SELF ASSESSMENT REPORT (SAR)

FOR ACCREDITATION OF UNDERGRADUATE ENGINEERING PROGRAM(S) (TIER-II)

INFORMATION TECHNOLOGY

Submitted to

NATIONAL BOARD OF ACCREDITATION
New Delhi

TKR COLLEGE OF ENGINEERING & TECHNOLOGY
(Approved by AICTE, Affiliated to JNTUH,)
AN AUTONOMOUS INSTITUTION
Medbowli, Meerpet, Balapur, Ranga Reddy, Hyderabad, Telangana – 500097.
Email: principal@tkrcet.ac.in, www.tkrcet.ac.in
Ph.No.9949665436, 9666573666

SAR CONTENT

PARTA: Institutional Information

1. **Name and Address of the Institution:**

   TKR College of Engineering & Technology
   Survey No. 8, Balapur Mandal, Medbowli, Meerpet,
   R.R. Dist, Hyderabad-500 097, Telangana.

2. **Name and Address of the Affiliating University:**

   Jawaharlal Nehru Technological University Hyderabad,

   Kukatpally, Hyderabad, Telangana.

3. **Year of establishment of the Institution: 2002**

4. **Type of the Institution: Autonomous**

University	☐
Deemed University	☐
Government Aided	☐
Autonomous	☑
Affiliated	☐

5. **Ownership Status:**

Central Government	☐
State Government	☐
Government Aided	☐
Self-Financing	☑
Trust	☐
Society	☐
Section25Company	☐
Any Other (Please specify)	☐

Provide Details:

6. Other Academic Institutions of the Trust/Society/Company etc.,if any:

Name of the Institution(s)	Year of Establishment	Programs of Study	Location
Teegala Krishna Reddy Engineering College	2005	Engineering	Meerpet, Medbowli, Hyderabad.
TKR Institute of Management & Science	2004	MBA	Meerpet
Teegala Krishna Reddy College of Pharmacy	2007	Pharmacy	Meerpet

TableA.6

7. Details of all the programs being offered by the institution under consideration:

S. No.	Program Name	Name of the Department	Year of Start	Intake	Increase in intake, if any	Year of increase	AICTE Approval	Accreditation Status*
1	Engineering & Technology	Civil Engineering	2009-10	60	120	2014	Yes	**No**
2	Engineering & Technology	Electrical &Electronics Engineering (EEE)	2002-03	60	120	2011	Yes	**Yes**
3	Engineering & Technology	Mechanical Engineering	2004-05	60	120	2009	Yes	**Yes**
4	Engineering & Technology	Electronics &Communication Engineering(ECE)	2002-03	60	240	2006-07, 2012-13, 2013-14	Yes	**Yes**
5	Engineering & Technology	Computer Science &Engineering (CSE)	2002-03	60	240	2008- 09, 2009-10, 2012-13, 2013-14	Yes	**Yes**
6	Engineering & Technology	Information Technology (IT)	2005-06	60	60	--	Yes	**Applying 1st time**
7	Engineering & Technology	Computer Science &Engineering (AI & ML)	2020-21	60	120	2021-22	Yes	**NA**
8	Engineering & Technology	Computer Science &Engineering (Data Science)	2020-21	60	120	2021-22	Yes	NA

TableA.7

**** Write applicable one: Applying first time***

- Applying first time
- Granted provisional accreditation for two /three years for the period(specify period)
- Grantedaccreditationfor5/6yearsfortheperiod(specify period)
- Not accredited(specify visit dates, year)
- Withdrawn(specify visit dates, year)
- Not eligible for accreditation
- Eligible but not applied

Note: Add rows as needed.

8. Programs to be considered for Accreditation vide this application:

S. No.	Program Name
1.	**Information Technology (IT)**

TableA.8

9. Total number of employees in the institution: 333

A. Regular Employees(Faculty and Staff):

Items		CAY (2020-21)		CAY*m*1 (2019-20)		CAY*m*2 (2018-19)	
		Min	**Max**	**Min**	**Max**	**Min**	Max
Faculty in Engineering	**M**	113	115	104	109	125	**125**
	F	84	85	80	83	92	**93**
Faculty in Maths, Science &Humanities	**M**	18	20	20	20	21	**21**
	F	17	20	17	18	18	**18**
Non-teaching staff	**M**	40	40	38	38	38	**38**
	F	**61**	**61**	**58**	**58**	**60**	**60**

TableA.9a

Note: All the faculty whether regular or contractual (except Part-Time), will be considered. The contractual faculty(doing away with the terminology of visiting/adjunct faculty, whatsoever) who have taught for 2 consecutive semesters in the corresponding academic year on fulltime basis shall be considered for the purpose of calculation in the Faculty Student Ratio.

However, following will be ensured in case of contractual faculty:

1. **Shall have the AICTE prescribed qualifications and experience.**
2. **Shall be appointed on full time basis and worked for consecutive two semesters**

during the particular academic year under consideration.

3. **Should have gone through an appropriate process of selection and the records of the same shall be made available to the visiting team during NBA visit.**

CAY–Current Academic Year

CAYm1-CurrentAcademicYearminus1=Current Assessment Year

CAYm2-CurrentAcademicYearminus2=CurrentAssessmentYearminus1

B. Contractual Staff Employees(Faculty and Staff): (Not covered in Table A):

Items		CAY		CAY*m*1		CAY*m*2	
		Min	**Max**	**Min**	**Max**	**Min**	Max
Faculty in Engineering	**M**	**N/A**					
	F						
Faculty in Maths, Science &Humanities	**M**						
	F						
Non-teaching staff	**M**						
	F						

TableA.9b

10. Total number of Engineering Students:

Item	CAY (2020-21)	CAYm1 (2019-20)	CAYm2 (2018-19)
Total no. of boys	2244	2172	2565
Total no. of girls	1096	1070	1166
Total no. of students	3340	3242	3731

TableA.10

(Instruction: The data may be categorized in tabular form separately for undergraduate, post graduate engineering, other program, if applicable)

Note: *In case the Institution is running AICTE approved additional course such as MBA,MCA in the first shift, engineering courses in the second shift, Polytechnic in Second shift etc., separate tables with the relevant heading shall be prepared.*

11. Vision of the Institution:

The Institution endeavors towards imparting quality education with ethical values and strives to make students technically competent to reach heights and make our nation self-reliant and globally recognized.

12. Mission of the Institution:

The Institution is committed and dedicated to mould the students into quality engineers and technologists with aplomb by providing world-class scientific and technical education through:

- Ensuring excellent branch wise infrastructural facilities, with eminent and qualified faculty.
- Making the institute a research/resource centre to enhance scope for consultancy and R&D.

13. Contact Information of the Head of the Institution and NBA coordinator, if designated:

I. **Name:** Dr. D. V. Ravi Shankar

Designation: Principal

Mobile No: 9949665436

Email id: principal@tkrcet.ac.in

II. **NBA coordinator, if designated**: **Name**: Smt. C. Jaya Lakshmi

Designation : Associate Professor

Mobile No: 9390909007

Email id : jayalakshmi@tkrcet.com

PART B: CRITERIA SUMMARY

NAME OF THE PROGRAM: INFORMATION TECHNOLOGY

Criteria No.	Criteria	Marks/Weightage
1	Vision, Mission and Program Educational Objectives	60
2	Program Curriculum and Teaching – Learning Processes	120
3	Course Outcomes and Program Outcomes	120
4	Students‟ Performance	150
5	Faculty Information and Contributions	200
6	Facilities and Technical Support	80
7	Continuous Improvement	50
Institute Level Criteria		
8	First Year Academics	50
9	Student Support Systems	50
10	Governance, Institutional Support and Financial Resources	120
	TOTAL	1000

CRITERION 1	Vision, Mission and Programme Educational Objectives	60

1. VISION, MISSION AND PROGRAM EDUCATIONAL OBJECTIVES (60)

1.1 State the Vision and Mission of the Department and Institute(5)

(Vision statement typically indicates aspirations and Mission statement states the broad approach to achieve aspirations)

(Here Institute Vision and Mission statements have been asked to ensure consistency with the department Vision and Mission statements; the assessment of the Institute Vision and Mission will be taken up in Criterion10)

Vision of the Institution:

The Institution endeavors towards imparting quality education with ethical values and strives to make students technically competent to reach heights and make our nation self-reliant and globally recognized.

Mission of the Institution:

The Institution is committed and dedicated to mould the students into quality engineers and technologists with aplomb by providing world-class scientific and technical education through:

- Ensuring excellent branch wise infrastructural facilities with eminent and qualified faculty
- Making the institute a research/resource centre to enhance scope for consultancy and R&D

Vision of the Department:

Department of Information Technology strives to mould professionals so as to meet the global needs of the Industry as well as Research.

Mission of the Department:

- Ensuring a quality teaching learning process in which theoretical knowledge is practically implemented to solve the global issue.
- Preparing students for their career development to reach high peaks in multiple areas.

CONSISTENCY OF VISION OF THE INSTITUTE WITH THAT OF DEPARTMENT	
Components of Vision Statement of Institute	**Components of Vision Statement of Department**
The Institution endeavors towards imparting quality education with ethical values and **strives to make students technically competent to reach heights and make our nation self-reliant and globally recognized.**	Department of Information Technology **strives to mould professionals so as to meet the global needs of the Industry as well as Research.**

CONSISTENCY OF MISSION OF THE INSTITUTE WITH THAT OF DEPARTMENT	
Components of Mission Statement of Institute	**Components of Mission Statement of Department**
➢ The Institution is committed and dedicated to mould the students into quality engineers and technologists **with aplomb by providing world-class scientific and technical education through Ensuring excellent branch wise infrastructural facilities with eminent and qualified faculty.**	➢ Ensuring a quality teaching learning process **in which theoretical knowledge is practically implemented to solve the global issue.**
➢ The Institution is committed and dedicated **to mould the students into quality engineers and technologists** with aplomb by providing world-class scientific and **technical education through making the institute a research/resource centre to enhance scope for consultancy and R&D.**	➢ Preparing students for their career development **to reach high peaks in multiple areas.**

1.2 State the Program Educational Objectives (PEOs) (5)

The Graduate of the program will be able to:

PEO 1	To create and sustain a community of learning in which students acquire knowledge and apply in their concerned fields with due consideration for ethical, ecological and economic issues.
PEO 2	To provide knowledge-based services so as to meet the needs of the society and industry.
PEO 3	To make the students understand, design and implement the concepts in multiple arenas.
PEO 4	To educate the students in disseminating the research findings with good soft skills so as to become successful entrepreneurs.

1.3 Indicate where the Vision, Mission and PEOs are published and disseminated among stakeholders (10)

(Describe where (websites, curricula, posters etc.) the Vision, Mission and PEOs are published and detail the process which ensures awareness among internal and external stakeholders with effective process implementation)

(Internal stakeholders may include Management, Governing Board Members, faculty, support staff, students etc. and external stakeholders may include employers, industry, alumni, funding agencies, etc.)

The vision, mission and PEO‟s are published and disseminated at:

- College Website–www.tkrcet.ac.in
- HoDs chamber
- Orientation program
- Laboratories
- Newsletters
- Department notice board
- Stakeholders through emails
- Various functions such as :
  - Alumni meet
  - Seminars
  - Workshops

Additionally, the PEO‟s are distributed to the stakeholders of the programe when the Board of studies (BOS), Department advisory committee (DAC) and the faculty members meet.

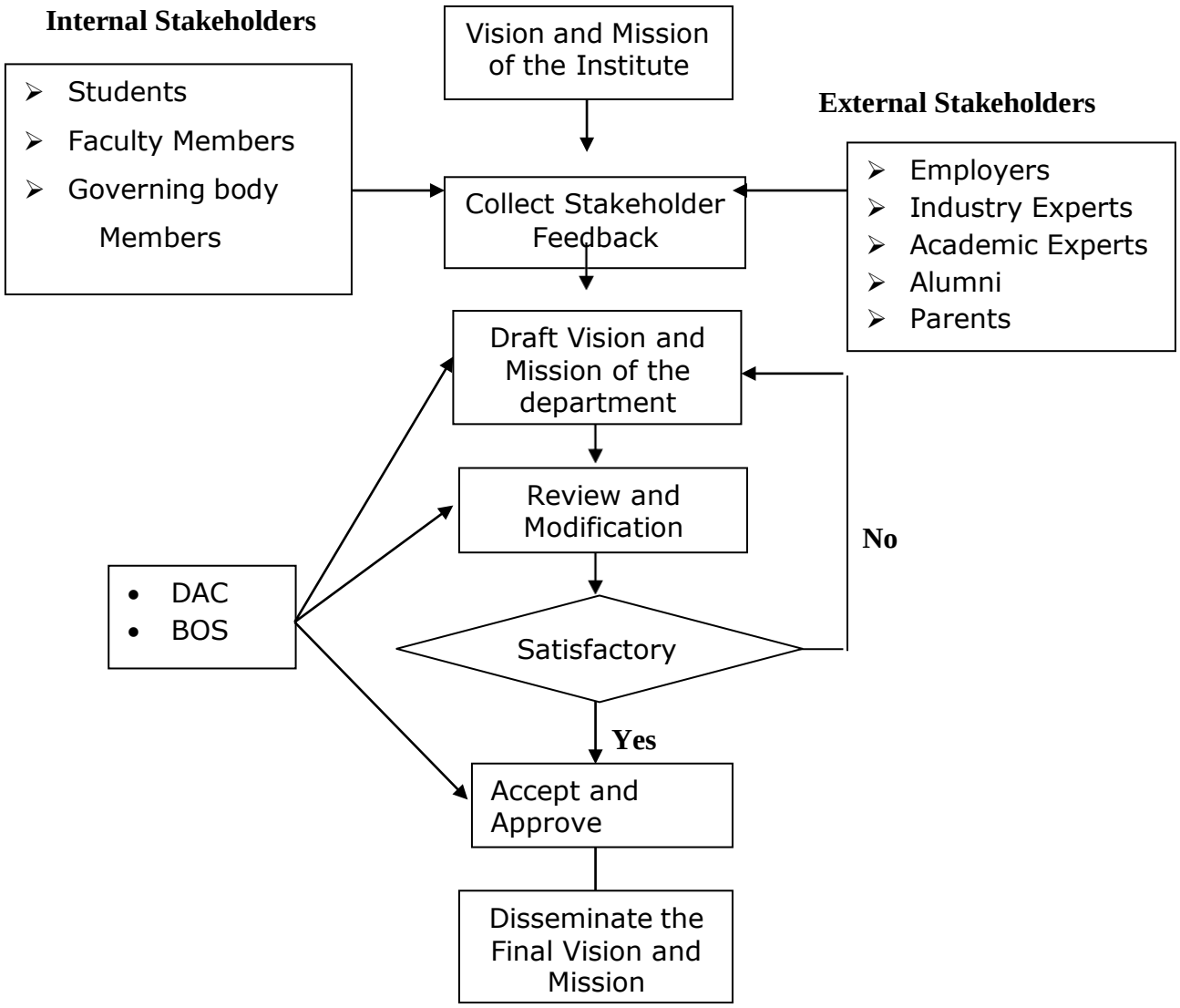
1.4 State the process for defining the Vision and Mission of the Department, and PEOs of the program (25)

(*Articulate the process for defining the Vision and Mission of the department and PEOs of the program)*

The Department's vision and mission statements were prepared by consulting the stake holders, the members of the Department advisory committee and the faculty of the department.

The procedure was carried on as follows:

1. If commenced with the formation of the Department Advisory Committee (DAC), which consisted of external academicians, industry experts, the HOD, senior faculty members and Alumni, Inputs acquired for the formulation of the draft vision and mission statement for the department.
2. Further, Board of Studies (BOS) involved HOD and senior faculty members and was formed in the department to prepare the draft of the Vision and Mission statements peeping in mind the perspective of Information Technology.
3. The Program co-coordinator was nominated by the Head of the Department and the program co-coordinator collected feedback from the internal and external stakeholders and prepared the draft of the vision and mission statements this was submitted to the HOD of the department for the next process.
4. The department conducted a meeting with all faculty members on the draft copy of vision and mission of the department and analyzed and then prepared the final version of the vision and mission of the department and submitted it to the BOS and DAC through the program coordinator.
5. Finally, Board of Studies (BOS) and Department Advisory Committee (DAC) approved the department's Vision and Mission statements.
6. The program co-coordinator disseminated the vision and mission statements to the stakeholders.



Process for defining the Vision and Mission of the Department

- Internal Stake Holders
  - Students
  - Faculty members
  - Governing body members
- External Stake Holders
  - Employers
  - Industry Experts
  - Academic Experts
  - Alumni
  - Parents

Process for defining the PEOs of the Department:

The educational objectives of the programme were established through a consultation process involving the stakeholders such as students, alumni, faculty and parents.

The PEO‟s were established through the following process steps:

Step 1: Vision and Mission of the institute were taken as basis.

Step 2: Vision and Mission of the department were taken as basis to interact with various stakeholders

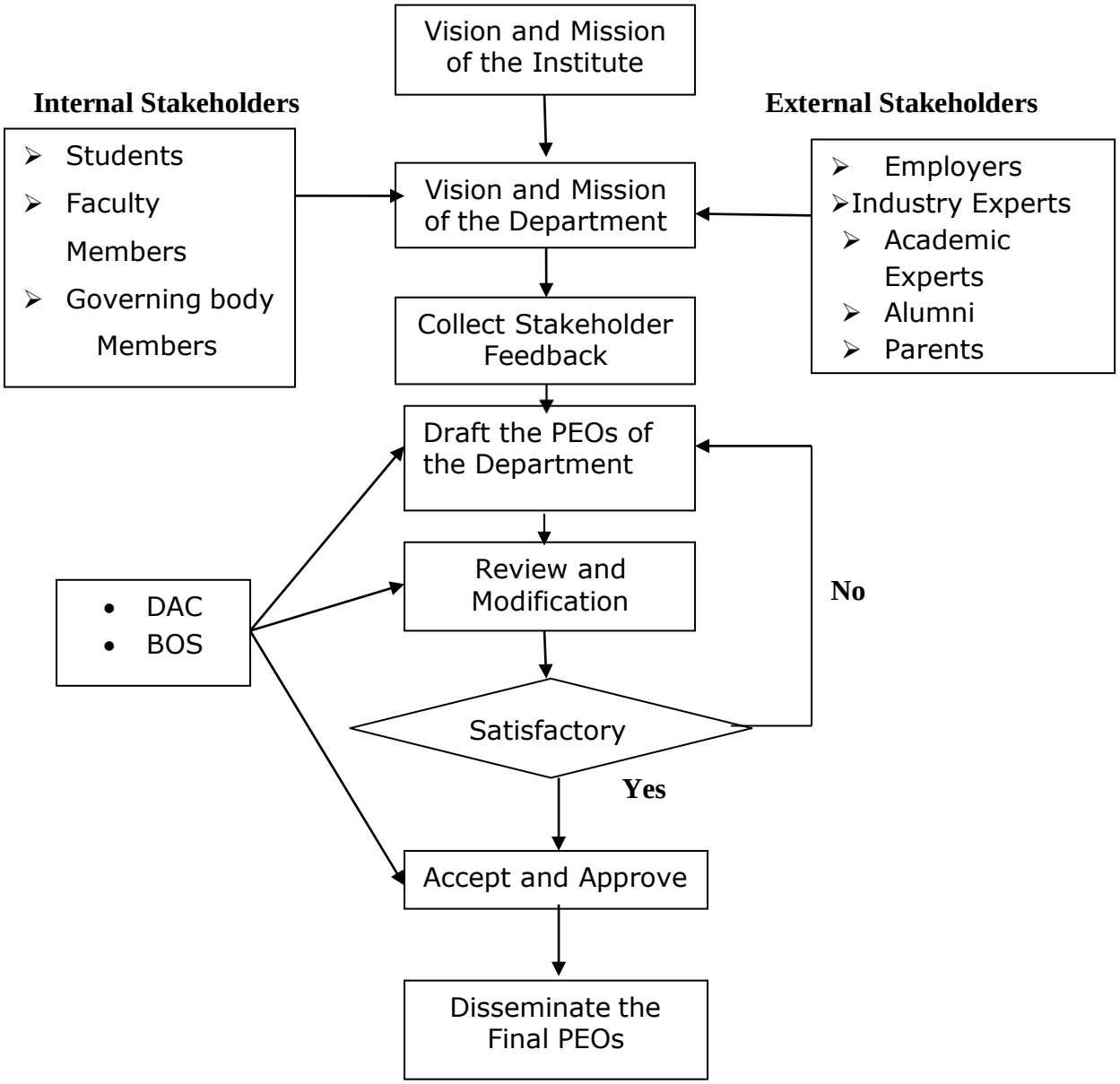
Step 3: The program co-coordinator collected the views of the stakeholders

Step 4: from the stakeholder's views, the PEO's were formulated by the senior faculty members identified for the program

Step 5: The PEO‟s were represented before the department advisory committee for additional inputs to improve the program

Setp 6: Finally the PEO‟s were approved by the BOS and DAC.

