
2.	Python Programming	3	Professional Core
3.	Web Technologies	4	Professional Core
4.	Computer Organization and Operating Systems	4	Professional Core
5.	Probability and Statistics	4	Basic Sciences
6.	Software Engineering	3	Professional Core
7.	Technical English Communication	2	Humanities
	Total	**24**	

I Year II Semester Structure

S. No.	Course Title	C	Course Category
1.	Database Systems	4	Professional Core
2.	Object Oriented Programming	4	Professional Core
3.	Computer Networks	3	Professional Core
4.	Organization Behavior	3	Humanities
5.	Soft Skills Laboratory	1	Humanities
6.	Department Elective - 1	4	Department Elective
7.	Department Elective - 2	3	Department Elective
	Total	**22**	

II Year I Semester Structure

S. No.	Course Title	C	Course Category
1.	Cryptography and Network Security	4	Professional Core
2.	Full Stack Technologies	4	Professional Core
3.	Big Data Analytics	3	Professional Core
4.	Socially Relevant Project using Design Thinking	2	Project
5.	Department Elective - 3	4	Department Elective
6.	Department Elective - 4	3	Department Elective
7.	MOOCS / NPTEL / Department Elective	2	Department Elective
	Total	**22**	

II Year II Semester Structure

S. No.	Course Title	C	Course Category
1.	Internship / Project Work	12	Project
	Total	**12**	

List of Electives (AI & ML)

S. No.	Course Title
1	Design and Analysis of Algorithms using Python
2	Machine Learning
3	Deep Learning
4	Fundamentals of Image Processing
5	Reinforcement Learning
6	Evolutionary Computing
7	Computer Vision
8	Natural Language Processing
9	Nature Inspired Computing Methods
10	Soft Computing
11	Data Analytics
12	Artificial Intelligence and Neural Network
13	Data Wrangling and Visualization

List of Electives (General)

S. No.	Course Title
1	Machine Learning
2	Mobile Application Development
3	Data Visualization
4	Formal Languages and Automata Theory
5	Digital Image Processing
6	Data Wrangling and Visualization
7	Block Chain Technology
8	Cloud Computing
9	Cyber Security
10	Computer Vision
11	Mobile Computing
12	Advanced Web Technologies

Chairperson

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APPENDIX III

SUPPLEMENT REGULATION FOR PURSUING BCA HONOURS

The proposal to institute BCA Honours in line with the practices in Institutions of National Importance, is to elevate the Gross Qualification Index (GQI) of India, and specifically to enhance the technological/ engineering competency of the Technocrats.

In order to attract the committed learners towards earning BCA Honours immediately after BCA the following scheme is proposed:

1. Every candidate should express his/her provisional intent at the time of BCA admission for pursuing BCA Honours degree. However, he/she can exercise his option to change his intent and final confirmation should be submitted by the end of II year BCA programme.

2. A candidate needs to be well informed about the advantages that he/she will reap by completing a Honours degree in one stretch as an immediate follow up to BCA degree program.

3. The candidate, after acquiring enough knowledge can take a well informed decision to opt for BCA Honors late as by the end of II-year BCA programme (IV semester).

A candidate willing to switch over to BCA Honours from the existing BCA should follow the following terms, conditions and procedures:

1. He/she should be a candidate maintaining his studentship through proper registration process of his BCA programme

2. He/ she should have completed all the credit requirements up to the end of 3rd semester successfully with a CGPA of at least 7.5. the candidate is expected to likely to complete 6th semester successfully and to maintain the CGPA of at least 7.

3. He/ she should indicate his willingness to switch over his study from BCA to BCA Honours during the Module-2 period of II-year – Even semester (4th semester). When the call is given by the office of the Dean AAA for the purpose.

4. He/ she has to appear for an aptitude test/ interaction and the corresponding committee of experts constituted for the purpose has to recommended his/ her name.

5. The candidate formally enrolls for BCA Honours by the end of IV semester before the semester-end summative assessment period of IV semester

6. The existing BCA fee structure will get continued for the extended IV year.

7. Two additional courses in V and VI semesters of worth 8 credits and two regular semesters VII & VIII of study is required to get BCA Honours Degree of cumulative credits 167.

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