VASAVI COLLEGE OF ENGINEERING (Autonomous)
9-5-81, Ibrahimbagh, Hyderabad-500031, Telangana, India
(Sponsored by Vasavi Academy of Education)
ACCREDITED BY NAAC WITH 'A++' GRADE
Phone: +91-40-23146003 Fax: +91-40-23146090, +91-40-23146080

DEPARTMENT OF INFORMATION TECHNOLOGY

13.06.2022

Minutes of the 11th BoS Meeting conducted on 11-06-2022 from 11:00AM

The 11th Board of Studies meeting started with the welcome address by the Chairman Dr. Ram Mohan Rao, Professor & Head, Department of Information Technology.

Members List

Dr. K. Ram Mohan Rao, Professor & Head	Chairman, BoS
Dr. P.V. Sudha, Professor, Dept. of Computer Science & Engineering, University College of Engineering, Osmania University, Hyderabad	University Nominee
Dr. Atul Negi, Professor, School of Computer & Information Sciences, University of Hyderabad, Hyderabad	Subject Expert
Dr. Salman Abdul Moiz, Professor, School of Computer & Information Sciences, University of Hyderabad, Hyderabad	Subject Expert
Dr.Bheemarjuna Reddy Tamma, Assoc. Professor, Dept. of Computer Science & Engineering, IIT-Hyderabad.	Subject Expert
Dr. Raghavendra Kune, Scientist/ Engineer SG Head High Performance Computing Drones(HPCD), ADRIN, Department of Space, ISRO, Hyderabad.	Subject Expert from Research Organization
Mr. Amit Kumar Gupta, Sr. Data Scientist, CSEO, Microsoft	Industry Representative
Mr. Surya Kiran, Software Engineer-9 Teradata Corporation India Pvt. Ltd. Hyderabad	Alumnus
Faculty members of the Department	List attached.

The following points were discussed in the meeting.

1. **Presentation of Department Profile:**
   - Head of the Department presented the department profile, vision, mission, PEOs and PSOs along with recent achievements of both students and faculty.
   - The placement growth rate and increase in the packages offered to students are appreciated by all BOS members.
   - The major achievement of the department in organizing International Conferences successfully in collaboration with reputed publishers like Springer Nature is emphasized and applauded by all members.

(Dr.P.V.Sudha) University Nominee	(Dr. Atul Negi) Subject Expert from UoH	(Dr. Salman Abdul Moiz) Subject Expert from UoH	(Dr.Bheemarjuna Reddy Tamma) Subject Expert from IITH
(Dr. Raghavendra Kune) Subject Expert from Research Organization	(Mr. Amit Kumar Gupta) Expert from Industry	(Mr. Suryakiran) Alumnus	(Dr. K. Ram Mohan Rao) Chairman, BOS

2. **Presentation of Minutes and Action Taken Report of the of 10th BOS meeting for ratification:**
   - Chairman has presented the minutes and action taken report of the 10th BOS meeting held on 07th Aug 2021 for ratification.
   - **Action Completed:** The minutes and action taken report of 10th BOS meeting held on 07th Aug 2021 is ratified.

3. **Presentation of minutes of the first Department Advisory Committee (DAC) Meeting:**
   - Chairman has presented the minutes of the first Department Advisory Committee (DAC) Meeting held on 4th June 2022.
   - Following are the recommendations made by DAC members and approved by BOS Members:
     - Include NoSQL in Database Management Systems course in IV Semester.
     - Include .NET Framework as part of Web Technologies course in VI Semester.
     - To the possible extent, ensure that the topics related to "Security" are included in all related courses.
     - For better placement and sustainable professional career; Node.js, React, ElasticSearch etc., are to be offered as part of Workshops, Mini Projects, Special Training Programs or any suitable forums.

4. **Presentation of summary of the interaction with outgoing batch students including their inputs on B.E. Curriculum for review and consideration:**
   Chairman has presented the summary of the interaction with outgoing batch students (admitted in AY 2018-19) including their inputs on B.E. Curriculum for review and consideration:
   - Following are the proposed modifications suggested by the students are approved by BOS Members:
     - Include the concepts on 'Collections' in Python Programming Course being offered in II Semester.
     - Topics on Priority Queues are to be included in Data Structures Lab course being offered in III Semester.
     - More concepts on 'Collections' are to be included in the Object-Oriented Programming course being offered in III Semester.
     - Disjoint Sets concept is to be included in the Design and Analysis of Algorithms course being offered in IV Semester.
     - Include some kernel-level applications like device drivers, kernel level etc. as assignments in the Operating Systems course being offered in V Semester.
     - Include web services concepts in the list of experiments of Distributed Systems and Cloud Computing in laboratory course being offered in VII semester.
     - The syllabus may be reduced appropriately from Units 4 & 5, in the Professional Elective Course on Data Mining being offered in VII semester.