Step 7: The program co-ordinator disseminated the PEO‟s statements to the stakeholders.



Process for defining the PEOs of the Department

1.5 Establish consistency of PEOs with Mission of the Department (15)

There are two mission statements of the department and four PEO‟s of B.Tech course in Information Technology. The consistency between PEOs and mission of the department was established by the departmental committee in consultation with faculty members which is described in the table below.

PEO Statements	M1	M2	Justification and rationale
PEO-1: To create and sustain a community of learning in which students acquire knowledge and apply in their concerned fields with due consideration for ethical, ecological and economic issues. .	3	3	• Use of modern teaching aids • Remedial & extra classes • Extra lab hours • Tutorial sessions • Organization of engineering activities • Career oriented value addition programs • Inclusion of humanities &human values subjects • Class room presentations
PEO-2: To provide knowledge-based services so as to meet the needs of the society and industry.	3	2	• Use of real world examples, problems & mini projects. • Contests on programming , tech fests, innovative projects • Real world projects & industry trainings

PEO-3: To make the students understand, design and implement the concepts in multiple arenas.	2	3	• Career based training programs like preparations for placements, mock interviews, aptitude sessions, group discussions etc. • International conferences, workshops, industrial trainings, industry visits, expert talks etc. • Personality development classes. • Online certifications. • Activities through student technical clubs.
PEO4: To educate the students in disseminating the research findings with good soft skills so as to become successful entrepreneurs.	3	3	• Social activities by technical club. • Participation in social programme. • Awareness through student articles in departmental e-magazine. • Awareness through celebrations on important days of national interest.

Table 1.5 Mapping of PEOs with Mission of Department

1. Slight (low) 2.Moderate (medium) 3. Substantial (high)

CRITERION 2	Program Curriculum and Teaching – Learning Processes	120

2. PROGRAM CURRICULUM AND TEACHING - LEARNING PROCESSES (120)

2.1 Program Curriculum (20)

The TKR College of engineering &technology is affiliated to JNTUH, Hyderabad and was granted autonomy by the UGC with effect from the academic year 2017-18 and accredited by NAAC A grade. The Institute being governed in Autonomous mode the Program Curriculum for B. Tech Information Technology program is designed by the Board of Studies. The Department of Information Technology follows a systematic process in the design and development of the curriculum as per the Choice Based Credit System (CBCS), involving all the stake holders contributing to the introduction, innovation and revision of the syllabus. The syllabus is designed to provide a comprehensive coverage of subject with emphasis on fundamentals as well as applied. Feedback from the faculty, experts from industry, current students and alumni are used in the initiation, review and redesign of the curriculum.

The department of information Technology has a department advisory committee (DAC), Board of Studies (BOS) which consists of senior faculty members of the department and reputed academician, experts from industry. Regular Meetings are conducted by the department and scrutinize the curriculum, syllabi and gives relevant suggestions from improving the quality of curriculum as well as syllabi.

After elaborate discussions on the content and organization of the syllabus in the BOS, it will be placed before the Academic Council for approval. The Curriculum have the balance in the composition of Basic Science courses, Engineering Science Courses, Humanities and Social Science courses, Program Core, Professional electives, Open Electives, skill enhancement electives and Project work.

TKR COLLEGE OF ENGINEERING &TECHNOLOGY

(Autonomous)

B.TECH. INFORMATION TECHNOLOGY-R17
ACADEMIC YEAR-2020-21

Regulation 2017:

Course Components of R17 Regulation

S. No	Course Component	Total number of credits	(% of totalnumber of credits of the program)
01	Basic Sciences	**25**	**12.43**
02	Engineering Sciences	**18**	**8.95**
03	Humanities and Social Sciences	**17**	**8.45**
04	Program Core	**90**	**44.77**
05	Professional Electives	**24**	**11.94**
06	Open Electives	**12**	**5.97**
07	Project(s)	**11**	**5.47**
08	Seminars, Comprehensive Viva	**4**	**1.99**
	Total number of credits		**201**

B.Tech. I Semester

S. No	Course Code	Course Title	L	T	P	Credits
01	A61BS1	Mathematics-I	3	1	0	3
02	A61BS2	Engineering Chemistry	4	0	0	4
03	A61BS3	Engineering Physics-I	3	0	0	3
04	A61HS4	Professional Communication in English	3	0	0	3
05	A61ES5	Engineering Mechanics	3	0	0	3
06	A61ES6	Basic Electrical and Electronics Engineering	4	0	0	4
07	A61HS7	English Language Communication Skills Lab	0	0	3	2
08	A61ES8	Engineering Workshop	0	0	3	2
09	AMC01	NSS	0	0	0	0
		Total	**19**	**1**	**6**	**24**

B.Tech. II Semester

S. No	Course Code	Course Title	L	T	P	Credits
01	A62BS1	Engineering Physic-II	3	1	0	3
02	A62BS2	Mathematics-II	4	1	0	4
03	A62BS3	Mathematics-III	4	1	0	4
04	A62ES4	Computer Programming in C	3	0	0	3
05	A62ES5	Engineering Graphics	2	0	4	4
06	A62BS6	Engineering Chemistry Lab	0	0	3	2
07	A62BS7	Engineering Physics Lab	0	0	3	2
08	A62ES8	Computer Programming Lab	0	0	3	2
09	AMC02	NCC/NSO	0	0	0	0
		Total	**16**	**3**	**13**	**24**

B. Tech. III SEMESTER

S. No	Course Code	Course Title	L	T	P	Credits
01	A63HS1	Mathematics – IV	4	1	0	4
02	A63PC2	Data Structures through C++	4	0	0	4
03	A63PC3	Mathematical Foundations of Computer Science	4	0	0	4
04	A63PC4	Digital Logic Design	3	0	0	3
05	A63PC5	Object Oriented Programming through Java	3	0	0	3
06	A63PC6	Data Structures through C++ Lab	0	0	3	2
07	A63PC7	IT Workshop	0	0	3	2
08	A63PC8	Object Oriented Programming through Java Lab	0	0	3	2
09	A63MC3	*Environmental Science and Technology	3	0	0	0
		Total Credits	**21**	**1**	**9**	**24**

B.Tech. IV SEMESTER

S. No	Course Code	Course Title	L	T	P	Credits
01	A64PC1	Computer Organization	4	0	0	4
02	A64PC2	Database Management Systems	4	0	0	4
03	A64PC3	Operating Systems	4	0	0	4
04	A64PC4	Formal Languages and Automata Theory	3	0	0	3
05	A64HS5	Business Economics and Financial Analysis	3	0	0	3
06	A64PC6	Computer Organization Lab	0	0	3	2
07	A64PC7	Database Management Systems Lab	0	0	3	2
08	A64PC8	Operating Systems Lab	0	0	3	2
09	A64MC4	*Gender Sensitization Lab	0	0	3	0
		Total Credits	**18**	**0**	**12**	**24**

B. Tech. V SEMESTER

S. No	Course Code	Course Title	L	T	P	Credits
01	A65PC1	Design and Analysis of Algorithms	4	0	0	4
02	A65PC2	Data Communication & Computer Networks	4	0	0	4
03	A65PC3	Software Engineering	4	0	0	4
04	A65HS4	Fundamentals of Management	3	0	0	3
05		**Open Elective-I**	3	0	0	3
06	A65PE6	**Professional Elective-I** 1. Distributed Systems 2. Image Processing and Pattern Recognition 3. Information Security	3	0	0	3
07	A65PC7	Design and Analysis Of Algorithms Lab	0	0	3	2
08	A65PC8	Computer Networks Lab	0	0	3	2
09	A65PC9	Software Engineering Lab	0	0	3	2
10	A65MC5	*Professional Ethics	0	3	0	0
		Total Credits				**27**

B.Tech. VI SEMESTER

S. No	Course Code	Course Title	L	T	P	Credits
01	A66PC1	Compiler Design	4	0	0	4
02	A66PC2	Web Technologies	4	0	0	4
03	A66PC3	Cryptography and Network Security	4	0	0	4
04		**Open Elective-II**	3	0	0	3
05	A66PE5	**Professional Elective –II** 1.Mobile Computing 2.Information Security Management(SA-I) 3.Introduction To Analytics	3	0	0	3
06	A66PE6	**Professional Elective-III** 1.Object Oriented Analysis and Design 2.Computer Forensics 3.Advanced Operating Systems	3	0	0	3
07	A66HS7	Advanced Communication Skills Lab	0	0	3	2
08	A66PC8	Web Technologies Lab	0	0	3	2
09	A66PC9	Cryptography and Network Security Lab	0	0	3	2
10	A66MC6	*Constitution Of India	0	3	0	0
		Total Credits				**27**

B.Tech. VII SEMESTER

S. No	Course Code	Course Title	L	T	P	Credits
01	A67PC1	Data Warehousing & Data Mining	4	0	0	3
02	A67PC2	Linux Programming	4	0	0	3
03	A67PC3	Python Programming	4	0	0	3
04		**Open Elective-III**	3	0	0	3
05	A67PE5	**Professional Elective-IV** 1.Information Security Assessments And Audits (SA-II) 2.Big Data Analytics-II 3.Human Computer Interaction	3	0	0	3
06	A67PE6	**Professional Elective-V** 1.Semantic Web & Social Networks 2. Cloud Computing 3.Distributed Databases	3	0	0	3

07	A67PE7	**Professional Elective-VI** 1.Software Process And Project Management 2.Artificial Intelligence 3.E-Commerce	3	0	0	3
08	A67PC7	Data Warehousing & Data Mining Lab	0	0	3	2
09	A67PC8	Linux Programming Lab	0	0	3	2
10	A67PC9	Python Programming lab	0	0	3	2
		Total Credits				**27**

B.Tech. VIII SEMESTER

S. No	Course Code	Course Title	L	T	P	Credits
01	A68PE1	**Professional Elective-VII** 1.Design Patterns 2.Internet Of Things 3.Advanced Computer Architecture	3	0	0	3
02	A68PE2	**Professional Elective-VIII** 1.Predictive Analytics 2.Information Security Incident Response And Management (SA-III) 3.Software Testing Methodologies	3	0	0	3
03		**OPEN ELECTIVE-IV**	3	0	0	3
04	A68PW4	Industry Oriented Mini Project	0	0	4	2
05	A68SE5	Seminars	0	0	4	2
06	A68CV6	Comprehensive Viva	0	0	4	2
07	A68PW7	Major Project	0	0	18	9
		Total Credits				**24**

TKR COLLEGE OF ENGINEERING & TECHNOLOGY (AUTONOMOUS)

B.TECH. INFORMATION TECHNOLOGY-R18

ACADEMIC YEAR 2020-21

Regulation 2018:

Course Components of R18 Regulation

S. No	Course Component	Total number of credits	(% of totalnumber of credits of the program)
01	Basic Sciences	**25**	**15.62**
02	Engineering Sciences	**22.5**	**14.06**
03	Humanities and Social Sciences	**9**	**5.62**
04	Program Core	**61.5**	**38.43**
05	Professional Electives	**18**	**11.25**
06	Open Electives	**9**	**5.62**
07	Project(s)	**12**	**7.5**
08	**Comprehensive Viva**	**3**	**1.87**
	Total number of credits		**160**

COURSE STRUCTURE-R18

IT B. Tech - I Semester

S. No	Course Code	Course Title	L	T	P	Credits
01	BBSM1	Engineering Mathematics-I	3	1	0	3
02	BBSP2	Applied Physics-I	3	0	0	3
03	BHSEN	Professional Communication Language	3	0	0	3
04	BBSBE	Basic Electrical Engineering	3	0	0	3
05	BBSEG	Engineering Graphics	3	0	0	3
06	BBSEW	Engineering Workshop	0	0	3	1.5
07	BBEEL2	BEE Lab	0	0	3	1.5
08	BE22	Professional Communication Language Lab	0	0	3	1.5
		Total Credits				**19.5**

IT B. Tech -II Semester

S. No	Course Code	Course Title	L	T	P	Credits
01	BBSM2	Engineering Mathematics–II	3	1	0	3
02	BBSP3	Applied Physics-II	3	1	0	3
03	BBSC1	Engineering Chemistry	4	1	0	4
04	BBSED	Electronics Devices and Circuits	3	1	0	3
05	BBSCP	Computer Programming using C	3	1	0	3
06	BP113	Applied Physics Lab	0	0	3	1.5
07	BCH2	Engineering Chemistry Lab	0	0	3	1.5
08	BEDCL2	Electronics Devices and Circuits Lab	0	0	3	1.5
09	BCPL2	Computer Programming using C Lab	0	0	3	1.5
		Total Credits				**22**

III SEMESTER

S. No	Course Code	Course Title	L	T	P	Credits
01	BBSM3	Probability & Statistics	3	0	0	3
02	B63PC1	Data Structures	3	0	0	3
03	B63PC2	Digital Logic Design	3	0	0	3
04	B63PC3	Object Oriented Programming	3	0	0	3
05	B63PC4	Introduction to Analytics	3	0	0	3
06	B63PC5	Data Structures Lab	0	0	3	1.5
07	B63PC6	Object Oriented Programming Lab	0	0	3	1.5
08	B63PC7	Digital Logic Design Lab	0	0	3	1.5
		Total Credits				**19.5**

IV SEMESTER

S. No	Course Code	Course Title	L	T	P	Credits
01	BBSM5	Discrete Mathematics	3	0	0	3
02	B64PC2	Computer Organization	3	0	0	3
03	B64PC3	Database Management Systems	3	0	0	3
04	B64PC4	Software Engineering	3	0	0	3
05	B64PC5	Formal Language & Automata Theory	3	0	0	3

06	B64PC6	Database Management System Lab	0	0	3	1.5
07	B64PC7	Software Engineering Lab	0	0	3	1.5
08	BITW1	IT Workshop	0	0	3	1.5
		Total Credits				**19.5**

V SEMESTER

S. No	Course Code	Course Title	L	T	P	Credits
01	B65PC1	Operating Systems	3	0	0	3
02	B65PC2	Computer Networks	3	0	0	3
03	B65PC3	Data Warehousing & Data Mining	3	0	0	3
04	B65PC4	Design and Analysis of Algorithms	3	0	0	3
05	BHSFM	Fundamentals Of Management	3	0	0	3
06	B65PC6	Linux Programming	3	0	0	3
07	B65PC7	Operating Systems and Computer Networks lab	0	0	3	1.5
08	B65PC8	Linux Programming Lab	0	0	3	1.5
09	B65MC1	*Professional Ethics	0	3	0	0
		Total Credits				**21**

VI SEMESTER

S. No	Course Code	Course Title	L	T	P	Credits
01	B66PC1	Web Technologies	3	0	0	3
02	B66PC2	Object Oriented Analysis & Design	3	0	0	3
03	B66PC3	Compiler Design	3	0	0	3
04	B66PE4	1.Software Testing Methodologies 2.Software Project Management 3.Software Metrics and Quality Assurance	3	0	0	3
05	B66OE5	O.E – I	3	0	0	3
06	B66OE6	O.E – II	3	0	0	3
07	B66PC7	Web Technologies Lab	0	0	3	1.5
08	B66PC8	Case Tools Lab	0	0	3	1.5
09	B66MC2	*Environmental Science	0	3	0	0
		Total Credits				**21**

VII SEMESTER

S. No	Course Code	Course Title	L	T	P	Credits
01	B67PE1	1.Machine Learning 2.Internet of Things 3.Artificial Intelligence	3	0	0	3
02	B67PE2	1.Mobile Computing 2.Mobile Application development 3.Design Patterns	3	0	0	3
03	B67PE3	1.Information Security 2.Information Retrieval System 3. Distributed Systems	3	0	0	3
04		OE-III	3	0	0	3
05	BE23	Advanced Communication Skills Lab	3	0	0	1.5
06	B67PE6	1.Network Security 2.Neural Networks 3. Wireless Sensor Networks	3	0	0	3
07	B67PW7	Project Work Part-A	0	0	8	4
		Total Credits				**20.5**

VIII SEMESTER

S. No	Course Code	Course Title	L	T	P	Credits
01		OE-II	3	0	0	3
02	B68PE2	1. Big Data Analytics 2. Semantic Web & Social Networks 3. Distributed Data Bases	3	0	0	3
03	B68CV3	Comprehensive Viva	0	0	6	3
04	B68PW4	Project Work Part – B	0	0	16	8
		Total Credits				**17**

TKR COLLEGE OF ENGINEERING & TECHNOLOGY (AUTONOMOUS)

B. TECH. INFORMATION TECHNOLOGY-R20

ACADEMIC YEAR 2020-21

Regulation 2020:

Course Component of Regulation 2020

S. No	Course Component	Total number of credits	(% of totalnumber of credits of the program)
01	Basic Sciences	**23**	**14.37**
02	Engineering Sciences	**22**	**13.75**
03	Humanities and Social Sciences	**11**	**6.87**
04	Program Core	**59**	**36.87**
05	Professional Electives	**18**	**11.25**
06	Open Electives	**12**	**7.5**
07	Project(s)	**15**	**9.37**
	Total number of credits		**160**

COURSE STRUCTURE-R20

SEMESTER I

S. No	Class	Course Code	Course Title	L	T	P	Credits
01	BS	CBSM2	Linear Algebra & Graph Theory	3	0	0	3
02	HS	CHSE1	English	2	0	0	2
03	BS	CBSC7	Chemistry	3	1	0	4
04	ES	CESEG1	Engineering Graphics	1	0	4	3
05	ES	CESCP1	C Programming for Problem Solving	3	0	0	3
06	HS	CHSE2	English Language & Communication Skills	0	0	2	1
07	BS	CBSC8	Chemistry Lab	0	0	3	1.5
08	ES	CESCP2	C Programming for Problem Solving Lab	0	0	3	1.5
09	MC	MC001	Sports	0	0	0	Satisfactory
			Total Credits				**19**

SEMESTER II

S. No	Class	Course Code	Course Title	L	T	P	Credits
01	BS	CBSM1	Ordinary Differential Equations & Vector Calculus	3	0	0	3
02	BS	CBSP1	Applied Physics	3	1	0	4
03	ES	CESBE2	Basic Electrical Engineering	3	0	0	3
04	ES	CESSD1	Semi-Conductor Devices & Circuits	3	0	0	3
05	BS	CBSP2	Applied Physics Lab	0	0	3	1.5
06	ES	CESBE4	Basic Electrical & Simulation Lab	0	0	3	1.5
07	ES	CESSD2	Semi-Conductor Devices & Circuits Lab	0	0	3	1.5
08	ES	CESIT1	IT Workshop	0	0	3	1.5
09	MC	MC002	Yoga	0	0	0	Satisfactory
			Total Credits				**19**