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(Dr. Raghavendra Kune) Subject Expert from Research Organization	(Mr. Amit Kumar Gupta) Expert from Industry	(Mr. Suryakiran) Alumnus	(Dr. K. Ram Mohan Rao) Chairman, BOS

5. Presentation of curriculum, detailed syllabus of all courses, scheme of instructions and evaluation for B.E (IT) Regular program offered by IT department for the batches admitted in AY 2021-22, AY 2020-21, AY 2019-20 and the students to be admitted in AY 2022-23, for review and approval:

Chairman has presented the details of curriculum, detailed syllabus of all courses, scheme of instructions and evaluation for B.E (IT) Regular program offered by IT department.

- Following details are presented to the BOS members for review and approval.
  - For B.E (IT) Regular Students admitted in the academic year 2019-20: VII & VIII Semesters courses.
    - **Recommendations of BOS Members:**
      - It is suggested to include 'Quantum Computing' in place of 'Queuing Theory and Modelling' as Professional Elective – IV in VII Semester.
      - Include simulators like QSim, IBM Quantum, in Quantum Computing course.
      - Data Analytics course is to be revisited: Title is to be replaced with "Data Analytics with Visualization". EDA and visualization concepts are to be included. If possible, any tool for visualization can be introduced.
      - Members agreed to include Web Services concepts in Distributed Systems & Cloud Computing Laboratory Course in VII-Semester.
      - Video processing to be included in the Professional Elective course on 'Digital Image Processing' as one chapter in VII Semester.
  - For B.E (IT) Regular Students admitted in the academic year 2020-21: V & VI Semesters courses
    - **Recommendations of BOS Members:**
      - Include some kernel-level applications like device drivers etc., as part of Operating Systems lab course being offered in V Semester.
      - EDA related concepts to be included in AI&ML Lab course being offered in VI Semester.
      - Syllabus for the Web Technologies course being offered in VI Semester is to be restructured as follows:
        - Unit-1: HTML & CSS
        - Unit-2: Javascript (include async, promises, call-backs), XML
        - Unit-3: Bootstrap, MVC using servlets and JSP (include .NET framework intro)
        - Unit-4 & 5: React, NodeJS, Express & MongoDB (MERN stack)

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- For B.E (IT) Regular Students admitted in the academic year 2021-22: III & IV Semester courses:
  - Topics on Priority Queues and Heaps are to be included in Data Structures lab course being offered in III Semester.
  - Additional experiments on 'Collections' are to be included in the Object-Oriented Programming lab course being offered in III Semester.
  - Members appreciated and emphasized the need to include NoSQL in DBMS Course in IV-Semester.
  - Disjoint Sets and related concepts are to be included in the Design and Analysis of Algorithms course being offered in IV Semester.
- For B.E (IT) Regular Students to be admitted in the academic year 2022-23: I & II Semesters courses
  - Include the concepts on 'Collections' in Python Programming Course being offered in II Semester.

- The approved curriculum, detailed syllabus of all courses, scheme of instructions and evaluation for B.E (IT) Honours is included in Annexure – I.

6. Review and approval of curriculum, detailed syllabus of all courses, scheme of instructions and evaluation for B.E (IT) Honours program being offered by IT department for the students admitted in AY 2020-21.

Chairman has presented the details of curriculum, detailed syllabus of all courses, scheme of instructions and evaluation for B.E (IT) Honours program offered by IT department.

The approved curriculum, detailed syllabus of all courses, scheme of instructions and evaluation for B.E (IT) Honours is included in Annexure – II.

The meeting concluded formally with Vote of Thanks.

(Dr.P.V.Sudha) University Nominee	(Dr. Atul Negi) Subject Expert from UoH	(Dr. Salman Abdul Moiz) Subject Expert from UoH	(Dr.Bheemarjuna Reddy Tamma) Subject Expert from IITH
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VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)
DEPARTMENT OF INFORMATION TECHNOLOGY

Action Taken Report

Date: 16.08.2021

Action taken report on the suggestions by the members in Board of Studies meetings held on 07.08.2021

1. Members went through the contents of course "IT Workshop" to be offered in III-Semester for students joining in academic year 2021-2022 (Regulation R21). After going through the curriculum, they suggested that the title of the course should be modified as "Network Engineering Lab".