SEMESTER III

S. No	Class	Course Code	Course Title	L	T	P	Credits
01	HS	CHSM1	Business Economics and Financial Analysis	3	0	0	3
02	BS	CBSM4	Mathematical Foundation of Computer Science	3	0	0	3
03	ES	CESDS1	Data Structures	3	0	0	3
04	PC	C63PC1	Digital Logic Design	3	0	0	3
05	PC	C63PC2	Operating Systems	3	0	0	3
06	PC	C63PC3	Linux Programming	3	0	0	3
07	ES	CESDS2	Data Structures Lab	0	0	2	1
08	PC	C63PC4	Linux/Operating Systems Lab	0	0	4	2
09	MC	MC003	Cultural Activity	0	0	0	Satisfactory
			Total Credits				**21**

SEMESTER IV

S. No	Class	Course Code	Course Title	L	T	P	Credits
01	BS	CBSM3	Probability & Statistics	3	0	0	3
02	PC	C64PC1	Computer Organization	3	0	0	3
03	PC	C64PC2	Database Management Systems	3	0	0	3
04	PC	C64PC3	Java Programming	3	0	0	3
05	PC	C64PC4	Design and Analysis of Algorithms	3	0	0	3
06	PC	C64PC5	Formal Languages and Automata Theory	3	0	0	3
07	PC	C64PC6	Java Programming Lab	0	0	3	1.5
08	PC	C64PC7	Database Management Systems Lab	0	0	3	1.5

09	MC	MC004	Video with Social Messages	0	0	0	Satisfactory
			Total Credits				**21**

SEMESTER V

S. No	Class	Course Code	Course Title	L	T	P	Credits
01	PC	C65PC1	Software Engineering	3	0	0	3
02	PC	C65PC2	Python Programming	3	0	0	3
03	PC	C65PC3	Compiler Design	3	0	0	3
04	PC	C65PC4	Computer Networks	3	0	0	3
05	PC	C65PC5	Object Oriented Analysis and Design	3	0	0	3
06	OE	C65OE6	Open Elective-I	3	0	0	3
07	PC	C65PC7	Object Oriented Analysis and Design Lab	0	0	3	1.5
08	PC	C65PC8	Python Programming Lab	0	0	3	1.5
09	MC	MC005	MOOCs/Online Course	0	0	0	**S**
			Total Credits				**21**

SEMESTER VI

S. No	Class	Course Code	Course Title	L	T	P	Credits
01	HS	CHSM2	Fundamentals of Management	3	0	0	3
02	PC	C66PC1	Web Technologies	3	0	0	3
03	OE	C66OE2	Open Elective-II	3	0	0	3
04	PE	C66PE3	Professional Elective- I 1) Advanced Databases 2) Network Programming 3)Stack Technologies	3	0	0	3
05	PE	C66PE4	Professional Elective- II 1) Distributed Databases 2) Wireless Networks 3)Mobile Application Development	3	0	0	3
06	HS	CHSE3	Advanced English Communication Skills Lab	0	0	3	2
07	PC	C66PC5	Web Technologies Lab	0	0	2	1
08	PW	C66PW6	Mini Project	0	0	4	2
09	MC	MC006	1.Personality Development/skill development 2.Technical events 3.Internships	0	0	0	S
			Total Credits				**20**

SEMESTER VII

S. No	Class	Course Code	Course Title	L	T	P	Credits
01	PC	C67PC1	Data Warehousing and Data Mining	3	0	0	3
02	PC	C67PC2	Information Security	3	0	0	3
03	OE	C67OE3	Open Elective-III	3	0	0	3
04	PE	C67PE4	Professional Elective- III 1) Introduction to Data Analytics 2) Mobile Adhoc Networks 3)Multimedia & Rich Internet Applications	3	0	0	3
05	PE	C67PE5	Professional Elective- IV 1) Big Data Analytics 2) Social Networks 3)Internet of Things	3	0	0	3
06	PC	C67PC6	Data Warehousing and Data Mining Lab	0	0	4	2
07	PW	C57PW8	Comprehensive Viva	0	0	0	1
08	PW	C67PW7	Major Project Phase-I	0	0	4	2
09	MC	MC007	Competitive Exams	0	0	0	**S**
			Total Credits				**20**

SEMESTER VIII

S. No	Class	Course Code	Course Title	L	T	P	Credits
01	OE	C68OE1	Open Elective-IV	3	0	0	3
02	PE	C68PE2	Professional Elective- V 1) Predictive Data Analytics 2) Storage Area Networks 3) Machine Learning	3	0	0	3
03	PE	C68PE3	Professional Elective- VI 1) Data Science 2) Semantic Web & Social Networks Deep Learning	3	0	0	3
04	PW	C68PW4	Major Project Phase II	0	0	20	10
			Total Credits				19

2.1.1 State the process used to identify extent of compliance of the University curriculum for attaining the Program Outcomes and Program Specific Outcomes as mentioned in Annexure I. Also mention the identified curricular gaps, if any (10)

Process used to identify extent of compliance of the curriculum for attaining the Program Outcomes and Program Specific Outcomes.

The B.Tech. Information Technology curriculum comprises of (i) Basic science (ii) Engineering science (iii) Humanities and social science (iv) Professional core (v) Professional elective (vi) Open elective.

The steps followed to ensure the compliance of curriculum for attaining program outcome and program specific outcome are summarized below:

1. Each subject will have five Course Outcomes (COs).
2. The course outcomes are mapped to relevant Program Outcomes (POs) namely PO 01 to PO12 along with three Program Specific Outcomes (PSOs). The mapping is done by team of faculty along with Head of the Department
3. After CO-PO and CO-PSO mapping, discussion with faculty members regarding the compliance of the curriculum is done through department meeting. The collected views will be taken to department advisory committee (DAC) meeting.
4. The Department advisory committee members will analyse whether the curriculum meets the desired program outcome and program specific outcome. If necessary, the DAC members will suggest the introduction of new electives and one credit courses to meet specific program or program specific outcome.
5. The views expressed by Department advisory committee member will be expressed in the Board of Studies. The BoS members will analyse the recommendation of DAC committee and it will also suggest the introduction of new laboratory courses, electives to strengthen the curriculum.
6. In addition to DAC committee and BOS committee, feedbacks regarding the compliance of courses are obtained from external examiners, academic experts who are invited to conduct project viva-voce examination and alumni.
7. The Head of the Department along with the academic co-ordinator will interact with final year students after the final viva-voce examination and collect their feedback which is termed as exit survey. It is also used as a tool to analyse the compliance of the curriculum with program outcome and program specific outcome.

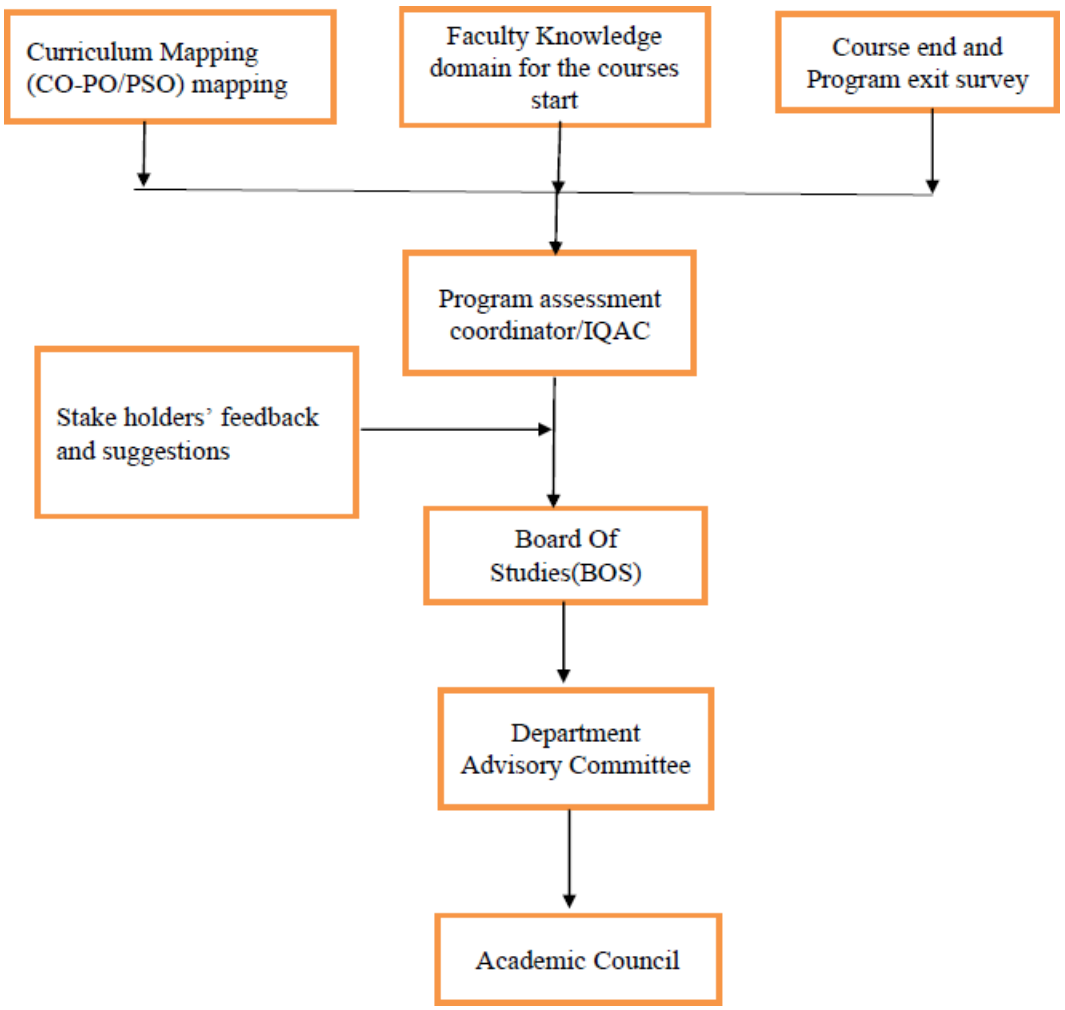


Figure.2.1.1. Curriculum Development Process

Program Outcomes (PO's):

1. **Engineering Knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. **Problem Analysis:** Identify, formulate, review research literature, and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. **Design/Development of Solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. **Conduct Investigations of Complex Problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5. **Modern Tool Usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.
6. **The Engineer and Society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7. **Environment and Sustain ability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. **Individual and Team Work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multi-disciplinary settings.
10. **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

11. **Project Management and Finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one‟s own work, as a member and leader in a team, to manage projects and in multi-disciplinary environments.
12. **Life-long Learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Program Specific Outcomes (PSOs):

The Department PSOs statements were prepared by consulting stakeholders, faculty of the department and Department Advisory committee members.

The procedure was carried on as follows:

1. The process starts with the formation of Department Advisory Committee (DAC), which consists of external academician, industry experts, HOD, senior faculty members, Alumni acquire inputs for the formulation of draft PSOs statements for the department.
2. Further, Board of Studies (BOS) involved HOD and senior faculty members and was formed in the department to prepare the draft of the department PSOs statements peeping in the mind perspective of Information Technology (IT).
3. The Program coordinator was nominated by the Head of the Department and the program coordinator collected feedback from the internal and external stakeholders and prepared the draft of the PSOs statements. This was submitted to the HOD of the department for the next process.
4. The department conducted a meeting with all faculty members on the draft copy of PSOs of the department and analyzed and then prepared the final version of the PSO‟s of the department and submitted it to the BOS and DAC through the program coordinator.
5. Finally, Board of Studies (BOS) and Department Advisory Committee (DAC) approved the department PSOs statements.
6. The program coordinator disseminated the PSOs statements to the stakeholders.

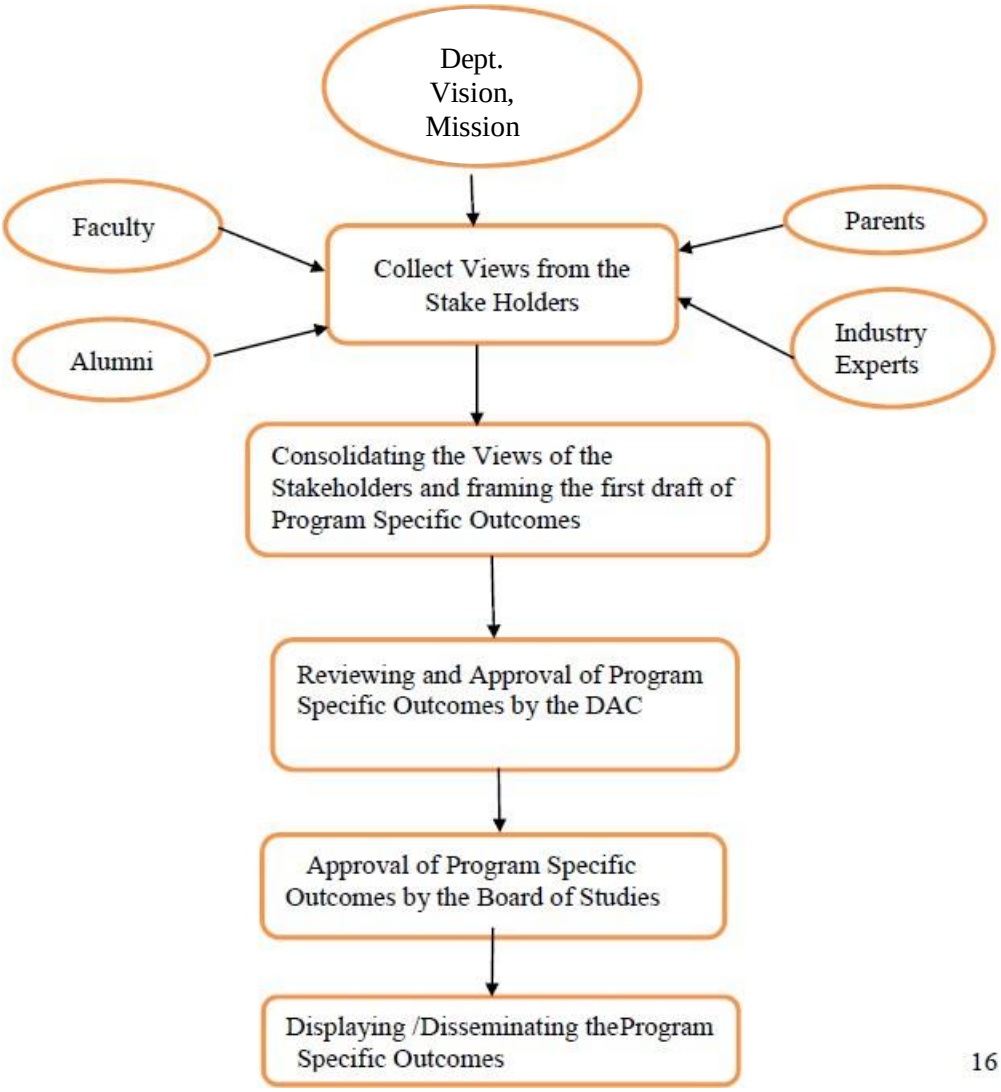


Fig: 2.1.1 Process for defining Program Specific Outcomes:

PSO1: To develop & motivate human resource to pursue information technology course; carry on research in real time applications & related fields and track their career.

PSO2: To implement the IT infrastructure for design and deployment of projects.

Mapping of curriculum with POs, PSOs CAY1 (2019-20)

S. No.	Subject Code	Subject Name	L	T/P	C	POs	PSOs
II YEAR I SEMESTER (R18 Regulation-Autonomous)							
1	BBSM3	Probability & Statistics	**3**	**0**	**3**	1,2,3,4,5,6,9,10,11,12	1,2
2	B63PC1	Data Structures	**3**	**0**	**3**	1,2,3,4,5,8,9,10,11,12	1,2
3	B63PC2	Digital Logic Design	**3**	**0**	**3**	1,2,3,4,5	1
4	B63PC3	Object Oriented Programming	**3**	**0**	**3**	1,2,3,4,5,6,7,8,9,10,11,12	1,2
5	B63PC4	Introduction to Analytics	**3**	**0**	**3**	1,2,3,4,5,8,9,10,11,12	1,2
6	B63PC5	Data Structures Lab	**0**	**0/3**	**1.5**	1,2,3,4,5,8,9,10,11,12	1,2
7	B63PC6	Object Oriented Programming	**0**	**0/3**	**1.5**	1,2,3,4,5,6,7,8,9,10,11,12	1,2
8	B63PC7	Digital Logic Design Lab	**0**	**0/3**	**1.5**	1,2,3,4,5	1
II YEAR II SEMESTER (R18 Regulation- Autonomous)							
1	BBSM5	Discrete Mathematics	3	0	3	1,2,3,4,5,6,9,10,11,12	1
2	B64PC2	Computer Organization	3	0	3	1,2,3,4,5,9,10,11,12	1,2
3	B64PC3	Database Management Systems	3	0	3	1,2,3,4,10,12	1,2
4	B64PC4	Software Engineering	3	0	3	1,2,3,4,5,9,10,11,12	1,2
5	B64PC5	Formal Languages &Automata Theory	3	0	3	1,2,3,4,5,8,9,10,12	1
6	B64PC6	Database Management Systems Lab	0	0/3	1.5	1,2,3,5	1,2
7	B64PC7	Software Engineering Lab	0	0/3	1.5	1,2,3,4,5,9,10,11,12	1,2
8	BITW1	IT Work Shop	0	0/3	1.5	1,2,3,10,11,12	1
III YEAR I SEMESTER (R17 Regulation- Autonomous)							
1	A65PC1	Design and Analysis of Algorithms	**4**	**0**	4	1,2,3,4,5,6,7,8,9,10,11,12	1,2
2	A65PC2	Data Communication & Computer Networks	**4**	**0**	4	1,2,3,4,8,10,12	1,2
3	A65PC3	Software Engineering	**4**	**0**	4	1,2,3,4,5,9,10,11,12	1,2
4	A65HS4	Fundamentals of Management	**3**	**0**	3	1,2,3,7,8,9,10,11,12	1
5	A65PE6	Information Security	3	0	3	1,2,3,4,5,9,10	1
6	A65PC7	Design and Analysis Of Algorithms Lab	**0**	**0/3**	2	1,2,3,4,5,8,9,10,11,12	1

7	A65PC8	Computer Networks Lab	**0**	**0/3**	2	1,2,3,5	1,2
8	A65PC9	Software Engineering Lab	**0**	**0/3**	2	1,2,3,4,5,9,10,11,12	1,2
9	A65MC5	*Professional Ethics	**0**	**3/0**	0	6,7,8,9,10,11,12	1
III YEAR II SEMESTER (R17 Regulation- Autonomous)							
1	A66PC1	Compiler Design	**4**	**0**	4	1,2,3,4,5,7,9,12	1
2	A66PC2	Web Technologies	**4**	**0**	4	1,2,3,4,5,8,9,10,11,12	1,2
3	A66PC3	Cryptography and Network Security	**4**	**0**	4	1,2,3,6,10,12	1,2
4	A66PE5	Mobile Computing	3	0	3	1,2,3,4,5,10,11,12	1
5	A66PE6	Object Oriented Analysis and Design	3	0	3	1,2,3,4,5,10,12	1,2
6	A66HS7	Advanced Communication Skills Lab	**0**	**0/3**	2	6,7,10,11,12	1
7	A66PC8	Web Technologies Lab	**0**	**0/3**	2	1,2,3,4,5,8,9,10,11,12	1,2
8	A66PC9	Cryptography and Network Security Lab	**0**	**0/3**	2	1,2,6,10,12	1,2
9	A66MC6	*Constitution Of India	**0**	**3**	0	6,7,8,9,10,11,12	1
IV YEAR I SEMESTER (R16 Regulation-JNTUH)							
1	CS701PC	Data Mining	4	0	4	1,2,3,4,5,9,11,12	1,2
2	IT702PC	Android Application Development	4	0	4	1,2,3,4,5,8,9,10,11,12	1,2
3	CS721PE	Python Programming	3	0	3	1,2,3,4,5	1,2
4	CS734PE	Software Process and Project Management	3	0	3	1,2,3,4,5,9,10,11,12	1,2
5	CS744PE	Social Network Analysis	3	0	3	1,2,3,4,5,8,9,10,11,12	1
6	IT703PC	Android Application Development Lab	0	0/3	2	1,2,3,4,5,8,9,10,11,12	1,2
7	CS751PC	Python Programming Lab	0	0/3	2	1,2,4,10,12	1,2
8	IT705PC	Industry Oriented Mini Project	0	0/3	2	2,3,4,5,9,10,11,12	1,2
9	IT706PC	Seminar	0	0/2	1	2,3,4,5,9,10,11,12	1,2
IV YEAR II SEMESTER (R16 Regulation-JNTUH)							

1	ME831OE	Total Quality Management	3	0	3	1,2,3,4,5,8,9,10,11,12	1
2	CS852PE	Real-Time Systems	3	0	3	1,2,3,4,5,9,10,11	1
3	IT863PE	Human Computer Interaction	3	0	3	1,2,3,4,5,12	1
4	IT801PC	Major Project	0	0/30	15	1,2,3,4,5,6,7,8,9,10,11,12	1,2

Mapping of curriculum with POs, PSOs CAY2 (2018-19)

S. No.	Subject Code	Subject Name	L	T/P	C	POs	PSOs
II YEAR I SEMESTER (R17 Regulation- Autonomous)							
1	A63HS1	Mathematics – IV	4	1	**3**	1,2,3,4,5,6,9,10,11,12	1
2	A63PC2	Data Structures through C++	4	0	**3**	1,2,3,4,5,8,9,10,11,12	1,2
3	A63PC3	Mathematical Foundations of Computer Science	4	0	**3**	1,2,3,4,5,6,9,10,11,12	1
4	A63PC4	Digital Logic Design	3	0	**3**	1,2,3,4,5	1
5	A63PC5	Object Oriented Programming through Java	3	0	**3**	1,2,3,4,5,6,7,8,9,10,11,12	1,2
6	A63PC6	Data Structures through C++ Lab	0	0/3	**1.5**	1,2,3,4,5,8,9,10,11,12	1,2
7	A63PC7	IT Workshop	0	0/3	**1.5**	1,2,3,10,11,12	1,2
8	A63PC8	Java Programming Lab	0	0/3	**1.5**	1,2,3,4,5,8,9,10,11,12	1,2
9	A63MC3	*Environmental Science and Technology	3	0	0	6,7,8,9,10,11,12	1
II YEAR II SEMESTER (R17 Regulation- Autonomous)							
1	A64PC1	Computer Organization	4	0	4	1,2,3,4,5,9,10,11,12	1
2	A64PC2	Database Management Systems	4	0	4	1,2,3,4,10,12	1,2
3	A64PC3	Operating Systems	4	0	4	1,2,3,4,5,6,7,8,9,10,11,12	1,2
4	A64PC4	Formal Languages and Automata Theory	3	0	3	1,2,3,4,5,8,9,10,12	1

5	A64HS5	Business Economics and Financial Analysis	3	0	3	1,2,3,8,9,10,11,12	1
6	A64PC6	Computer Organization Lab	0	0/3	2	1,2,3,4,5,9,10,11,12	1
7	A64PC7	Database Management Systems Lab	0	0/3	2	1,2,3,5	1
8	A64PC8	Operating Systems Lab	0	0/3	2	1,2,3,4,5,8,9,10,11,12	1,2
9	A64MC4	*Gender Sensitization Lab	0	0	3	6,7,8,9,10,11,12	1
III YEAR I SEMESTER (R16 Regulation-JNTUH)							
1	CS501PC	Design and Analysis of Algorithms	4	0	4	1,2,3,4,5,6,7,8,9,10,11,12	1,2
2	CS502PC	Data Communication and Computer Networks	4	0	4	1,2,3,4,5,8,10,12	1,2
3	CS503PC	Software Engineering	4	0	4	1,2,3,4,5,9,10,11,12	1,2
4	SM504MS	Fundamentals of Management	3	0	3	1,2,3,7,8,9,10,11,12	1
5		Principles of Electronic Communications	3	0	3	1,3,4,5,6,10,11,12	1
6	CS505PC	Design and Analysis of Algorithms Lab	0	0	2	1,2,3,4,5,8,9,10,11,12	1,2
7	CS506PC	Computer Networks Lab	0	0	2	1,2,3,5	1,2
8	CS507PC	Software Engineering Lab	0	0	2	1,2,3,4,5,9,10,11,12	1,2
9	*MC500HS	Professional Ethics	3	0	0	6,7,8,9,10,11,12	1
III YEAR II SEMESTER (R16 Regulation-JNTUH)							
1	CS601PC	Compiler Design	4	0	4	1,2,3,4,5,7,9,12	1
2	CS602PC	Web Technologies	4	0	4	1,2,3,4,5,8,9,10,11,12	1,2
3	CS603PC	Cryptography and Network Security	4	0	4	1,2,3,6,10,12	1,2
4	MT512OE	Intellectual Property Rights	3	0	3	1,2,3,5,6,7,8,9,10,12	1
5	IT612PE	Object Oriented Analysis and Design	3	0	3	1,2,3,4,5,10,12	1,2
6	CS604PC	Cryptography and Network Security Lab	0	0/3	2	1,2,6,10,12	1
7	CS605PC	Web Technologies Lab	0	0/3	2	1,2,3,4,5,8,9,10,11,12	1,2
8	EN606HS	Advanced English Communication Skills	0	0/3	2	6,7,10,11,12	1

		Lab					
IV YEAR I SEMESTER (R15 Regulation-JNTUH)							
1	A70522	Information Security	4	0	4	1,2,3,4,5,9,10	1,2
2	A70530	Design Patterns	4	0	4	1,2,3,4,5,9,10,11	1,2
3	A70535	Mobile Application Development	4	0	4	1,2,3,4,5,8,9,10,11,12	1,2
4	A70533	Information Retrieval Systems	4	0	4	1,2,3,4,5,6,7,8,9,10,11,12	1,2
5		Big Data Analytics	4	0	4	1,2,3,4,5,6,7,8,9,10,11,12	1,2
6	A70531	Human Computer Interaction	4	0	4	1,2,3,4,5,12	1
7	A70593	Case Tools and Software Testing Lab	0	0/3	2	1,2,3,4,5,6,7,8,9,10,11,12	1,2
8	A70597	Mobile Application Development Lab	0	0/3	2	1,2,3,4,5,6,7,8,9,10,11,12	1,2
IV YEAR II SEMESTER (R15 Regulation-JNTUH)							
1	A80014	Management Science	4	0	4	1,2,3,4,5,6,7,8,9,10,11,12	1
2		**Predictive Analytics**	4	0	4	1,2,3,5,10,12	1,2
3	A80550	Storage Area Networks	4	0	4	1,2,3,4,5,6,7,8,9,10,11,12	1
4	A80087	Industry Oriented Mini Project	0	0	2	2,3,4,5,9,10,11	1,2
5	A80089	Seminar	0	0/6	2	2,3,4,5,9,10,11	1
6	A80088	Project Work	0	0/15	10	2,3,4,5,9,10,11	1,2
7	A80090	Comprehensive Viva	0	0	2	2,3,4,5,9,10,11	1

Mapping of university curriculum with POs, PSOs CAY3 (2017-18)

S. No.	Subject Code	Subject Name	L	T/P	C	POs	PSOs
II YEAR I SEMESTER (R16 Regulation)							
1	MA301BS	Mathematics – IV	4	1	**4**	1,2,3,4,5,6,9,10,11,12	1
2	CS302ES	Data Structures through C++	4	0	**4**	1,2,3,4,5,6,8,9,10,11,12	1,2
3	CS303ES	Mathematical Foundations of Computer Science	4	0	**4**	1,2,3,4,5,6,9,10,11,12	1
4	CS304ES	Digital Logic Design	3	0	**3**	1,2,3,4,5	1
5	CS305ES	Object Oriented Programming through	3	0	**3**	1,2,3,4,5,6,7,8,9,10,11,12	1,2

		Java					
6	CS306ES	Data Structures through C++ Lab	0	0/3	**2**	1,2,3,4,5,8,9,10,11,12	1,2
7	CS307ES	IT Workshop	0	0/3	**2**	1,2,3,10,11,12	1
8	CS308ES	Object Oriented Programming through Java Lab	0	0/3	**2**	1,2,3,4,5,8,9,10,11,12	1,2
9	MC300ES	*Environmental Science and Technology	3	0	0	6,7,8,10,11,12	1
II YEAR II SEMESTER (R16 Regulation)							
1	CS401BS	Computer Organization	4	0	4	1,2,3,4,5,9,10,11,12	1
2	CS402ES	Database Management Systems	4	0	4	1,2,3,4,10,12	1,2
3	CS403ES	Operating Systems	4	0	4	1,2,3,4,5,6,7,8,9,10,11,12	1,2
4	CS404ES	Formal Languages and Automata Theory	3	0	3	1,2,3,4,5,8,9,10,12	1
5	SM405MS	Business Economics and Financial Analysis	3	0	3	1,2,3,8,9,10,11,12	1
6	CS406ES	Computer Organization Lab	0	0/3	2	1,2,3,4,5,9,1,0,11,12	1
7	CS407ES	Database Management Systems Lab	0	0/3	2	1,2,3,5	1
8	CS408ES	Operating Systems Lab	0	0/3	2	1,2,3,4,5,8,9,10,11,12	1,2
9	MC400HS	*Gender Sensitization Lab	0	0	3	6,7,8,9,10,11,12	1
III YEAR I SEMESTER (R15 Regulation)							
1	A50513	Automata and Compiler Design	4	0	4	1,2,3,4,5,7,9,12	1
2	A50517	Linux Programming	4	0	4	1,2,3,4,5,6,7,8,9,10,11,12	1,2
3	A50518	Software Engineering	4	0	4	1,2,3,4,5,9,10,11,12	1,2
4	A50510	Operating Systems	4	0	4	1,2,3,4,5,6,7,8,9,10,11,12	1,2
5	A50515	Computer Networks	4		4	1,2,3,4,8,10,12	1,2
6	A50010	Managerial Economics and Financial Analysis	4	0	4	1,2,3,8,9,10,11,12	1
7	A50589	Operating Systems Lab	0	0/3	2	1,2,3,4,5,8,9,10,11,12	1,2
8	A50588	Computer Networks Lab	0	0/3	2	1,2,3,5	1
III YEAR II SEMESTER (R15 Regulation)							
1	A60512	Web Technologies	4	0	4	1,2,3,4,5,8,9,10,11,12	1,2
2		Introduction to Analytics	4	0	4	1,2,3,4,5,8,9,10,11,12	1,2
3	A60524	Object Oriented Analysis and Design	4	0	4	1,2,3,4,5,10,12	1,2
4	A60520	Data Warehousing and	4	0	4	1,2,3,4,5,9,11,12	1,2

		Data Mining					
5	A60525	Software Testing Methodologies	4	0	4	1,2,3,4,5,7,8,9,10,11,12	1,2
6	A60519	Cloud Computing	4	0	4	1,2,3,8,9,10,11,12	1
7	A60592	Data Mining and Web Technologies Lab	0	0/3	2	1,2,3,4,5,9,10,11,12	1
8	A600086	Advanced Communication Skills Lab	0	0/3	2	6,7,10,11,12	1
IV YEAR I SEMESTER (R13 Regulation)							
1	A70522	Information Security	4	0	4	1,2,3,4,5,9,10	1,2
2	A70530	Design Patterns	4	0	4	1,2,3,4,5,9,10,11	1,2
3	A70535	Mobile Application Development	4	0	4	1,2,3,4,5,8,9,10,11,12	1,2
4	A70533	Information Retrieval Systems	4	0	4	1,2,3,4,5,6,7,8,9,10,11,12	1,2
5		Big Data Analytics	4	0	4	1,2,3,4,5,6,7,8,9,10,11,12	1,2
6	A70531	Human Computer Interaction	4	0	4	1,2,3,4,5,12	1
7	A70593	Case Tools and Software Testing Lab	0	0/3	2	1,2,3,4,5,6,7,8,9,10,11,12	1,2
8	A70597	Mobile Application Development Lab	0	0/3	2	1,2,3,4,5,6,7,8,9,10,11,12	1,2
IV YEAR II SEMESTER (R13 Regulation)							
1	A80014	Management Science	4	0	4	1,2,3,4,5,6,7,8,9,10,11,12	1
2		**Predictive Analytics**	4	0	4	1,2,3,5,10,12	1,2
3	A80550	Storage Area Networks	4	0	4	1,2,3,4,5,6,7,8,9,10,11,12	1
4	A80087	Industry Oriented Mini Project	0	0	2	2,3,4,5,9,10,11	1,2
5	A80089	Seminar	0	0/6	2	2,3,4,5,9,10,11	1
6	A80088	Project Work	0	0/15	10	2,3,4,5,9,10,11	1,2
7	A80090	Comprehensive Viva	0	0	2	2,3,4,5,9,10,11	1

2.1.2. State the delivery details of the content beyond the syllabus for the attainment of POs and PSOs (10)

The process for bridging the gap between academic and industry is shown in below figure.

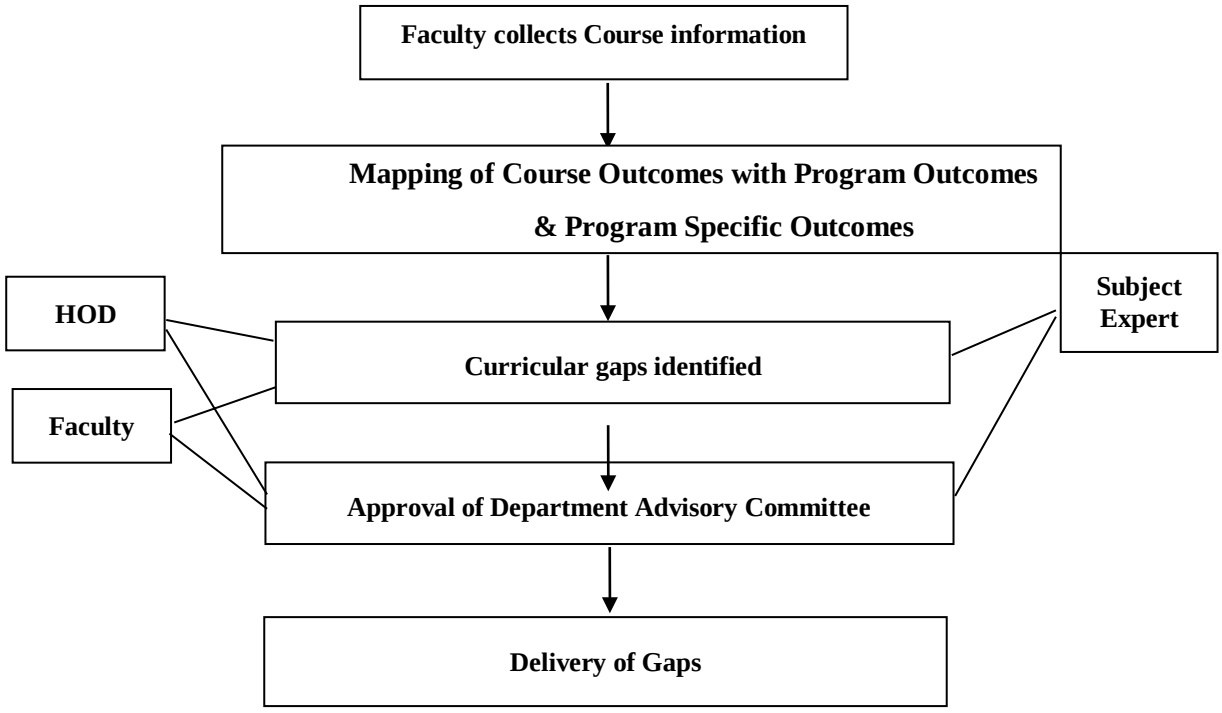


Figure 2.1.1a Process for bridging the Gap between Academic and Industry

The curricular gaps or beyond the syllabus are intimated by the faculty to the Head of the Department which is being forwarded to the Head of the Institution. Necessary modifications in the curriculum are intimated to the BOS /Academic Council by the Head of the Institution, further the content beyond the syllabus or gaps are strengthened by conducting following activities.

INITIATIVES TAKEN TO ADDRESS CURRICULAR GAPS

The department has initiated the following measures to bridge the identified curricular gaps.

- **Guest lectures:** Experts from industry and academia are invited to deliver lectures on the latest trends and thrust areas in Computer Science and Engineering.
- **Technical talk:** Students are kept updated about the advances in technologies through technical seminars.
- **Workshops:** The department has introduced a novel initiative for students, wherein they are encouraged to participate in hands-on workshops, thereby enhancing their application skills.
- **Soft skill training:** The department emphasizes on personality development through

softskills training programs to improve the employability of students.

- **Industrial visits:** Visits to industries of repute are organized every year to keep the students abreast with applications of Computer Science and Engineering.

CAYm1

S. No	Gap/Beyond	Action taken	Date-Month Year	Resource Person with designation	% of students	Relevance to POs, PSOs
01	To gain knowledge on Data Analytics	Guest Lecture	13-09-2019	Dr. V. Krishna Professor Department of IT Holy Mary Institute of Technology &science	80%	6,7,8,9,10
02	To enhance the knowledge of Database in Modern World	Guest Lecture	07-02-2020	Dr. G. Vijay Kumar Associate Professor Department of CSE Nawab shah Alam Khan college of engineering and Technology.	85%	4,5,6,7,8,9
03	Seminar on Analysis of Algorithms	Seminar	12-07-2019	Dr. G. S Pradeep Associate Professor Mallareddy Engineering college	84%	6,7,8,9,10
04	Guest Lecture or Web Designing	Guest Lecture	21-02-2020	Dr. M. Mallareddy Associate Professor Department Of CSE St. Mary‟s Integrated campus	90%	1,2,3,4,5,8,9,10,11,12
05	The Latest trends in the IT market and Project lifecycle development	Guest lecture	26-07-2019	Mr. Srinivas.A Senior Project Manager Capgemini	92%	1,2,3,4,5,6,7,8,9,10,11,12

06	Entrepreneurship development opportunities	Workshop	16-08-2019	Rambabu Atmakuri Associate Professor Anurag college of Engineering	85%	8,9,10
07	Awareness on competitive exams for higher studied	Seminar	24-08-2019	Rambabu Atmakuri Associate Professor Anurag college of Engineering		

Table B.2.1.2a

CAY*m2*

S.No.	Gap/Beyond	Action taken	Date-Month-Year	Resource Person with designation	% of students	Relevance to POs, PSOs
01	To enhance the knowledge of object	Guest lecture	05-09-2018	Dr. M. Laxmaiah Professor of CSE CMR Engineering college	75%	1,2,3,4,5,8,9
	oriented Programming					
02	To gain knowledge on Advance Operating System	Seminar	25-01-2019	Dr. N. Sathish Professor Department of CSE St. Martins Engineering college	78%	6,7,8,9
03	It is essential for the students to have awareness on cybercrimes.	Organized a one day workshop on „Cyber Security“	21-09-2018	Dr. B. Rajesh Associate Professor Department of CSE Sreyas institute of engineering and Technology	80%	6,7,8,9,10,11,12

04	Requirement of lifelong learning in Networking	Guest Lecture on „Networking technologies	15-02-2019	Dr. Abdul Nabi Professor Dept of CSE AVN college of Engineering	84%	1,2,3,4,6,7,8,9,10,11,12
05	Personality Development Program	Guest lecture	04-10-2018 To 05-10-2018	Dr. Vivek Modi TASK	90%	6,7,8,9,10,11,12
06	Challenges in Cyber Security	Guest Lecture	22-03-2019	V.Swarna Assistant Professor Dept of IT Bhoj reddy engineering college for women	80%	1,2,3,5,6,7,8,9,10

Table B.2.1.2b

CAY*m3*

S.No	Gap/Beyond	Action taken	Date-Month Year	Resource Person with designation	% of students	Relevance to POs, PSOs
01	To gain the knowledge of database Connectivity	Seminar	15-09-2017	Dr. M. Mallareddy Associate Professor Dept Of CSE St. Mary‟s Integrated campus	78	1,2,3,4,5,8,9,10,11,12
02	To enhance the knowledge of Decidability &Undecidability problems	Guest lecture	09-02-2018	M. Santhosh Associate Professor Dept of IT Bhoj reddy engineering college for women	72	1,2,6,8,9,10

03	Seminar on advanced Networking	Seminar	20-10-2017	Dr. V. Krishna Professor Department of IT Holy Mary Institute of Technology &science	68	6,7,8,9,10
04	Knowledge of software testing tools	Guest lecture	16-03-2018	Ch. Saritha Associate Professor Dept of CSE Bhoj reddy engineering college for women	75	1,2,3,4,5,6,7,8,9
05	Seminar on Cloud Data Storage	Seminar	09-03-2018	Dr. Venkatesh Naik Associate Professor Dept of CSE Mallareddy college of engineering	80	2,4,5,6,7,8,9
06	Career Development	Guest lecture	15-12-2017	Rambabu Atmakuri Associate Professor Anurag college of Engineering	82	6,7,8,9,10,11,12

Table B.2.1.2c

Note: Please mention *in detail* whether the Institution has given such inputs and suggestions tothe Affiliating University regarding curricular gaps and possible addition of content/add-on courses in the curriculum, to bridge the gap and to better attain program outcome(s).