   Action Taken:
   As per suggestion of BoS Members, 'IT Workshop' lab course is renamed as "Network Engineering Lab".

2. Members felt that more credits should be awarded for Mini-Project and Theme-Based projects.

   Action Taken:
   As per AICTE Model Curriculum, courses like 'Mini-Project' and 'Theme-Based projects' are given sufficient number of credits, 3 in total. To make the activity more impactful Mini Project activity has been considered in three semesters; Mini Project-I in 3rd semester, Mini Project-II in 5th semester and Theme-Based Project in the 6th semester with a weightage of 1 credit each.

3. Members felt that title of the course 'Theory of Automata' may be modified as 'Automata, Languages and Computation' based on the topics being discussed as part of the syllabus.

   Action Taken:
   As per suggestion of BoS Members, 'Theory of Automata' course title is renamed as 'Automata, Languages and Computation'.

4. Members suggested that a course on 'Programming with FPGA' may be offered as an Open Elective by the Department of Electronics and Communication Engineering (ECE).

   Action Taken:
   The same has been communicated to ECE department to explore the possibility to offer the above said course as an open elective.

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5. Members advised to minimize the redundancy of topics covered in Professional Electives-Data Analytics and Data Mining.

   Action Taken:
   The input is well received and syllabus has been revisited in the above said courses. There is a overlap of 20%-30%, with core concepts only, but it is justifiable as these two courses are being offered as Professional Electives and it is ensured that a student can take either of these two courses.

6. Members suggested that for the course "Digital Image Processing", being offered as a Professional Elective in VII Semester, content on Video Processing may also be added and the course may be renamed as "Digital Image and Video Processing".

   Action Taken:
   The course contents of "Digital Image Processing" are more appropriate with all necessary concepts in the current version. Video Processing concepts can be included in Computer Vision course based on the possibility.

7. Members suggested that "Predictive Analytics" may be included as a Professional Elective in VII or VIII semesters.

   Action Taken:
   Predictive Analytics, as an individual course, is not listed in Professional Electives. However, most of the contents of 'Predictive Analytics' are already being covered in AI&ML, Data Analytics & Deep Learning courses.

8. Members suggested that conducting a workshop on Research Paper Reading, Writing and Publishing in reputed Journals/Conferences, for students, may be considered.

   Action Taken:
   Some activities to promote and encourage research activities among students and faculty members are already in progress. Further, as per the suggestion of BoS Members, the department conducted expert lectures/guest lectures/workshops/researchers' forum in collaboration with IEEE and other professional societies.

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9. There was a suggestion by one of the BOS members Dr Bheemarjuna Reddy of IIT Hyderabad, in the 9th Board of Studies meeting held on 29th July 2020 to visit IIT Hyderabad and explore the scope to design theory and lab courses on 'Autonomous Systems Lab' and also to study the requirements of concerned lab establishment at Vasavi College of Engineering (A).

Action Taken:

The following committee is nominated by the Chairman BOS for the proposed visit to IIT Hyderabad.

1. Chairman, BOS – Dr. K. Ram Mohan Rao, Professor and Head, Dept. of IT
2. Member, BOS – Mr. K. Srinivasa Chakravarthy, Assistant Professor
3. Member, BOS – Mr. R. Dharma Reddy, Assistant Professor
4. Member, BOS – Dr Raghavendra Kune, Adjunct Professor, Dept. of IT
5. Nominee by the Chairman, BOS - Dr T. Hitendra Sarma – Associate Professor

The above committee visited the Technology Innovation Hub on Autonomous Navigation (TiHAN) and Data Acquisition Systems (UAVs, ROVs, etc.) Lab at IIT Hyderabad on 3rd June 2022. A detailed report is submitted to the Chairman BOS covering details of the scope of designing new theory and lab courses on 'Autonomous Navigation Systems' and understand the requirements to establish the concerned lab at Vasavi College of Engineering (A).

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VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)
DEPARTMENT OF INFORMATION TECHNOLOGY
Signatures Of BOS Members For 11TH BOS Meeting held on 11-06-2022 (Saturday) at 11:00AM TO 2.00PM

S.No	Name and Designation of the member	Category	Affiliation	Signature
1	Dr. K. Ram Mohan Rao, Professor & Head	Chairman, BOS	VCE	
2	Dr. P.V. Sudha, Professor Dept. of Computer Science University College of Engineering Osmania University, Hyderabad	University Nominee	OU	
3	Dr. Atul Negi, Professor School of Computer & Information Sciences; University of Hyderabad, Hyderabad	Subject Expert	HCU	
4	Dr. Salman Abdul Moiz, Professor, School of Computer & Information Sciences, University of Hyderabad, Hyderabad	Subject Expert	HCU	
5	Dr. Bheemarjuna Reddy Tamma Assoc. Professor, Dept. of Computer & Engineering, IIT-Hyderabad, Hyderabad	Subject Expert	IIT-H	
6	Dr. Raghavendra Kune, Scientist / Engineer 'SG', Head High performance computing Drones(HPCD), Advanced Data Processing Research Institute (ADRIN), ISRO, Secunderabad.	Expert from Research Organization	ADRIN	
7	Mr Amit Kumar Gupta Sr Data Scientist, CSEO Microsoft India, Microsoft Campus, Gachibowli, Hyderabad 500032, TS.	Subject Expert from Industry	Microsoft	
8	Mr. Surya Kiran, Software Engineer-9 Teradata Corporation India Pvt Ltd . Hyderabad	Alumnus	Teradata	
-	Entire Faculty members of the Department in each specialization	Faculty Members	VCE	List attached.

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)
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Signatures Of BOS Members For 11TH BOS Meeting held on 11-06-2022 (Saturday) at 11:00AM TO 2.00PM

S.No	Name and Designation of the member	Category	Affiliation	Signature
9	Dr. V. Venkata Krishna	Member	VCE	
10	Mrs. S. Aruna	Member	VCE	
11	Dr. B. Kezia Rani	Member	VCE	
12	Mr. K. Shyam Sundar Reddy	Member	VCE	
13	Mrs. S.K. Chaya Devi	Member	VCE	
14	Dr. T. Hitendra Sarma	Member	VCE	
15	Mr. N. Anil Kumar	Member	VCE	NAK
16	Mrs. S. Sree Lakshmi	Member	VCE	
17	Mr. K. Rama Krishna	Member	VCE	
18	Ms. M. Gayatri	Member	VCE	ABSENT
19	Mr. K. Srinivasa Chakravarthy	Member	VCE	
20	Ms. S. Rajya Lakshmi	Member	VCE	
21	Mr. N. David Raju	Member	VCE	
22	Mr. G. Raja Shekhar	Member	VCE	
23	Mrs. D.R.L. Prasanna	Member	VCE	Prasanna

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)
DEPARTMENT OF INFORMATION TECHNOLOGY
Signatures Of BOS Members For 11TH BOS Meeting held on 11-06-2022 (Saturday) at 11:00AM TO 2.00PM

S.No	Name and Designation of the member	Category	Affiliation	Signature
24	Mrs. L. Divya	Member	VCE	
25	Mr. G. Srinivas Rao	Member	VCE	
26	Mrs. C. Sireesha	Member	VCE	
27	Mrs. B. Leelavathy	Member	VCE	
28	Mr. R. Dharma Reddy	Member	VCE	
29	Ms. G. Radha	Member	VCE	
30	Mr. Mukesh Kumar Tripathi	Member	VCE	
31	Ms. Haseeba Yaseen	Member	VCE	
32	Mrs. M. Sathya Devi	Member	VCE	
33	Mr. Manoj Patil	Member	VCE	
34	Mrs. G. Swapnasri	Member	VCE	
35	Mrs. S. Renuka	Member	VCE	

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)
DEPARTMENT OF INFORMATION TECHNOLOGY

B.E. INFORMATION TECHNOLOGY

SCHEME OF INSTRUCTION AND EXAMINATION
ACADEMIC YEAR 2022-23
(For the students admitted in the Academic Year 2022-2023 **(R-22)**)

B.E (IT) I Semester								
Course Code	**Name of the Course**	**Scheme of Instruction**			**Scheme of Examination**			
		Hours per Week			**Duration in Hrs**	**Maximum Marks**		**Credits**
		L	**T**	**P/D**		**SEE**	**CIE**	
THEORY								
U22HS110EH	English Language and Communication	2	-	-	3	60	40	2
U22BS110MA	Calculus	3	-	-	3	60	40	3
U22BS110PH	Semiconductor Physics and Optoelectronic Devices	3	-	-	3	60	40	3
U22ES120CS	Programming for Problem Solving	3	-	-	3	60	40	3
U22ES010EE	Basic Electrical Engineering	2	-	-	3	60	40	2
U22ES030CE	Basic Engineering Drawing	1	-	2	3	60	40	2
U22MC010ME	Introduction to Entrepreneurship	1	-	-	2	40	30	-
PRACTICALS								
U22HS111EH	English Language and Communication Skills Lab	-	-	2	3	50	30	1
U22BS011PH	Applied Physics Lab	-	-	2	3	50	30	1
U22ES121CS	Programming for Problem Solving Lab	-	-	2	3	50	30	1
U22ES011EE	Basic Electrical Engineering Lab	-	-	2	3	50	30	1
Library / Sports / Personality Development Programme / Mentor Interaction		-	-	-	-	-	-	-
Total		**15**	**-**	**10**	--	**600**	**390**	**19**
Grand Total		**25**			--	**990**		