2.2 Teaching - Learning Processes (100)

2.2.1Describe Processes followed to improve quality of Teaching & Learning (25)

Teaching - Learning Process:

The teaching learning process (TLP) followed to improve the quality of teaching and learning in each semester of the program.

The following are the typical steps of the TLP with necessary supporting documents.

A) Academic Calendar

The Academic calendar for the institute is prepared in the chronological order by a Dean of Academics. This envisages the planned execution of proper completion of syllabus, conducting the internal continuous assessment tests, conduction of departmental events, holidays etc.

Allotment of Courses:

The time-table coordinator circulates the course option form which has details of the competency of the faculty member and based on that HOD will allot courses to all the faculty members based on their option.

Timetable

Every semester the timetable is planned for five days of the week, 6 periods of 50 to 55 minutes of duration each. Day order timetable is given for working Saturdays. Timetable coordinator of the department ensures the workload to every faculty member as per the prescribed norms.

Course Outline and Schedule

Once the courses are allocated, the faculty members prepare a lesson plan of the course and it is reviewed and approved by the HOD. The lesson plan includes COs, topics to be taught, teachingaids for each topic, number of periods allocated to cover each topic.

Maintenance of Course files: For each course, a course file is prepared by the concerned faculty. The course file consists of following items.

- The course objectives are derived for each course in line with the POs.
- Lesson plan: Lesson plans are prepared for each lecture in the teaching plan by the faculty before the commencement of the semester, and made available to the students. The lesson plan encompasses the learning outcomes and the assessment of outcomes.
- Upon completion of course, the necessary assessments are recorded and approved, and disseminated in the form of results to an course file.

B) Use of various instructional methods and Pedagogical Initiatives:

The faculty are now oriented towards Outcome Based Education (OBE) and are actively utilizing the OBE to cater the learning need of the students by innovative methods.

The faculty of department adopts various innovative teaching & learning methodologies to create the best learning environment for students. These methodologies include traditional black board teaching, presentations, video lecturing, collaborative learning methods etc.

Lecture method and Interactive learning

The faculty use chalk and board and audio-visual aids in teaching. Students are encouraged to actively interact during the lecture hour by getting the doubts clarified. Further, students are also encouraged to give seminars relevant to the subjects which adds to their presentation skills.

Project-based learning

During pre-final year, the students are encouraged to carry out mini projects and in the final year academic projects are to be carried out covering the course of study under the guidance of faculty.

Computer-assisted learning

The department is equipped with sufficient number of computers, LCD projectors, internet facility, application software, system software and printers which are effectively used for teaching and learning. The students and faculty are also encouraged to undergo E-learning program offered by various learning platforms like, NPTEL, SWAYAM, Course era, Udemy etc.

C) Methodologies to support Weak students and encourage Bright Students:

Bright and Weak students are identified based on their performance in the class internal assessment test as per the Figure 2.2.1

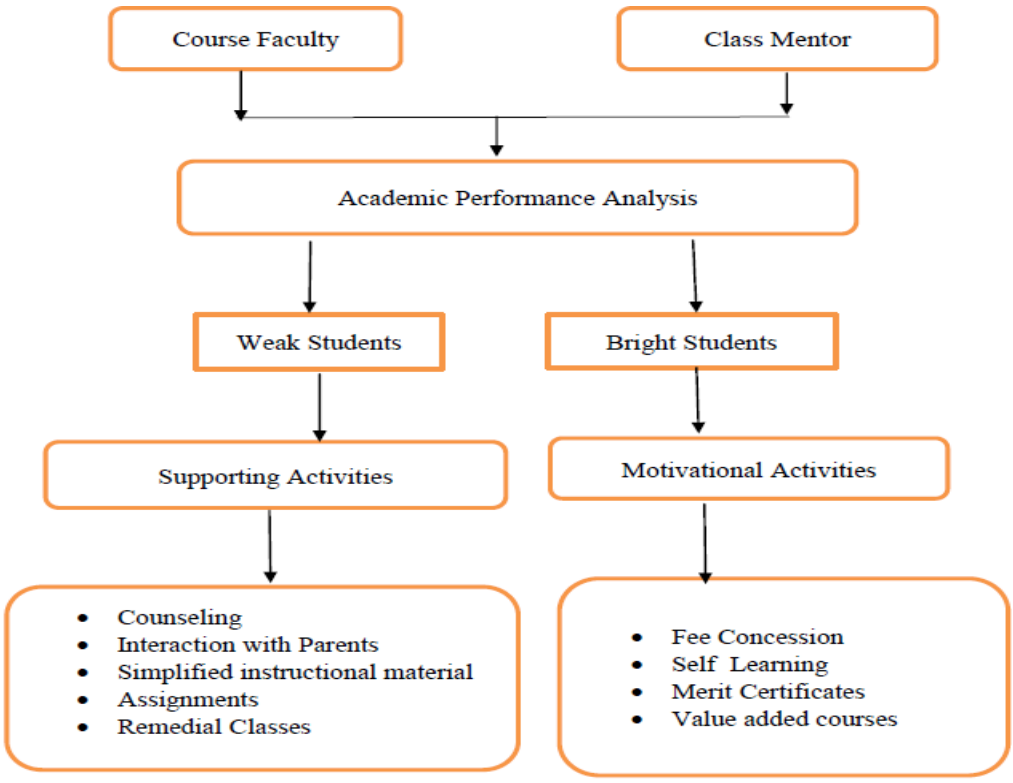


Fig.2.2.1 Process to identify Weak and Bright Students and supporting activities

D) Quality of classroom teaching:

Conducive learning ambience in the classrooms is maintained through comfort seating arrangements, good ventilation with proper lighting. Smart classrooms are utilized to impart and implement the e-teaching-learning process.

E) Conduct of Experiments:

The teacher plans for the conduct of required laboratories hours, and assigns the tasks based on the content taught and learnt by the student during the week of study. The tasks are framed in the form of programs.

F) Continuous assessment in the Laboratory:

The student, record‟s the compiled code in their observation after executing the relevant program. The Course Instructor evaluates the students by verifying the record and assessing orally the relevant theoretical knowledge related to the performance for each program.

- Based on that assesment outcome, the weaker students are identified and individual attention is provided.

G) Student feedback of teaching learning process and action taken:

The feedback from students on teaching learning process is collected by the teacher, and the quality assurance cell. The teacher on his own collects the feedback of his teaching aids, and content delivery mechanism. The quality assurance cell follows a rubric mechanism for collection of feedback.

The Quality assurance cell shares the feedback information with HOD, who shall examine the feedback analysis report, and record, the discussed measures of improvement in the faculty meeting and announce the merits and demerits of each faculty member individually for specific corrective measures if any.

2.2.2 Quality of internal semester Question papers, Assignments and Evaluation (20)

(Mention the initiatives, implementation details and analysis of learning levels related to quality of semester question papers, assignments and evaluation)

A) Process for internal semester question paper setting and evaluation and effective process implementation:

Two internal mid examinations are conducted by the department in coordination with examination branch cell as per the schedule prescribed in the academic calendar in every semester and a model examination also conducted after completion of syllabus.

B) Process to ensure questions from outcomes/learning levels perspective:

The Course objective described by the teacher ensures the teaching mechanism to impart the content in depth, based on the course, the type of assessment is implied to map the outcome defined by the teacher. Faculty members imply levels of blooms taxonomy for framing the questions in objective anddescriptive mode to assess the knowledge gained by the student and reproduction of the same in writing comprehension.

The distribution of mark allocation for the prescribed syllabus and the course outcomes of the Test are evaluated by the respective course instructor as per the norms.

C) Evidence of CO's coverage in class test/mid-term tests:

The questions in the question paper are mapped with the course outcomes and Blooms Taxonomy levels, sample copy of the question paper is shown below:

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous & Accredited with 'A' Grade by NAAC)

B.Tech V Semester First Mid-Term Examinations Oct-2021	
Branch Name: InformationTechnology	
Subject Name: DAA	
Maximum Marks: 20	Duration: 1Hour 20 Minutes

Part-A (Objective Paper)			
Answer All the following questions. (5 Multiple choice & 5 Fill in the blanks) Marks: 10x1/2M = 5M		Blooms Taxonomy Level	Attainment of Course Outcomes
1	The time complexity for(i=0;i<n;i++) a) O(n) b) O(n/2) c)O(n^2) d) O($\sqrt{n}$)	L4	CO1
2	..... Of an algorithm is the amount of memory it needs to run to completion a) Time complexity b) space complexity c)memory complexity d) time & space complexity	L1	CO1
3	Worst case time complexity for merge sort is..... a) O(n) b) O(log n) c) O(nlogn) d) none of the above	L1	CO1
4	If G is a ..... Then visit all the vertices in the graph to first call in the BFS. a) Connected directed graph b) Cconnected undirected graph c) Biconnected directed graph d) Biconnected undirected graph	L1	CO2
5	A graph G is biconnected if and only if it contains..... a) articulation points b) no articulation points c) connected components d)none of the above	L1	CO2
6	..... is a finite set of instructions that accomplishes a particular task.	L1	CO1
7	Time complexity for(i=1;i<n;i=i*2).....	L4	CO1
8	..... is an algorithm technique to solve a problem by an incremental way.	L1	CO2
9	General formulae for master theorem	L2	CO1
10	Back track word was first introduced by	L2	CO2

Part-B (Descriptive Paper)			
Answer All the following questions. Marks: 5Mx3= 15M		Blooms Taxonomy Level	Attainment of Course Outcomes
1	Discuss various asymptotic notations and calculate the asymptotic values the following functions. a) $f(n)=2n^2+3n+4$ b) $f(n)=n^2 \log n+n$	L3	CO1

	OR		
	Sort the following elements by quick sort method with the use of divide and conquer procedure? Calculate the time complexity? 10,16,8,12,15,6,3,9,5	L3	CO1
2	Let W={5,7,10,12,15,18,20} and m=35 find all possible subsets of W that sum to M. do this using the sum of subsets(Backtracking method) Draw the portion of the state space tree that is generated.	L3	CO2
	OR		
	Find the optimal solution by greedy method to the knapsack instance n=7, m=15, $(P_1,P_2,P_3\ldots\ldots P_7)$=(10,5,15,7,6,18,3) and $(W_1,W_2\ldots\ldots W_7)$=(2,3,5,7,1,4,1).	L3	CO2
3	Solve the recurrence relation using induction method and also draw the recurrence tree for the following: a) T(n)=T(n/2)+1	L3	CO1
	OR		
	Give the solution to the 4-queens problem using backtracking?	L4	CO2

D) Quality of assignment and its relevance to COs:

1. Assignments are given to the students to achieve the outcomes of the courses to promote the self-learning.
2. The assignments are used to assess the application-oriented knowledge gained by the students in the relevant course.
3. The evaluations of the assignments are based on the basic concepts, coverage of the courses and the way the student present it.
4. Course Outcome is evaluated based on the performance of student‟s,
    i) Internal mid examinations and assignments (30% weightage)
    ii) End semester examinations (70% weightage)

2.2.3 Quality of student projects (25)

A) Identification of projects and allocation of methodology to faculty members:

The Department of Information Technology insists to the students to do their project, from third year, each and every student has to complete mini project. When they enter to fourth year, they are instructed to undergo a major project. The department encourages the students to do mini and major projects to enhance their technical skills and practical exposure.

- A project coordinator is nominated by the Head of the department, who is responsible for planning, scheduling and execution of all the activities related to the student project work.
- The Project Coordinator (PC) collects the area of specialization details from the faculty members.
- Student can also propose new project ideas if they wish to undertake and submit project abstracts. The project area covers all factors including environment, safety, ethics in the areas of Research based projects, Application level-based projects, Industry need based projects.
- A notification is issued to all the students to submit their interested domains in which they would like to undertake their major project work.
- Considering the area of specialization of faculty, the Guide is allocated and list is displayed on the notice board.

- **Academic Year(2019-20) Major Projects List**:

Sl. No.	Title of the Project	Roll numbers	Project Members	PO	PSO
1.	VIRTUAL MOUSE OPERATION USING WEBCAM	16K91A1201	AKKATI VINVITHA REDDY	PO9,PO10, PO11,PO12	PSO2
		16K91A1205	BADAVATH ANKITHA		
		16K91A1208	CHANDALA AKHIL		
		15K91A1212(RA)	G.HRITHIK		
2.	CUSTOMER LOAN PREDICTION ANALYSIS	16K91A1223	MADDI KEERTHI REDDY	PO9,PO10, PO11,PO12	PSO2
		16K91A1209	CH.PRATHYUSHA REDDY		
		16K91A1211	DASARI BHARGAV YADAV		
		15K91A1215(RA)	K.SANTOSH NATH		

3.	FACE RECOGNITION BASED ATTENDANCE SYSTEM	16K91A1244	SHINDE ANIRUDH	PO9,PO10, PO11,PO12	PSO2
		16K91A1224	MALLESH SHRAVYA REDDY		
		16K91A1235	POLISHETTY SHIVA KUMAR		
		16K91A1210	DASARI PRAVALIKA		
4.	BREAST CANCER DETECTION USING MACHINE LEARNING	16K91A1226	MARIYALA SOUMYA	PO9,PO10, PO11,PO12	PSO2
		16K91A1215	ENDURI LALITH KUMAR		
		16K91A1216	G.RAI SINGH		
		16K91A1242	S.BHARATH SIMHA REDDY		
5.	DRIVER DROWSINESS DETECTION SYSTEM USING ML	16K91A1241	RUVVA JOHN PUNEETH	PO9,PO10, PO11,PO12	PSO2
		16K91A1212	DEVARAJU SREELEKHA		
		16K91A1220	L.SAI KUMAR RAO		
6	SUSPICIOUS ACTIVITY DETECTION	16K91A1204	AUSULA SREEJA	PO9,PO10, PO11,PO12	PSO2
		16K91A1213	DUVVALA PRANAY RAJ		
		16K91A1214	ENDAL RISHIKA		
		16K91A1221	LOKA RANJEETH REDDY		
7	TEXT BASED CAPTCHA RECOGNITION	16K91A1231	CHAPPIDI NIRUSHA	PO9,PO10, PO11,PO12	PSO2
		16K91A1222	MADDELA SRIKARI		

		16K91A1246	S.CHANDRAKANTH REDDY		
8	A ML MODEL FOR AVERAGE FUEL CONSUMPTION IN HEAVY VEHICLES	16K91A1228	MEDAVARAPU VISHAL KUMAR	PO9,PO10, PO11,PO12	PSO2
		16K91A1202	AKKELA NIKHITHA		
		16K91A1239	R.SUSHMITHA REDDY		
		15K91A1234(RA)	A.YESHWANTH		
9	ADVANCED LANE LINE DETECTION	16K91A1227	MARTHINENI ASHOK RAO	PO9,PO10, PO11,PO12	PSO2
		16K91A1217	G.UDAY KUMAR		
		16K91A1229	MUKKERA CHANDRASHEKAR		
		16K91A1232	P.LOKESH		
10	CARDIOTOCOGRAPHY USING ML AND ANN	16K91A1238	PUVVADA SREE KAMALA	PO9,PO10, PO11,PO12	PSO2
		16K91A1245	SINGAM SHIVARAM		
		16K91A1253	VOODUGULA KAVYA		
11	DEPRESSION DETECTION	16K91A1252	V.SATHANANDA DEEKSHITH	PO9,PO10, PO11,PO12	PSO2
		16K91A1243	SAMALA VIKAS REDDY		
		16K91A1250	UMME KULSUM		
		15K91A1257(RA)	P.RAMESH		

Academic Year (2018-19) Major Projects List:

Sl. No.	Title of the Project	Roll numbers	Project Members	PO	PSO
1	SMARTPHONE PINPOINTER	15K91A1202	AMETI SUPRIYA	PO9,PO10,PO11,PO12	PSO2
		15K91A1211	DUDIPALA MOUNIKA		
		15K91A1221	MUTHINENI SREE SAI		
2	CREDIT CARD FRAUD DETECTION USING PREDICTIVE MODELLINMG	15K91A1224	P AKSHAY KUMAR REDDY	PO9,PO10,PO11,PO12	PSO2
		15K91A1210	DEEPALI ANIL		
		15K91A1226	POTHARLA AKHIL YADAV		
		15K91A1218	MOHAMMED SALMAN		
3	BRAIN TUMOR DIAGNOSIS USING MACHINE LEARNING	15K91A1206	BATHINI PRANATHI	PO9,PO10,PO11,PO12	PSO2
		15K91A1207	BOMMASANI GAYATHRI		
		15K91A1237	B OMPRAKASH REDDY		
4	CHRONIC DISEASE OUTBREAK PREDICTION USING MACHINE LEARNING	15K91A1213	GUDURU ANUSHA REDDY	PO9,PO10,PO11,PO12	PSO2
		15K91A1229	SHAIK SALMAN FARSI		
		15K91A1251	AISHWARYA		

			GUJJE		
5	BLOCK CHAIN TECHNOLOGY	15K91A1219	MORISHETTI KOUSHIKA	PO9,PO10,PO11,PO12	PSO2
		15K91A1223	N SHARATH CHANDRA PRASAD		
		15K91A1216	KONDA SRAVANI		
6	PRIVACY PRESERVING RANKED MULTI KEYWORD SEARCH FOR MULTIPLE DATA OWNERS	15K91A1220	MUSHAM SIRIVALLI	PO9,PO10,PO11,PO12	PSO2
		15K91A1225	PALLE DINESH REDDY		
		15K91A1241	GODALA SREEJA		
7	BREAST CANCER DIAGNOSIS USING MACHINE LEARNING ALGORITHM	15K91A1227	PUNNA SUMA NETHA	PO9,PO10,PO11,PO12	PSO2
		15K91A1231	UPPALANCHI SREEKAR		
		15K91A1236	AVVARI PRIYANKA		
8	INFOTUTE	15K91A1249	PEDDAKAPU NAGARANI	PO9,PO10,PO11,PO12	PSO2
		15K91A1246	MUNNURU SRINATH		
		15K91A1240	DUBASI CHANDANA		
9	PHISHING WEBSITES	15K91A1204	A SREE LAXMI MANI DEEPIKA	PO9,PO10,PO11,PO12	PSO2