Note:
1. One hour is allotted to Library / Sports / Personality Development Programme / Mentor Interaction.
2. The left over hours are to be allotted to CC / RC / TC based on the requirement.

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University Nominee

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Subject Expert from UoH

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(Dr. K. Ram Mohan Rao)
Chairman, BOS

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)
DEPARTMENT OF INFORMATION TECHNOLOGY

B.E. INFORMATION TECHNOLOGY

SCHEME OF INSTRUCTION AND EXAMINATION
ACADEMIC YEAR 2022-23
(for the students admitted in the academic year 2022-2023 **(R-22)**)

B.E (IT) II Semester								
Course Code	**Name of the Course**	**Scheme of Instruction**			**Scheme of Examination**			
		Hours per Week			**Duration in Hrs**	**Maximum Marks**		**Credits**
		L	**T**	**P/D**		**SEE**	**CIE**	
THEORY								
U22BS210MA	Advanced Calculus and Differential Equations	3	-	-	3	60	40	3
U22BS220CH	Material Chemistry	3	-	-	3	60	40	3
U22ES010CE	Basic Engineering Mechanics	3	-	-	3	60	40	3
U22ES210IT	Basic Electronics	3	-	-	3	60	40	3
U22PC210IT	Python Programming	3	-	-	3	60	40	3
U22HS010EH	Human Values & Professional Ethics – I	1	-	-	2	40	30	1
U22MC010CE	Environmental Science	2	-	-	3	60	40	-
PRACTICALS								
U22BS211MA	Mathematics Lab	-	-	2	3	50	30	1
U22BS011CH	Chemistry Lab	-	-	2	3	50	30	1
U22ES211IT	Basic Electronics Lab	-	-	2	3	50	30	1
U22PC211IT	Python Programming Lab	-	-	2	3	50	30	1
	Library / Sports / Personality Development Programme / Mentor Interaction	-	-	-	-	-	-	-
Total		**18**	**-**	**8**	**--**	**600**	**390**	**20**
Grand Total		**26**				**990**		

Note:
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2. The left over hours are to be allotted to CC / RC / TC based on the requirement.

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VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)
DEPARTMENT OF INFORMATION TECHNOLOGY

B.E. INFORMATION TECHNOLOGY

SCHEME OF INSTRUCTION AND EXAMINATION
ACADEMIC YEAR 2022-23
(for the students admitted in the academic year 2021-2022 **(R-21)**)

B.E (IT) III-Semester

Course Code	Course Name	Scheme of Instruction: Hours per week			Scheme of Examination: Duration in Hrs	Maximum Marks		Credits
		L	T	P/D		SEE	CIE	
THEORY								
U21BS340MA	Discrete Mathematics	3	-	-	3	60	40	3
U21ES310IT	Digital Electronics & Logic Design	3	-	-	3	60	40	3
U21PC310IT	Data Structures	3	-	-	3	60	40	3
U21PC320IT	Object Oriented Programming	3	-	-	3	60	40	3
U21OE3XXXX	Open Elective – I	2	-	-	3	60	40	2
U21HS330EH	Skill Development - I (Communication Skills –I)	1	-	-	2	40	30	1
U21BS330MA	Skill Development – I (Aptitude – I)	1	-	-	2	40	30	1
PRACTICALS								
U21PC311IT	Data Structures Lab	-	-	3	3	50	30	1.5
U21PC321IT	Object Oriented Programming Lab	-	-	3	3	50	30	1.5
U21PC322IT	Network Engineering Lab	-	-	2	3	50	30	1
U21PW319IT	Mini Project – I	-	-	2	3	50	30	1
	Co-Curricular Activities-I	-	-	-	-	-	-	-
	Extra-Curricular Activities-I	-	-	-	-	-	-	-
	Library / Sports / Mentor Interaction	-	-	-	-	-	-	-
Student should acquire one online certification course equivalent to 2 credits during III to VII Semesters.								
	Total	**16**	**-**	**10**	**-**	**580**	**380**	**21**
	Grand Total	**26**			**-**	**960**		

Note:
1. One hour is allotted to Library / Sports / Personality Development Programme / Mentor Interaction.
2. The left over hours are to be allotted to CC / RC / TC based on the requirement.

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VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)
DEPARTMENT OF INFORMATION TECHNOLOGY

B.E. INFORMATION TECHNOLOGY

SCHEME OF INSTRUCTION AND EXAMINATION
ACADEMIC YEAR 2022-23
(for the students admitted in the academic year 2021-2022 **(R-21)**)

B.E (IT) III-Semester (BRIDGE COURSE)								
Course Code	**Course Name**	**Scheme of Instruction**			**Scheme of Examination**			**Credits**
		Hours per week			**Duration in Hrs**	**Maximum Marks**		
		L	**T**	**P/D**		**SEE**	**CIE**	
THEORY								
U21BS300MA	Matrix Theory and Vector Calculus	2	-	-	3	50	-	-
U21PC2091CS	Computer Programming	2	-	-	3	50	-	-
PRACTICALS								
U21PC2191CS	Computer Programming Lab	-	-	2	3	50	-	-
	Total	**4**	**-**	**2**	**-**	**150**	**-**	**-**
	Grand Total	**6**			**-**	**150**		

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VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)
DEPARTMENT OF INFORMATION TECHNOLOGY

B.E. INFORMATION TECHNOLOGY

SCHEME OF INSTRUCTION AND EXAMINATION
ACADEMIC YEAR 2022-23
(for the students admitted in the academic year 2021-2022 **(R-21)**)

B.E (IT) IV Semester

Course Code	Course Name	Scheme of Instruction: Hours per week			Scheme of Examination: Duration in Hrs	Maximum Marks		Credits
		L	T	P/D		SEE	CIE	
THEORY								
U21BS420MA	Probability and Statistics	3	-	-	3	60	40	3
U21PC410IT	Computer Organization	3	-	-	3	60	40	3
U21PC420IT	Database Management Systems	3	-	-	3	60	40	3
U21PC430IT	Design & Analysis of Algorithms	3	-	-	3	60	40	3
U21PC440IT	Software Engineering	3	-	-	3	60	40	3
U21OE4XXXX	Open Elective – II	3	-	-	3	60	40	3
U21HS020EH	Human Values and Professional Ethics – II	1	-	-	2	40	30	1
U21BS430MA	Skill Development – II (Aptitude – II)	1	-	-	2	40	30	1
U21XX430XX	Skill Development - II (Technical Skills- I)	1	-	-	2	40	30	1
PRACTICALS								
U21PC411IT	Database Management Systems Lab	-	-	2	3	50	30	1
U21PC421IT	Design and Analysis of Algorithms Lab	-	-	2	3	50	30	1
U21PC431IT	Software Engineering Lab	-	-	2	3	50	30	1
	Co-Curricular Activities-II	-	-	-	-	-	-	-
	Library /Sports/ Mentor Interaction	-	-	-	-	-	-	-
Student should acquire one online certification course equivalent to 2 credits during III-VII Semesters.								
	Total	**21**	**-**	**6**	**--**	**630**	**420**	**24**
	Grand Total	**27**			**--**	**1050**		

Note:
1. One hour is allotted to Library / Sports / Mentor Interaction.
2. The left over hours are to be allotted to CCA-II / RC / CC / TC based on the requirement.

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ACADEMIC YEAR 2022-23
(for the students admitted in the academic year 2021-2022 **(R-21)**)

B.E (IT) IV Semester (BRIDGE COURSE)								
Course Code	**Course Name**	**Scheme of Instruction**			**Scheme of Examination**			**Credits**
		Hours per week			**Duration in Hrs**	**Maximum Marks**		
		L	**T**	**P/D**		**SEE**	**CIE**	
THEORY								
U21HS2230EH	English Language and Communication Skills	2	-	-	3	50	-	-
PRACTICALS								
U21HS2231EH	English Language and Communication Skills Lab	-	-	2	3	50	-	-
	Total	**2**	**-**	**2**	**-**	**100**	**-**	**-**
	Grand Total	**4**			**-**	**100**		

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ACADEMIC YEAR 2022-23

(for the students admitted in the academic year 2020-2021 **(R-20)**)