	FEATURES CLASSIFICATION BASED ON EXTREME LEARNING MACHINE	15K91A1208	C SHASHIDHAR REDDY		
		15K91A1235	ALLENKI HARSHITHA		
10	FORM BASED AUTHENTICATION LIBRARY MANAGEMENT SYSTEM	15K91A1203	A VAMSHIDHAR REDDY	PO9,PO10,PO11,PO12	PSO2
		15K91A1239	DAKI KRUTHIKA		
		15K91A1252	A RAVIJA SUPRITH		
11	ROAD ACCIDENT ANALYSIS USING MACHINE LEARNING	15K91A1222	N ROHITH KUMAR	PO9,PO10,PO11,PO12	PSO2
		15K91A1254	T HRISHIKESH SIMHA		
		15K91A1250	PULI ROHIT		
12	RFID BASED TOLL BOOTH AUTOMATION	15K91A1247	MUSKULA RACHANA		
		15K91A1232	YASA RAMESH REDDY	PO9,PO10,PO11,PO12	PSO2
		15K91A1201	AKULA SUDHA		
13	IOT BASED DRUNK AND DRIVE DETECTION	15K91A1244	MEKA ROJA	PO9,PO10,PO11,PO12	PSO2
		15K91A1256	VUDATHA LIKHITHA		
		15K91A1242	KOTAGIRI RANDEEP KUMAR		
		15K91A1248	PEDDAGANDU JAYWANTH		

Academic Year (2017-18) Major Projects List:

Sl. No.	Title of the Project	Roll numbers	Project Members	PO	PSO
1	Gaesture Keyboard using IOT	14K91A1243	PASHAM SAI AKSHAY	PO9,PO10,PO11,PO12	PSO2
		14K91A1244	PRASANN GARG		
		14K91A1247	SHAIK ASIF PASHA		
2	Visitor Counter Using IOT	14K91A1239	N SRI DEVYA DURGA SARVANI	PO9,PO10,PO11,PO12	PSO2
		14K91A1233	KADLI KEERTHI		
		14K91A1238	MIDATHANAPALLI BHAVYA		
		14K91A1229	GOKA ARAVIND REDDY		
3	Rule-Based Method for Entity Resolution	14K91A1237	M KRISHNA CHAITANYA	PO9,PO10,PO11,PO12	PSO2
		14K91A1209	BALLI SAI KRISHNA		
		14K91A1204	AINAPUR PAVAN KRISHNA		
4	Android Group Expense Tracker	14K91A1236	KODALI SAMHITHA	PO9,PO10,PO11,PO12	PSO2
		14K91A1235	KATTA MOUNIKA		
		14K91A1210	BASUPALLI MADHAVI		

5	Library Book Locater	14K91A1230	GOVU SUSHMITHA	PO9,PO10,PO11,PO12	PSO2
		14K91A1253	VINJAMOORU SRAVANI		
		14K91A1231	K JASHWANTH REDDY		
6	Stamp: Enabling Privacy-Preserving Location Proofs for Mobile User	14K91A1228	GODUGU SUSHMA	PO9,PO10,PO11,PO12	PSO2
		14K91A1249	THADAKA AKHILA		
		14K91A1223	GADDAM BHOOMA REDDY		
7	An Efficient Diet Plan Using Artificial Intelligence Dietician	14K91A1226	GANJI BHARGAVI	PO9,PO10,PO11,PO12	PSO2
		14K91A1251	VANDANAPU SRUTHI		
		14K91A1246	SAMUNURI SEETHARAMA RAJU		
8	A Robust Reputation Management Mechanism In the Federated Cloud	14K91A1254	VUNDYALA SNEHA LAXMI	PO9,PO10,PO11,PO12	PSO2
		14K91A1256	TADAKAMALLA MOUNIKA		
		14K91A1252	VANGALA SANKALPITHA		
9	Garbage Monitoring with Weight Sensing Using IOT	14K91A1248	SUDHATI NIVEDITHA	PO9,PO10,PO11,PO12	PSO2
		14K91A1203	AENUGU SUSHMITHA REDDY		

		14K91A1206	AREPALLY SAKETH REDDY		
10	Android Mobile Application For Metro Rail	14K91A1245	SAKILAM MADHULIKA	PO9,PO10,PO11,PO12	PSO2
		14K91A1222	G HARIKA REDDY		
		14K91A1232	K NIKHIL KUMAR		
11	Customer - Satisfaction - Aware Optimal Multi server Configuration for Profit Maximization Clod Computing	15K95A1201	BOMPALLY MADHAVI	PO9,PO10,PO11,PO12	PSO2
		14K91A1205	AMULA SRILATHA		
		14K91A1250	TRICHUNAPALLI SAI ROHIT		
12	Co-Extracting Opinion Targets and Opinion Words from Online Reviews Based on the word Alignment	14K91A1201	ABHISHEK KUMAR SINGH	PO9,PO10,PO11,PO12	PSO2
		14K91A1241	PARUPALLY MANIDHAR		
		14K91A1242	PASANGULA RAMESH		
13	A.R Book	14K91A1212	BUDDHA AKHIL	PO9,PO10,PO11,PO12	PSO2
		14K91A1211	BOKKA VAISHNAVI REDDY		
		14K91A1255	YERROLLA KISHORE KUMAR		
14	College Event Management	14K91A1214	CHELKAPALLY RAHUL MALLIK	`	PSO2

	System	14K91A1207	B KULDEEP SINGH		
		14K91A1216	CHINTA PALLY AKHIL		
15	An Interactive Classification Scheme for Sanitizing Large-Scale Datasets	14K91A1213	BYREDDY SNEHA	PO9,PO10,PO11,PO12	PSO2
		14K91A1208	BADDIPADIGE BHAVITHA		
		14K91A1217	DAMARA TARUN KUMAR		
16	College -Parent Interaction using An Android Application	14K91A1218	DARSHITHA BIKKUMALLA	PO9,PO10,PO11,PO12	PSO2
		14K91A1227	GODHURU MONICA		
		14K91A1215	CHETAN REDDY RAVULA		
17	Using Artificial Neural Network to play pong	14K91A1220	DOGIPARTHI SIVA SAI MARUTHI PRANEETH	PO9,PO10,PO11,PO12	PSO2
		14K91A1225	GANGISHETTY SREEJA		
		14K91A1234	KARRE VINAY KUMAR		
18	FYT (Find Your Tutor)	14K91A1219	DASARI VAMSHI CHARAN REDDY	PO9,PO10,PO11,PO12	PSO2
		14K91A1224	GALI NANDINI		
		14K91A1240	P SINJUSHA		

B) Types and relevance of the projects and their contribution towards attainment of POs and PSOs:

Based upon the functional area of the projects, they are categorized as follows:

- Mobile Application development
- Product and process development
- Solution to the industrial specific problems
- Design and Development of software
- Verification and validation of software
- Internet Of Things
- Artificial Intelligence and Machine learning

After categorizing the projects, they will be mapped with POs and PSOs and the attainments are assessed based on the following parameters:

- Depth in fundamentals
- Clarity in problem analysis
- Methodology adopted
- Modern tool usage
- Impact on societal needs as useful products/processes
- Future scope of the work
- Novelty of work
- Team work
- Presentation and documentation
- Cost effectiveness and project management
- Employability

C) Process for monitoring and evaluation:

a) Students have to submit the synopsis of the project to the coordinator for scrutiny.

b) The project coordinator will scrutinize the synopsis and give suggestions to strengthen the synopsis.

c) Every week the student should meet their concern guide and update their project work progress and get the signature of the guide.

d) Students must give presentation on the project as per the schedule given by the project coordinator.

e) Finally the review committee evaluates the projects and submit the review report to the project coordinator.

f) The sample copy of Rubrics towards the Mini/Major projects given below:

TKR College of Engineering & Technology

Department of Information Technology

Mini/Major project report:

Description:

Evaluator Name: **Name and roll number of the student:**

Review #	Agenda	Assessment	Review Assessment Weightage Max.Marks
Review 1	Project Synopsis/ Proposal Evaluation	Rubric R1	(50)
Review 2	Project Analysis / Design Evaluation	Rubric R2	(50)
		Total	(100)
Review 3	Project Coding / Implementation Evaluation	Rubric R3	(25)
Review 4	Project Report Evaluation	Rubric R4	(25)
External Evaluation			(50)
		Total	(100)

PROJECT CO-ORDINATOR **HOD**

D) Process to assess individual and team performance:

The performance of the individual team member of the project is assessed at the time of presentation in reviews by considering the following criterions:

a. Communication
b. Confidence in the project work
c. Attainment of individual scope of work
d. Overall contribution for the project accomplishment

The performance of the project team is assessed by considering the following criterions:

e. Knowledge of the other member contribution towards the project

f. Coordination in consolidating work

g. Time management

E) Quality of completed projects/working prototypes:

a. The quality of the project evaluated based on the conversion possibility of the ideas synthesized in the course of project based on the real outcome.

F) Evidences of papers published/ awards received by projects

a. The students are encouraged to publish their innovative works in the national and international conferences, Journals etc.

2.2.4 Initiatives related to industry interaction (15)

The department of Information Technology has taken initiatives to strengthen the Industry-institute interaction. This enhances the students initiatives in the curriculum beyond the syllabus. The measures adopted are:

- MoU with Industries
- Establish industry supported laboratories
- Training the students on specific skills by industry experts
- Providing Industrial Visits and Internships to the students

To enhance the interaction with industries, the department signed MoU‟s with the following organization.

The details of MOUs are given below

S. No	Name of the Company	Date & Year
01	Astute Business Solutions Pvt Ltd	21-06-2017
02	Pixel Designers	25-07-2018
03	Sri Vaikunta Technologies Pvt Ltd	26-06-2019
04	Path Creators(Sri Vaikunta Technologies Pvt Ltd)	04-02-2021

2.2.5 Initiatives related to industry internship/summer training (15)

(Mention the initiatives, implementation details and impact analysis)

- Students are encouraged to take internship for which the Institute/department renders support so as to appraise their knowledge.
- All the students who go for such internships exhibit enhanced skills, to do related project and invariably find employment in similar industries.

Initiatives:

The in-plant training coordinator encourages to undergo in-plant training or internship, during their pre-final year vacation period. This enables the students

i. To gain hands-on experience in implementing whatever they have learnt in their curriculum.
ii. To train themselves on the state-of-the-art equipment‟s and standards used by the industries.
iii. To present themselves as complete professionals, when they go for placements.

Arranging for In-plant training / Internship:

- Students will choose a domain that they come across in their academia and find the industries available on that particular domain in the industries under MoU and in the intern Shala web link.
- Students will then approach the department for getting approval.
- The institute will issue the necessary documents like a Bonafide certificate and request letter to the concerned industry.
- After the consent of the industry, the students will attend the training program in the respective industries.

CRITERION 3	Course Outcomes and Program Outcomes	120

3. COURSE OUTCOMES AND PROGRAM OUTCOMES (120)

3.1.1 Establish the correlation between the courses and the Program Outcomes (POs) and Program Specific Outcomes (PSOs) (20)

S.No.	Program Outcomes
PO1	**Engineering Knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
PO2	**Problem Analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
PO3	**Design/Development Of Solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
PO4	**Conduct Investigations of Complex Problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
PO5	**Modern Tool Usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
PO6	**The Engineer and Society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
PO7	**Environment and Sustain ability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
PO8	**Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
PO9	**Individual and Team Work:** Function effectively as an individual, and as a

	member or leader in diverse teams, and in multi disciplinary settings.
PO10	**Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
PO11	**Project Management and Finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multi disciplinary environments.
PO12	**Life-long Learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

S.No.	Program Specific Outcomes
PSO1	To Develop & motivate human resource to pursue Information Technology course; carry on research in real time applications & related fields and track their career.
PSO2	To implement the IT Infrastructure for Design & Deployment of the Project.

Course Outcomes (COs) (SAR should include course outcomes of one course from each semester of study, however, should be prepared for all courses and made available as evidence, if asked) (05)

COURSE OUTCOMES CAY (2020-21)

Course Name: C202 – (A63PC2) Data Structures through C++

Year of study 2018-19

C202.1	Ability to choose appropriate data structures to represent data items in real world problems
C202.2	Ability to analyze the time and space complexities of algorithms
C202.3	Ability to design programs using a variety of data structures such as stacks queues, hash tables, binary tree and heaps
C202.4	Able to analyze and implement various kinds of searching and sorting techniques
C202.5	Able to design programs using a variety of data structures such as graphs, search tree and B-trees

Table 3.1.1.1 C202 – DS

Course Name: C209 – (A64PC1) Computer Organization
Year of study 2018-19

C209.1	Gain knowledge on the basic components of computer organization and design parameters, the design of CPU, ALU and Control Unit.
C209.2	Describe architecture, instruction formats and addressing modes of 8086.
C209.3	Apply 8086 assembly language constructs on simple computational techniques.
C209.4	Demonstrate and perform computer arithmetic operations on integer and real numbers.
C209.5	Understand memory, I/O organization and its impact on computer cost/performance.

Table 3.1.1.2 C209 - CO

Course Name: C302 – (A65PC2) Data Communication & Computer Networks

Year of study 2019-20

C302.1	Able to understand and explore the basics of data communication.
C302.2	Able to understand data link layer with transmission errors to provide a well defined interface to the network layer.
C302.3	Classify the routing protocol and analyzes how to assign the IP addresses for the given network
C302.4	Able to understand to perform end to end services in the transport layer
C302.5	Ability to access the global information about various services on the Internet.

Table 3.1.1.3 C302 – DC&CN

Course Name: C309 – (A66PC1) Compiler Design
Year of study 2019-20

C309.1	Understand the major phases of compilation and to understand the knowledge of Lex tool & Yaac tool.
C309.2	Develop the parsers and experiment the knowledge of different parsers design without automated tools.
C309.3	Construct the intermediate code representations and generation.
C309.4	Convert source code for a novel language into machine code for a novel computer.
C309.5	Apply for various optimizations techniques for data flow analysis.

Table 3.1.1.4 C311 – CD

Course Name: C402 – (A67PC2) Linux Programming

Year of study 2020-21

C402.1	Learn about Linux utilities and develop shell scripts to perform more complex tasks in shell programming environment.
C402.2	Understanding the concepts of files, directories and their related system calls.
C402.3	Understand the process structure, scheduling and management through System calls&Develop signal functions to handle interrupts by using various system calls.
C402.4	Design and Implement inter process communication(IPC) by using pipes message queues and semaphores.
C402.5	Develop signal functions to handle interrupts by using various system calls.

Table 3.1.1.5 C402 – LP

Course Name: C410 – (A68PE1) Internet of Things

Year of study 2020-21

C410.1	Able to understand fundamentals of IoT, IoT protocols, Applications and various technologies using IoT.
C410.2	Able to identify M2M (machine to machine) protocols, SDN and IoT system management protocols
C410.3	Able to use modules, file handling and various Packages in Python Programming.
C410.4	Able to design on the IoT system using Raspberry Pi.
C410.5	Able to develop IoT web application using Python framework- Django, RESTfu Web API**.**

Table 3.1.1.6 C410 – IoT

(a) CO-PO matrices of courses selected in 3.1.1 (six matrices to be mentioned; one per semester from 3rd to 8th semester) (05)

CO-PO MATRICES CAY (2021-21)

Course Name: C202 – (A63PC2) Data Structures through C++

Year of study 2018-19

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C202.1	3	3	3	3	3	-	-	1	2	3	3	3
C202.2	3	3	3	2	2	-	-	1	2	3	3	3
C202.3	3	3	3	3	3	-	-	1	2	3	3	3
C202.4	3	3	3	2	3	-	-	1	2	3	3	3
C202.5	3	3	3	3	3	-	-	1	2	3	3	3
Average	**3.00**	**3.00**	**3.00**	**2.60**	**2.80**	**-**	**-**	**1.00**	**2.00**	**3.00**	**3.00**	**3.00**

Table 3.1.2.(a).1 C202 – DS

Course Name: C209 – (A64PC1) Computer Organization

Year of study 2018-19

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C209.1	1	1	2	1	2	-	-	-	-	1	2	3
C209.2	1	2	1	1	1	-	-	-	-	1	-	1
C209.3	2	2	2	2	2	-	-	-	2	1	1	1
C209.4	2	1	2	1	1	-	-	-	-	1	-	1
C209.5	1	2	1	1	2	-	-	-	1	1	2	1
Average	**1.40**	**1.60**	**1.60**	**1.20**	**1.60**	**-**	**-**	**-**	**1.50**	**1.00**	**1.67**	**1.40**

Table 3.1.2.(a).2 C209 – CO

Course Name: C302 – (A65PC2) Data Communication & Computer Networks

Year of study 2019-20

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C302.1	3	2	1	1	-	-	-	1	-	-	-	-
C302.2	3	3	1	3	-	-	-	1	-	2	-	-
C302.3	3	3	2	3	-	-	-	1	-	3	-	2
C302.4	3	3	3	-	-	-	-	1	-	3	-	-
C302.5	2	3	2	-	-	-	-	1	-	3	-	3
Average	**2.80**	**2.80**	**1.80**	**2.33**	**-**	**-**	**-**	**1.00**	**-**	**2.75**	**-**	**2.50**

Table 3.1.2.(a).3 C302 – DC&CN

Course Name: C309 – (A66PC1) Compiler Design

Year of study 2019-20

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C309.1	2	2	2	-	-	-	2	-	2	-	-	2
C309.2	1	2	2	1	2	-	-	-	-	-	-	-
C309.3	1	1	2	-	2	-	-	-	-	-	-	-
C309.4	2	1	2	-	2	-	2	-		-	-	-
C309.5	2	2	1	-	2	-	-	-	-	-	-	1
Average	**1.60**	**1.60**	**1.80**	**1.00**	**2.00**	**-**	**2.00**	**-**	**2.00**	**-**	**-**	**1.50**

Table 3.1.2.(a)..4 C311 – CD

Course Name: C402 – (A67PC2) Linux Programming

Year of study 2020-21

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C402.1	3	3	3	3	3	1	1	2	3	3	3	3
C402.2	3	3	3	3	3	-	-	2	2	3	3	3
C402.3	3	3	3	3	3	-	-	2	3	3	3	3
C402.4	3	3	3	3	3	-	-	2	3	3	3	3
C402.5	3	3	3	3	3	-	-	2	2	3	3	3
Average	**3.00**	**3.00**	**3.00**	**3.00**	**3.00**	**1.00**	**1.00**	**2.00**	**2.60**	**3.00**	**3.00**	**3.00**

Table 3.1.2.(a).5 C402 – LP

Course Name: C410 – (A68PE1) Internet of Things

Year of study 2020-21

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C410.1	3	2	-	-	-	-	-	-	-	-	-	-
C410.2	3	3	-	-	-	-	-	-	-	-	-	-
C410.3	3	3	3	3	-	-	-	-	-	-	-	1
C410.4	2	2	3	3	3	-	-	-	-	-	-	2
C410.5	2	3	3	2	3	-	-	-	-	-	-	2
Average	**2.60**	**2.60**	**3.00**	**2.67**	**3.00**	**-**	**-**	**-**	**-**	**-**	**-**	**1.67**

Table 3.1.2.(a).6 C410 – IoT

Note:

- Enter correlation levels 1, 2 or 3 as defined below:

  1: Slight (Low) **2: Moderate (Medium)** **3: Substantial (High)**

  It there is no correlation, put "-"

- ***Similar table is to be prepared for PSOs***

(b) CO-PO matrices of courses selected in 3.1.1 (six matrices to be mentioned;one per semester from 3rd to 8th semester) (05)

CO-PSO MATRICES CAY (2020-21)