B.E (IT) V-SEMESTER								
Course Code	**Course Name**	**Scheme of Instruction**			**Scheme of Examination**			**Credits**
		Hours per week			**Duration in Hrs**	**Maximum Marks**		
		L	**T**	**P/D**		**SEE**	**CIE**	
THEORY								
U20PC510IT	Data Communications and Computer Networks	3	1	-	3	60	40	4
U20PC520IT	Microprocessors and Interfacing	3	-	-	3	60	40	3
U20PC530IT	Operating Systems	3	-	-	3	60	40	3
U20PC540IT	Automata, Languages and Computation	3	-	-	3	60	40	3
U20OE5XXXX	Open Elective - III	3	-	-	3	60	40	3
U20HS510EH	Skill Development – III (Communication Skills – II)	1	-	-	2	40	30	1
U20XX510XX	Skill Development – III (Technical Skills – II)	1	-	-	2	40	30	1
PRACTICALS								
U20PC511IT	Computer Networks lab	-	-	2	3	50	30	1
U20PC521IT	Microprocessors and Interfacing Lab	-	-	2	3	50	30	1
U20PC531IT	Operating Systems Lab	-	-	2	3	50	30	1
U20PW519IT	Mini Project – II	-	-	2	3	50	30	1
	CCA-III : Paper Presentation	-	-	-	-	-	-	-
	ECA-II	-	-	-	-	-	-	-
	Library / Sports / Mentor Interaction	-	-	-	-	-	-	-
Student should acquire one online certification course equivalent to 2 credits during III-VII Semesters.								
	Total	**17**	**1**	**8**	**-**	**580**	**380**	**22**
	Grand Total	**26**			**-**	**960**		

Note:

1. *One hour is allotted to Library / Sports / Mentor Interaction.*
2. *The left over hours are to be allotted to ECA-II / CCA-III / RC / CC / TC based on the requirement .*

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ACADEMIC YEAR 2022-23
(for the students admitted in the academic year 2020-2021 **(R-20)**)

B.E (IT) VI-SEMESTER								
Course Code	**Course Name**	**Scheme of Instruction**			**Scheme of Examination**			
		Hours per week			**Duration in Hrs**	**Maximum Marks**		**Credits**
		L	**T**	**P/D**		**SEE**	**CIE**	
THEORY								
U20PC610IT	Artificial Intelligence and Machine Learning	3	-	-	3	60	40	3
U20PC620IT	Embedded Systems and IoT	3	-	-	3	60	40	3
U20PC630IT	Web Technologies	3	-	-	3	60	40	3
U20OE6XXXX	Open Elective - IV	3	-	-	3	60	40	3
U20HS040EH	Economics and Finance for Engineers	2	-	-	3	60	40	2
U20HS020EH	Human Values & Professional Ethics – II	1	-	-	2	40	30	1
U20BS610MA	Skill Development – IV (Aptitude – III)	1	-	-	2	40	30	1
U20XX610XX	Skill Development – IV (Technical Skills – III)	1	-	-	2	40	30	1
PRACTICALS								
U20PC611IT	Artificial Intelligence and Machine Learning Lab	-	-	2	3	50	30	1
U20PC621IT	Embedded Systems and IoT Lab	-	-	2	3	50	30	1
U20PC631IT	Web Technologies Lab	-	-	2	3	50	30	1
U20PW619IT	Theme Based Project	-	-	2	-	-	30	1
	Library / Sports / Mentor Interaction	-	-	-	-	-	-	-
Student should acquire one online certification course equivalent to 2 credits during III-VII Semesters.								
	Total	**17**	**-**	**8**	-	**570**	**410**	**21**
	Grand Total	**25**			-	**980**		

Note:
1. *One hour is allotted to Library / Sports / Mentor Interaction.*
2. *The left over hours are to be allotted to ECA-II / CCA-III / RC / CC / TC based on the requirement .*

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ACADEMIC YEAR 2022-23
(for the students admitted in the academic year 2019-2020 **(R-19)**)

B.E (IT) VII-SEMESTER								
Course Code	**Course Name**	**Scheme of Instruction**			**Scheme of Examination**			**Credits**
		Hours per week			**Duration in Hrs**	**Maximum Marks**		
		L	**T**	**P/D**		**SEE**	**CIE**	
THEORY								
U19PC710IT	Compiler Construction	3	-	-	3	60	40	3
U19PC720IT	Distributed Systems & Cloud Computing	3	-	-	3	60	40	3
U19PE7XXIT	Professional Elective - I	3	-	-	3	60	40	3
U19PE7XXIT	Professional Elective – II	3	-	-	3	60	40	3
U19PE7XXIT	Professional Elective – III	3	-	-	3	60	40	3
U19PE7XXIT	Professional Elective – IV	3	-	-	3	60	40	3
PRACTICALS								
U19PC711IT	Compiler Construction Lab	-	-	2	3	50	30	1
U19PC721IT	Distributed Systems & Cloud Computing Lab	-	-	2	3	50	30	1
U19PW719IT	Project Seminar	-	-	2	-	-	30	1
	Library / Sports / Mentor Interaction	-	-	-	-	-	-	-
Student should acquire one online certification course equivalent to 2 credits during III-VII Semesters.								
Total		**18**	**-**	**6**	**-**	**460**	**330**	**21**
Grand Total		**24**			**-**	**790**		

Professional Elective – I	**Professional Elective – II**
U19PE710IT: Data Mining	U19PE750IT: Data Analytics with Visualization
U19PE720IT: Software Quality and Assurance	U19PE760IT: Software Testing
U19PE730IT: Graph Theory	U19PE770IT: Advanced Algorithms
U19PE740IT: Cryptography and Network Security	U19PE780IT: Information Security

Professional Elective – III	**Professional Elective – IV**
U19PE790IT : Neural Networks and Deep Learning	U19PE742IT: Digital Image & Video Processing
U19PE712IT: Software Reuse Techniques	U19PE752IT: Object Oriented Analysis and Design
U19PE722IT: Parallel and Distributed Algorithms	U19PE762IT: Quantum Computing
U19PE732IT: Information Storage and Management	U19PE772IT: Information Retrieval Systems

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(for the students admitted in the academic year 2019-2020 **(R-19)**)

B.E (IT) VIII-SEMESTER									
S No.	**Course Code**	**Course Name**	**Scheme of Instruction**			**Scheme of Examination**			
			Hours per week			**Duration in Hrs**	**Maximum Marks**		**Credits**
			L	**T**	**P/D**		**SEE**	**CIE**	
THEORY									
1	U19PE8XXIT	Professional Elective - V	3	-	-	3	60	40	3
2	U19PE8XXIT	Professional Elective -VI	3	-	-	3	60	40	3
3	U21PE0XXIT	MOOCs Certification	-	-	-	-	-	-	2
PRACTICALS									
4	U19PW819IT	Project / Internship	-	-	12	Viva-Voce	50	50	6
		Total	**6**	**-**	**12**		**170**	**130**	**14**
		Grand Total	**18**			**-**	**300**		

Professional Elective – V	**Professional Elective - VI**
U19PE810IT: Natural Language Processing	U19PE850IT: Computer Vision
U19PE820IT: Software Project Management	U19PE860IT: Agile Software Development
U19PE830IT: Computational Number Theory	U19PE870IT: Information Theory and Coding
U19PE840IT: Cloud Security	U19PE880IT: Block Chain

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B.E (IT) VIII-SEMESTER									
S No.	**Course Code**	**Course Name**	**Scheme of Instruction**			**Scheme of Examination**			
			Hours per week			**Duration in Hrs**	**Maximum Marks**		**Credits**
			L	**T**	**P/D**		**SEE**	**CIE**	
THEORY									
1	U19PE8XXIT	Professional Elective - V	3	-	-	3	60	40	3
2	U19PE8XXIT	Professional Elective -VI	3	-	-	3	60	40	3
3	U19PE0XXIT	MOOCs Certification	-	-	-	-	-	-	2
PRACTICALS									
4	U19PW819IT	Project / Internship	-	-	12	Viva-Voce	50	50	6
		Total	**6**	**-**	**12**		**170**	**130**	**14**
		Grand Total	**18**			**-**	**300**		

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U19PE810IT: Natural Language Processing	U19PE850IT: Computer Vision
U19PE820IT: Software Project Management	U19PE860IT: Agile Software Development
U19PE830IT: Computational Number Theory	U19PE870IT: Information Theory and Coding
U19PE840IT: Cloud Security	U19PE880IT: Block Chain

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Open Electives Offered by IT Department for the Academic Year 2022-23

Sl.No	Semester / No. of Credits	Track 1	Track 2
1	B.E III/2	Introduction to Internet and Webpage Development (U21OE310IT)	Introduction to Linux (U21OE320IT)
2	B.E IV/3	Introduction to Object Oriented Programming (U21OE410IT)	Essentials of Python Programming (U21OE420IT)
3	B.E V/3	Introduction to Database Management Systems (U20OE510IT)	Introduction to Statistical Programming (U20OE520IT)
4	B.E VI/3	Web Application Development & Security (U19OE610IT)	Introduction to Machine Learning (U19OE620IT)
M.E./M.Tech. II – SEMESTER			
5	M.E./ M.Tech. II – SEMESTER	Fundamentals of Python Programming (PX22OE210IT)	

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