Course Name: C202 – (A63PC2) Data Structures through C++

Year of study 2018-19

CO	PSO1	PSO2
C202.1	3	2
C202.2	3	2
C202.3	3	2
C202.4	3	2
C202.5	3	2
Average	3.00	2.00

Table 3.1.2.(b).1 C202 – DS

Course Name: C209 – (A64PC1) Computer Organization

Year of study 2018-19

CO	PSO1	PSO2
C209.1	1	1
C209.2	1	1
C209.3	2	2
C209.4	2	2
C209.5	1	1
Average	1.40	1.40

Table 3.1.2.(b).2 C209 – CO

Course Name: C302 – (A65PC2) Data Communication & Computer Networks

Year of study 2019-20

CO	PSO1	PSO2
C302.1	3	-
C302.2	3	2
C302.3	3	2
C302.4	3	-
C302.5	3	3
Average	3.00	2.33

Table 3.1.2.(b).3 C302 – DC&CN

Course Name: C309 – (A66PC1) Compiler Design

Year of study 2019-20

CO	PSO1	PSO2
C309.1	1	-
C309.2	-	2
C309.3	1	-
C309.4	2	-
C309.5	-	2
Average	1.33	2.00

Table 3.1.2.(b).4 C309 – CD

Course Name: C402 – (A67PC2) Linux Programming

Year of study 2020-21

CO	PSO1	PSO2
C402.1	3	2
C402.2	3	2
C402.3	3	2
C402.4	3	2
C402.5	3	2
Average	3.00	2.00

Table 3.1.2.(b).5 C402 – LP

Course Name: C410 – (A68PE1) Internet of Things

CO	PSO1	PSO2
C410.1	2	-
C410.2	2	-
C410.3	3	3
C410.4	3	3
C410.5	3	3
Average	2.60	3.00

Table 3.1.2.(b).6 C410 – IoT

(a) Program level Course-PO matrix of all courses INCLUDING first year courses (10)

AVERAGE OF CO-PO MATRICES CAY (2020-21)

NBA Course code	Course Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101	A61BS1-Mathematics-I	3.00	3.00	2.40	1.52	1.52	1.00	-	-	1.40	2.00	1.40	3.00
C102	A61BS2-Engineering Chemistry	3.00	2.20	2.00	2.80	1.00	2.00	3.00	-	2.00	-	2.00	3.00
C103	A61BS3-Engineering Physics-I	3.00	2.60	2.20	-	-	-	-	2.00	2.00	-	-	2.00
C104	A61HS4-Professional Communication in English	2.20	2.40	2.40	2.20	1.80	2.20	2.20	-	-	-	2.40	2.60
C105	A61ES5-	2.60	2.60	-	-	-	-	-	-	-	-	-	2.20

	Engineering Mechanics												
C106	A61ES6- Basic Electrical and Electronics Engineering	2.60	-	2.80	-	-	-	-	-	-	-	-	-
C107	A61HS7- English Language Communication Skills Lab	3.00	2.00	-	-	-	-	-	3.00	-	3.00	-	-
C108	A61ES8- Engineering Workshop	3.00	2.50	1.50	1.00	1.00	1.00	-	-	-	-	-	1.00
C109	A62BS1- Engineering Physic-II	3.00	2.20	1.60	-	-	-	-	-	-	-	-	-
C110	A62BS2- Mathematics-II	2.60	2.00	2.20	2.40	1.20	1.00	1.00	-	-	1.00	1.00	3.00
C111	A62BS3- Mathematics-III	3.00	2.00	2.40	2.20	1.40	-	1.00	-	-	1.00	1.00	3.00
C112	A62ES4- Computer Programming in C	2.80	2.00	2.20	2.80	2.00	-	3.00	-	2.60	3.00	2.40	2.20
C113	A62ES5- Engineering Graphics	2.80	1.80	1.00	-	-	-	-	-	-	-	-	1.00
C114	A62BS6- Engineering Chemistry Lab	2.50	1.50	-	-	1.00	-	-	-	-	-	-	-
C115	A62BS7- Engineering Physics Lab	2.00	3.00	2.00	1.00	2.00	-	-	-	-	-	-	-

C116	A62ES8-Computer Programming Lab	3.00	2.00	3.00	2.50	2.00	-	-	-	-	-	2.50	3.00
C201	A63HS1-Mathematics – IV	3.00	3.00	1.80	1.40	1.40	1.00	-	-	1.40	1.80	1.20	3.00
C202	A63PC2- Data Structures through C++	3.00	3.00	3.00	2.60	2.80	-	-	1.00	2.00	3.00	3.00	3.00
C203	A63PC3-Mathematical Foundations of Computer Science	3.00	3.00	2.60	2.60	1.60	1.00	-	-	1.80	2.00	1.60	3.00
C204	A63PC5- Digital Logic Design	3.00	2.60	2.80	2.40	2.40	-	-	-	-	-	-	-
C205	A63PC5- Object Oriented Programming through Java	3.00	3.00	3.00	3.00	3.00	1.00	1.00	2.20	2.40	2.60	3.00	3.00
C206	A63PC6- Data Structures through C++ Lab	3.00	3.00	3.00	3.00	3.00	-	-	1.00	3.00	3.00	2.00	3.00
C207	A63PC7- IT Workshop	3.00	2.00	3.00	-	-	-	-	-	-	3.00	2.00	3.00
C208	A63PC8- Java Programming Lab	3.00	3.00	3.00	3.00	3.00	-	-	3.00	3.00	3.00	3.00	3.00
C209	A64PC1-Computer Organization	1.40	1.60	1.60	1.20	1.60	-	-	-	1.50	1.00	1.67	1.40
C210	A64PC2-Database Management Systems	2.00	3.00	3.00	2.20	-	-	-	-	-	2.00	-	2.40

C211	A64PC3-Operating Systems	2.00	3.00	3.00	2.00	2.40	2.00	1.20	0.80	1.80	2.40	2.60	2.60
C212	A64PC4- Formal Languages and Automata Theory	3.00	3.00	3.00	2.40	2.20	-	-	1.00	1.00	3.00	-	1.00
C213	A64HS5-Business Economics and Financial Analysis	1.20	1.40	2.00	-	-	-	-	2.60	2.60	1.60	2.50	1.60
C214	A64PC6-Computer Organization Lab	2.00	2.00	1.50	1.00	2.00	-	-	-	1..00	1.00	1.00	1.00
C215	A64PC7-Database Management Systems Lab	2.00	3.00	3.00	-	3.00	-	-	-	-	-	-	-
C216	A64PC8-Operating Systems Lab	3.00	3.00	3.00	3.00	3.00	-	-	2.00	2.00	3.00	2.00	3.00
C301	A65PC1- Design and Analysis of Algorithms	3.00	3.00	3.00	2.60	2.20	2.00	1.80	1.40	2.00	2.00	1.80	2.00
C302	A65PC2- Data Communication & Computer Networks	2.80	2.80	1.80	2.33	-	-	-	1.00	-	2.75	-	2.50
C303	A65PC3-Software Engineering	2.60	2.80	2.40	2.40	2.60	-	-	-	2.40	2.20	1.60	2.60
C304	A65HS4-Fundamentals of Management	1.00	1.50	1.60	-	-	-	2.20	2.00	3.00	1.60	1.00	3.00

C305	A65PE6-Information Security	2.75	2.00	1.80	1.50	1.00	-	-	-	1.00	2.00	-	-
C306	A65PC7- Design and Analysis of Algorithms Lab	3.00	3.00	3.00	3.00	3.00	-	-	2.00	2.00	3.00	2.00	2.00
C307	A65PC8-Computer Networks Lab	3.00	3.00	2.00	-	3.00	-	-	-	-	-	-	-
C308	A65PC9-Software Engineering Lab	2.50	3.00	2.50	3.00	2.50	-	-	-	3.00	2.00	1.00	2.00
C309	A66PC1-Compiler Design	1.60	1.60	1.80	1.00	2.00	-	2.00	-	2.00	-	-	1.50
C310	A66PC2- Web Technologies	3.00	3.00	3.00	3.00	3.00	-	-	2.00	2.60	3.00	3.00	3.00
C311	A66PC3-Cryptography and Network Security	2.40	2.20	2.80	-	-	3.00	-	-	-	2.20	-	2.80
C312	A66PE5- Mobile Computing	2.60	2.80	2.40	2.40	1.60	-	-	-	-	1.50	3.00	3.00
C313	A66PE6- Object Oriented Analysis and Design	1.80	3.00	3.00	2.20	2.60	-	-	-	-	1.00	-	2.00
C314	A66HS7-Advanced Communication Skills Lab	-	-	-	-	-	2.00	2.00	-	-	3.00	1.00	3.00
C315	A66PC8- Web Technologies Lab	3.00	3.00	3.00	3.00	3.00	-	-	2.00	3.00	3.00	3.00	3.00
C316	A66PC9-Cryptography and Network Security	3.00	2.50	-	-	-	3.00	-	-	-	3.00	-	3.00

	Lab												
C401	A67PC1- Data Warehousing & Data Mining	2.00	1.80	2.00	2.00	1.75	-	-	-	1.00	-	1.00	2.00
C402	A67PC2- Linux Programming	3.00	3.00	3.00	3.00	3.00	1.00	1.00	2.00	2.60	3.00	3.00	3.00
C403	A67PC3- Python Programming	2.60	2.40	2.40	2.20	2.00	-	-	-	-	-	-	-
C404	A67PE5-Human Computer Interaction	2.80	3.00	2.00	2.20	2.20	-	-	-	-	-	-	1.00
C405	A67PE6- Distributed Databases	2.20	2.40	2.80	2.00	-	-	-	-	-	-	-	-
C406	A67PE7- Software Process and Project Management	2.40	2.00	2.40	2.40	2.40	-	-	-	3.00	2.00	3.00	2.20
C407	A67PC7- Data Warehousing & Data Mining Lab	1.00	2.00	2.00	1.00	2.00	-	-	-	1.00	1.00	1.00	1.00
C408	A67PC8- Linux Lab	3.00	3.00	3.00	3.00	3.00	-	-	2.00	3.00	3.00	3.00	3.00
C409	A67PC9- Python Programming Lab	1.00	1.00	-	1.00	-	-	-	-	-	1.50	-	3.00
C410	A68PE1- Internet Of Things	2.60	2.60	3.00	2.67	3.00	-	-	-	-	-	-	1.67
C411	A68PE2- Predictive Analytics	3.00	3.00	2.80	-	2.00	-	-	-	-	1.80	-	1.80
C412	OE-IV-Principles of Electronic	3.00	2.00	3.00	2.00	2.60	3.00	-	-	-	2.60	2.00	2.50

	Communications												
C413	A68PW4-Industry Oriented Mini Project	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
C414	A68SE5-Seminars	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
C415	A68CV6-Comprehensive Viva	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
C416	A68PW7- Major Project	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
		2.59	**2.51**	**2.49**	**2.29**	**2.27**	**2.01**	**2.09**	**2.05**	**2.25**	**2.31**	**2.12**	**2.43**

Table.3.1.3.(a). CO-PO Matrices

Note:

1. Enter correlation levels 1, 2 or 3 as defined below:

1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

It there is no correlation, put "-"

It may be noted that contents of Table 3.1.2 must be consistent with information available in Table 3.1.3 for all the courses.

2. Similar table is to be prepared for PSOs

2.1.3. (b) Program level Course-PO matrix of all courses INCLUDING first year courses (10)

AVERAGE OF CO-PSO MATRICES CAY (2020-21)

NBA Course code	Course Code	PSO1	PSO2
C101	A61BS1- Mathematics-I	3.00	1.40
C102	A61BS2- Engineering Chemistry	2.00	-
C103	A61BS3- Engineering Physics-I	3.00	2.00

C104	A61HS4- Professional Communication in English	2.20	-
C105	A61ES5- Engineering Mechanics	1.80	-
C106	A61ES6- Basic Electrical and Electronics Engineering	2.80	2.60
C107	A61HS7- English Language Communication Skills Lab	3.00	-
C108	A61ES8- Engineering Workshop	2.00	1.00
C109	A62BS1- Engineering Physic-II	1.20	1.00
C110	A62BS2- Mathematics-II	2.60	2.20
C111	A62BS3- Mathematics-III	3.00	2.00
C112	A62ES4- Computer Programming in C	2.00	-
C113	A62ES5- Engineering Graphics	1.60	1.00
C114	A62BS6- Engineering Chemistry Lab	1.00	1.00
C115	A62BS7- Engineering Physics Lab	1.00	1.00
C116	A62ES8- Computer Programming Lab	3.00	-
C201	A63HS1- Mathematics – IV	3.00	1.40
C202	A63PC2- Data Structures through C++	3.00	2.00
C203	A63PC3- Mathematical Foundations of Computer Science	3.00	1.80
C204	A63PC5- Digital Logic Design	2.40	2.00
C205	A63PC5- Object Oriented Programming through Java	3.00	2.00
C206	A63PC6- Data Structures through C++ Lab	3.00	3.00

C207	A63PC7- IT Workshop	3.00	2.50
C208	A63PC8- Java Programming Lab	3.00	2.00
C209	A64PC1- Computer Organization	1.40	1.40
C210	A64PC2- Database Management Systems	2.00	2.60
C211	A64PC3- Operating Systems	3.00	1.60
C212	A64PC4- Formal Languages and Automata Theory	3.00	1.00
C213	A64HS5- Business Economics and Financial Analysis	-	1.80
C214	A64PC6- Computer Organization Lab	2.00	2.00
C215	A64PC7- Database Management Systems Lab	3.00	3.00
C216	A64PC8- Operating Systems Lab	3.00	3.00
C301	A65PC1- Design and Analysis of Algorithms	2.75	3.00
C302	A65PC2- Data Communication & Computer Networks	3.00	2.33
C303	A65PC3- Software Engineering	2.80	2.60
C304	A65HS4- Fundamentals of Management	-	1.40
C305	A65PE6- Information Security	2.00	1.50
C306	A65PC7- Design and Analysis of Algorithms Lab	3.00	3.00
C307	A65PC8- Computer Networks Lab	3.00	3.00
C308	A65PC9- Software Engineering Lab	2.50	3.00
C309	A66PC1- Compiler Design	1.33	2.00

C310	A66PC2- Web Technologies	3.00	2.00
C311	A66PC3- Cryptography and Network Security	2.20	3.00
C312	A66PE5- Mobile Computing	2.40	2.00
C313	A66PE6- Object Oriented Analysis and Design	3.00	2.20
C314	A66HS7- Advanced Communication Skills Lab	-	-
C315	A66PC8- Web Technologies Lab	3.00	2.00
C316	A66PC9- Cryptography and Network Security Lab	2.00	2.00
C401	A67PC1- Data Warehousing & Data Mining	1.33	1.50
C402	A67PC2- Linux Programming	3.00	2.00
C403	A67PC3- Python Programming	2.20	2.00
C404	A67PE5-Human Computer Interaction	2.80	2.00
C405	A67PE6- Distributed Databases	2.00	2.40
C406	A67PE7- Software Process and Project Management	2.20	1.40
C407	A67PC7- Data Warehousing & Data Mining Lab	1.50	1.50
C408	A67PC8- Linux Lab	3.00	2.00
C409	A67PC9- Python Programming Lab	1.50	1.00
C410	A68PE1- Internet Of Things	2.60	3.00
C411	A68PE2- Predictive Analytics	3.00	1.80
C412	OE-IV-Principles of Electronic Communications	1.75	2.00
C413	A68PW4- Industry Oriented Mini	3.00	3.00

	Project		
C414	A68SE5- Seminars	3.00	3.00
C415	A68CV6- Comprehensive Viva	3.00	3.00
C416	A68PW7- Major Project	3.00	3.00

Table.3.1.3.(b). CO-PSO Matrices

Attainment of Course Outcomes (50)

1. **Describe the assessment processes used to gather the data upon which the evaluation of Course Outcome is based (10)**

Course Outcome Assessment Process

- Course outcomes are assessed based on internal examinations (descriptive, objective, Assignments), and End semester examinations.
- To calculate the attainment process of COs the internal and external marks for each course are considered and the calculation is based on assigned threshold value.
- The weightage of 30% with respect to internal examinations is projected as internal attainment and 70% weightage with respect to end semester examination is projected as external attainment.
- The final attainment of each course is addition of internal attainment and external attainment.
- If the target is not attained corrective measures are practiced in the forms of guest lectures, seminars and workshops.

Assessment Processes and Tools

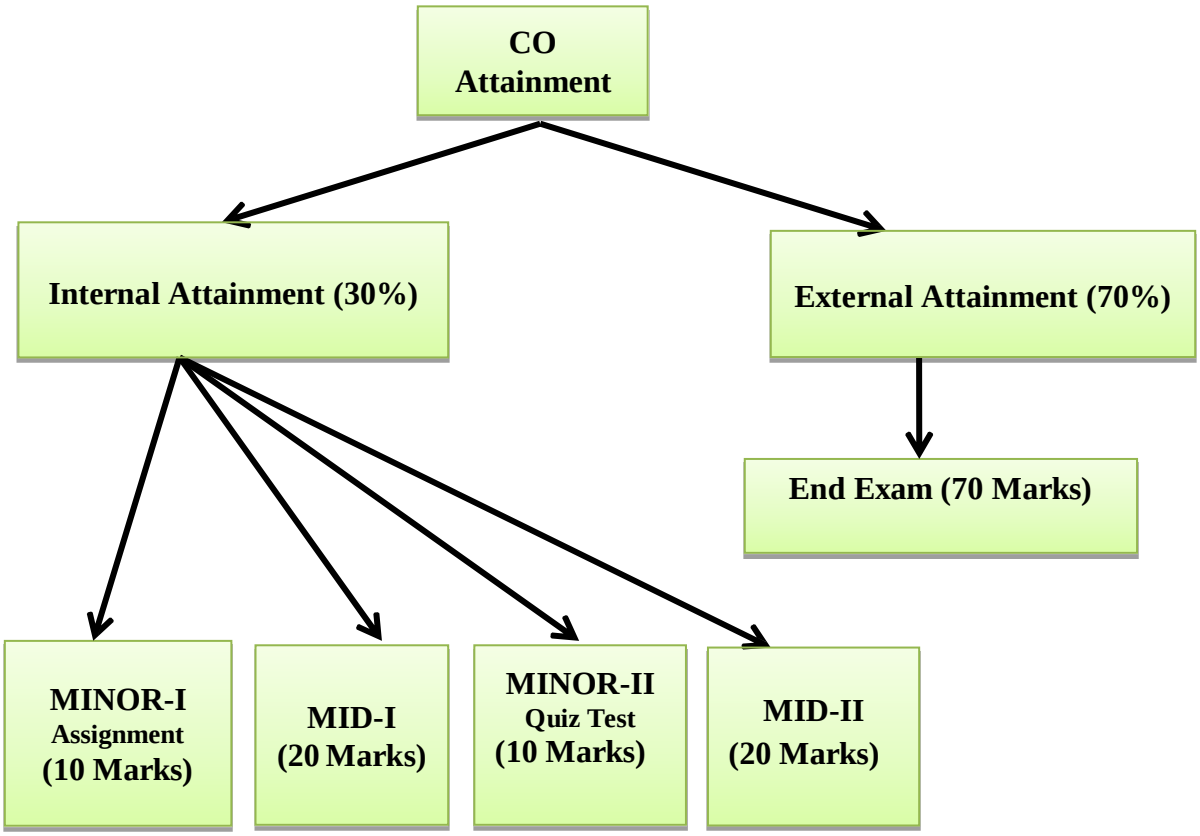


Fig.3.2.1.1. Assessment Processes and Tools

Internal Assessment Process:

Component	Internal Examinations	Components of Evaluation	Marks	Nature of examination
Theory	Internal -I	Test-I	10	Assignment
		Mid-I	05	Objective
			15	Descriptive
	Internal-II	Test-II	10	Multiple choice questions
		Mid-II	05	Objective
			15	Descriptive

		Average of Internal - I & Average of Internal –II		
Practical	**Daily evaluation**	**Record**	**05**	**Theory, procedure, observations, calculations, and results.**
		Observation	**05**	**Theory, procedure, observations, calculations, and results.**
		Viva voce	**05**	**Viva voce.**
	Practical examinations	**Internal -I**	**15**	**Theory, procedure, observations, calculations, and results.**
		Internal -II	**15**	**Theory, procedure, observations, calculations, and results.**
		Average of Internal - I & Average of Internal –II		

Table: 3.2.1.1 Internal Assessment Process

End Semester Assessment Process:

Component	**Name of the examination**	**Components of Evaluation**	**Marks**	**Items used**
Theory	**Semester end examination**	**University end examination**	**70**	**Short and Long essay questions.**
Practical	**Semester end examination**	**Design/code**	**15**	**Theory, procedure, observations.**
		Execution and results	**45**	**Calculations and results.**
		Viva voce	**10**	**Viva voce**

Table: 3.2.1.2 End Semester Process

3.2.2 Record the attainment of Course Outcomes of all courses with respect to set attainment levels (40)

Program shall have set Course Outcome attainment levels for all courses.

(The attainment levels shall be set considering average performance levels in the university examination or any higher value set as target for the assessment years. Attainment level is to be measured in terms of student performance in internal assessments with respect to the Course Outcomes of a course in addition to the performance in the University examination)

Measuring Course Outcomes attained through Semester End Examinations:

Attainment Level 1: **50%** students scoring more than or equality 5 grade points out of 10.

Attainment Level 2: **60%** students scoring more than or equality 5 grade points out of 10.

Attainment Level 3: **70%** students scoring more than or equality 5 grade points out of 10.

Measuring CO attainment through Internal Assessments:

Attainment Level 1: **50%** students scoring more than or equality 50% of marks.

Attainment Level 2: **60%** students scoring more than or equality 50% of marks.

Attainment Level 3: **70%** students scoring more than or equality 50% of marks.

Course Outcome Attainment

Final Course Outcome Attainment = 30% weightage to Internal Assessment + 70% weightage to Semester End Examination

NBA Course code	Course Code	Internal Attainment	External Attainment	Final attainment (IA*30%+EA*70%)
C101	A61BS1- Mathematics-I	2.50	3.00	2.85
C102	A61BS2- Engineering Chemistry	2.00	3.00	2.70
C103	A61BS3- Engineering Physics-I	1.00	2.00	1.70
C104	A61HS4- Professional	1.50	3.00	2.55

	Communication in English			
C105	A61ES5- Engineering Mechanics	1.50	2.00	1.85
C106	A61ES6- Basic Electrical and Electronics Engineering	1.10	2.00	1.73
C107	A61HS7- English Language Communication Skills Lab	3.00	3.00	3.00
C108	A61ES8- Engineering Workshop	3.00	3.00	3.00
C109	A62BS1- Engineering Physic-II	1.40	1.00	1.12
C110	A62BS2- Mathematics-II	0.85	0.00	0.26
C111	A62BS3- Mathematics-III	1.10	1.00	1.03
C112	A62ES4- Computer Programming in C	1.95	0.00	0.59
C113	A62ES5- Engineering Graphics	1.30	2.00	1.79
C114	A62BS6- Engineering Chemistry Lab	3.00	3.00	3.00
C115	A62BS7- Engineering Physics Lab	3.00	3.00	3.00
C116	A62ES8- Computer Programming Lab	3.00	3.00	3.00
C201	A63HS1- Mathematics – IV	1.20	2.00	1.76
C202	A63PC2- Data Structures through C++	2.80	3.00	2.94
C203	A63PC3- Mathematical Foundations of Computer Science	3.00	3.00	3.00

C204	A63PC5- Digital Logic Design	2.30	3.00	2.79
C205	A63PC5- Object Oriented Programming through Java	2.95	3.00	2.99
C206	A63PC6- Data Structures through C++ Lab	3.00	3.00	3.00
C207	A63PC7- IT Workshop	3.00	3.00	3.00
C208	A63PC8- Java Programming Lab	3.00	3.00	3.00
C209	A64PC1- Computer Organization	2.50	3.00	2.85
C210	A64PC2- Database Management Systems	2.95	3.00	2.99
C211	A64PC3- Operating Systems	2.00	2.00	2.00
C212	A64PC4- Formal Languages and Automata Theory	2.75	1.00	1.53
C213	A64HS5- Business Economics and Financial Analysis	2.90	3.00	2.97
C214	A64PC6- Computer Organization Lab	3.00	3.00	3.00
C215	A64PC7- Database Management Systems Lab	3.00	3.00	3.00
C216	A64PC8- Operating Systems Lab	3.00	3.00	3.00
C301	A65PC1- Design and Analysis of Algorithms	2.75	3.00	2.93
C302	A65PC2- Data Communication & Computer Networks	2.70	3.00	2.91

C303	A65PC3- Software Engineering	2.85	3.00	2.96
C304	A65HS4- Fundamentals of Management	3.00	3.00	3.00
C305	A65PE6- Information Security	2.50	3.00	2.85
C306	A65PC7- Design and Analysis of Algorithms Lab	3.00	3.00	3.00
C307	A65PC8- Computer Networks Lab	3.00	3.00	3.00
C308	A65PC9- Software Engineering Lab	3.00	3.00	3.00
C309	A66PC1- Compiler Design	1.30	3.00	2.49
C310	A66PC2- Web Technologies	3.00	3.00	3.00
C311	A66PC3- Cryptography and Network Security	1.95	3.00	2.69
C312	A66PE5- Mobile Computing	2.90	3.00	2.97
C313	A66PE6- Object Oriented Analysis and Design	3.00	3.00	3.00
C314	A66HS7- Advanced Communication Skills Lab	3.00	3.00	3.00
C315	A66PC8- Web Technologies Lab	3.00	3.00	3.00
C316	A66PC9- Cryptography and Network Security Lab	3.00	3.00	3.00
C401	A67PC1- Data Warehousing & Data Mining	2.00	3.00	2.70
C402	A67PC2- Linux	3.00	3.00	3.00

	Programming			
C403	A67PC3- Python Programming	3.00	3.00	3.00
C404	A67PE5-Human Computer Interaction	2.15	3.00	2.75
C405	A67PE6- Distributed Databases	3.00	3.00	3.00
C406	A67PE7- Software Process and Project Management	3.00	3.00	3.00
C407	A67PC7- Data Warehousing & Data Mining Lab	3.00	3.00	3.00
C408	A67PC8- Linux Lab	3.00	3.00	3.00
C409	A67PC9- Python Programming Lab	3.00	3.00	3.00
C410	A68PE1- Internet Of Things	3.00	3.00	3.00
C411	A68PE2- Predictive Analytics	3.00	3.00	3.00
C412	OE-IV- Principles of Electronic Communications	3.00	3.00	3.00
C413	A68PW4- Industry Oriented Mini Project	3.00	3.00	3.00
C414	A68SE5- Seminars	3.00	3.00	3.00
C415	A68CV6- Comprehensive Viva	3.00	3.00	3.00
C416	A68PW7- Major Project	3.00	3.00	3.00
CO Attainment		**2.57**	**2.72**	**2.67**

Table: 3.2.2 CO Attainment

Attainment of Program Outcomes and Program Specific Outcomes (50)

Describe assessment tools and processes used for measuring the attainment of each of the Program Outcomes and Program Specific Outcomes (10)

(Describe the assessment tools and processes used to gather the data upon which the evaluation of each of the Program Outcomes and Program Specific Outcomes is based indicating the frequency with which these processes are carried out. Describe the assessment processes that demonstrate the degree to which the Program Outcomes and Program Specific Outcomes are attained and document the attainment levels)

Procedure Followed to Measure PO and PSO Attainment

Assessment tools & processes used for measuring the attainment of each of Program Outcomes and Program Specific Outcomes are as follows.

Assessment Tools and Process

Direct Method:

- Continuous Internal Examination (CIE) Tests, Assignments.
- Semester End Examinations (SEE).
- Practical Test.
- Project-Mini Project, Major Project.
- Seminar Presentations-Technical Presentation.

Indirect Method (Stakeholders):

- Employers feedback
- Alumni feedback.
- Student exit feedback.

Assessment tools are categorized into **Direct and Indirect methods** to assess the program outcomes. 80% weightage is given to direct methods and 20% to indirect methods. Direct methods display the students‟ knowledge and skills from their performance in the academic activities like Internal Assessment Exams, End–Semester Examinations, Assignment, Presentations, and Practical. These methods provide a sampling of what students know and/or can do and provide strong evidence of student learning. Average of CO-PO attainment of all the courses is considered as direct method assessment tool for PO attainment. Indirect methods, like surveys of the stakeholders (alumni, student exit feedback, employers)

helps in improving student‟s learning. They assess opinions or thoughts about the graduates‟ knowledge or skills.

The average of PO attainment of all surveys is considered for calculating the PO attainment. The following figure shows the various methods/tools used for calculating the PO attainment along with weightage given to each method.

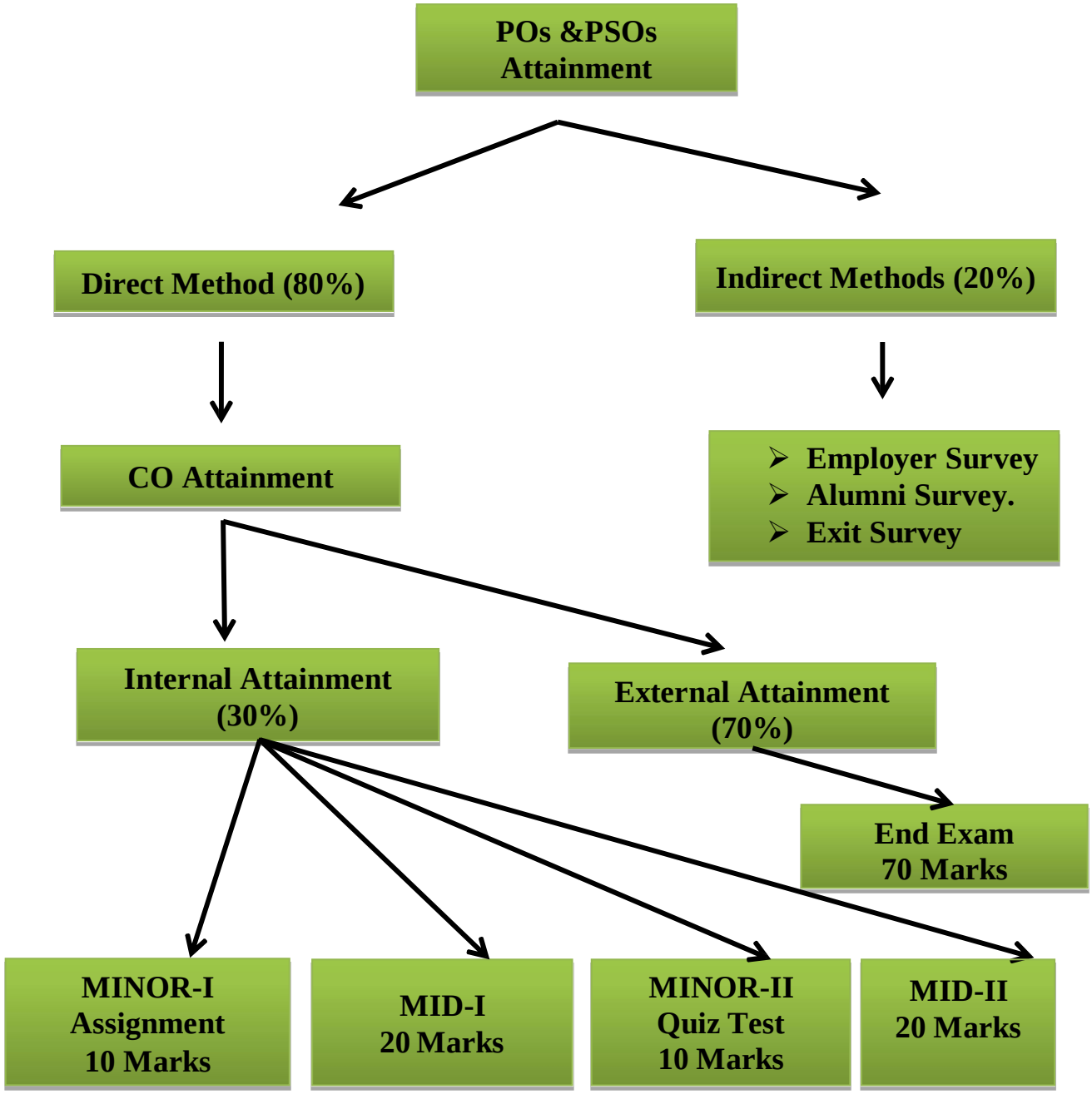


Figure.3.3.1 PO & PSO Attainment

3.3.1 Provide results of evaluation of each PO & PSO (40)

Program shall set Program Outcome attainment levels for all POs & PSOs.

(The attainment levels by direct (student performance) and indirect (surveys) are to be presented through Program level Course – PO & PSO matrix as indicated).

Direct Assessment

Direct PO Assessment = Sum of product of weighted of particular CO attainment and respective CO- PO matrix value/ Sum of PO values

Indirect Assessment

Surveys, Analysis, customized to an average value as per levels 1, 2 & 3.

Final Attainment

PO Attainment level will be 80% of direct assessment + 20% of indirect assessment

Note: Similarly for PSOs

Direct PO Attainment

NBA Course code	Course Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101	A61BS1-Mathematics-I	2.85	2.85	2.84	2.86	2.86	2.85	-	-	2.89	2.85	2.85	2.85
C102	A61BS2-Engineering Chemistry	2.58	2.59	2.58	2.59	2.58	2.58	2.56	-	2.58	-	2.58	2.58
C103	A61BS3-Engineering Physics-I	1.70	1.71	1.71	-	-	-	-	1.70	1.70	-	-	1.70
C104	A61HS4-Professional Communication in English	2.55	2.55	2.55	2.55	2.55	2.55	2.55	-	-	-	2.55	2.55
C105	A61ES5-	1.85	1.85	-	-	-	-	-	-	-	-	-	1.85

	Engineering Mechanics												
C106	A61ES6- Basic Electrical and Electronics Engineering	1.73	-	1.72	-	-	-	-	-	-	-	-	-
C107	A61HS7- English Language Communication Skills Lab	3.00	3.00	-	-	-	-	-	3.00	-	3.00	-	-
C108	A61ES8- Engineering Workshop	3.00	3.00	3.00	3.00	3.00	3.00	-	-	-	-	-	3.00
C109	A62BS1- Engineering Physic-II	1.12	1.11	1.13	-	-	-	-	-	-	-	-	-
C110	A62BS2- Mathematics-II	0.27	0.26	0.23	0.25	0.28	0.26	0.26	-	-	0.26	0.26	0.26
C111	A62BS3- Mathematics-III	1.03	1.03	1.05	1.01	1.02	-	1.03	-	-	1.03	1.03	1.03
C112	A62ES4- Computer Programming in C	0.58	0.59	0.61	0.59	0.59	-	0.59	-	0.59	0.59	0.58	0.59
C113	A62ES5- Engineering Graphics	1.78	1.77	1.70	-	-	-	-	-	-	-	-	1.70
C114	A62BS6- Engineering Chemistry Lab	3.00	3.00	-	-	3.00	-	-	-	-	-	-	-
C115	A62BS7- Engineering Physics Lab	3.00	3.00	3.00	3.00	3.00	-	-	-	-	-	-	-
C116	A62ES8- Computer Programming Lab	3.00	3.00	3.00	3.00	3.00	-	-	-	-	-	3.00	3.00

C201	A63HS1- Mathematics – IV	1.76	1.76	1.78	1.79	1.74	1.76	-	-	1.76	1.77	1.78	1.76
C202	A63PC2- Data Structures through C++	2.94	2.94	2.94	2.94	2.95	-	-	2.94	2.94	2.94	2.94	2.94
C203	A63PC3- Mathematical Foundations of Computer Science	3.00	3.00	3.00	3.00	3.00	3.00	-	-	3.00	3.00	3.00	3.00
C204	A63PC5- Digital Logic Design	2.79	2.80	2.80	2.80	2.79	-	-	-	-	-	-	-
C205	A63PC5- Object Oriented Programming through Java	2.99	2.99	2.99	2.99	2.99	-	-	2.98	2.98	2.98	2.99	2.99
C206	A63PC6- Data Structures through C++ Lab	3.00	3.00	3.00	3.00	3.00	-	-	3.00	3.00	3.00	3.00	3.00
C207	A63PC7- IT Workshop	3.00	3.00	3.00	-	-	-	-	-	-	3.00	3.00	3.00
C208	A63PC8- Java Programming Lab	3.00	3.00	3.00	3.00	3.00	-	-	3.00	3.00	3.00	3.00	3.00
C209	A64PC1- Computer Organization	2.87	2.85	2.85	2.85	2.85	-	-	-	2.90	2.85	2.85	2.81
C210	A64PC2- Database Management Systems	2.99	2.99	2.99	2.99	-	-	-	-	-	2.99	-	2.99
C211	A64PC3- Operating Systems	1.96	2.00	2.00	1.91	1.93	1.97	2.03	1.93	2.00	1.99	1.99	2.01
C212	A64PC4- Formal Languages and Automata Theory	1.53	1.53	1.53	1.53	1.52	-	-	1.53	1.53	1.53	-	1.53

C213	A64HS5- Business Economics and Financial Analysis	2.98	2.98	2.99	-	-	-	-	2.98	2.98	2.98	2.94	2.98
C214	A64PC6- Computer Organization Lab	3.00	3.00	3.00	3.00	3.00	-	-	-	3.00	3.00	3.00	3.00
C215	A64PC7- Database Management Systems Lab	3.00	3.00	3.00	-	3.00	-	-	-	-	-	-	-
C216	A64PC8- Operating Systems Lab	3.00	3.00	3.00	3.00	3.00	-	-	3.00	3.00	3.00	3.00	3.00
C301	A65PC1- Design and Analysis of Algorithms	2.93	2.93	2.93	2.91	2.92	2.93	2.93	2.95	2.93	2.93	2.93	2.93
C302	A65PC2- Data Communication & Computer Networks	2.91	2.93	2.93	2.96	-	-	-	2.91	-	2.96	-	2.91
C303	A65PC3- Software Engineering	2.95	2.95	2.94	3.00	2.97	-	-	-	2.96	2.96	2.97	2.97
C304	A65HS4- Fundamentals of Management	3.00	3.00	3.00	-	-	-	3.00	3.00	3.00	3.00	3.00	3.00
C305	A65PE6- Information Security	2.92	2.93	2.85	2.80	2.85	-	-	-	3.00	3.00	-	-
C306	A65PC7- Design and Analysis of Algorithms Lab	3.00	3.00	3.00	3.00	3.00	-	-	3.00	3.00	3.00	3.00	3.00
C307	A65PC8- Computer Networks Lab	3.00	3.00	3.00	-	3.00	-	-	-	-	-	-	-
C308	A65PC9- Software Engineering Lab	3.00	3.00	3.00	3.00	3.00	-	-	-	3.00	3.00	3.00	3.00
C309	A66PC1- Compiler Design	2.49	2.46	2.50	2.40	2.49	-	2.55	-	2.40	-	-	2.40

C310	A66PC2- Web Technologies	3.00	3.00	3.00	3.00	3.00	-	-	3.00	3.00	3.00	3.00	3.00
C311	A66PC3- Cryptography and Network Security	2.66	2.67	2.69	-	-	2.78	-	-	-	2.67	-	2.69
C312	A66PE5- Mobile Computing	2.97	2.97	2.98	2.98	2.98	-	-	-	-	3.00	3.00	3.00
C313	A66PE6- Object Oriented Analysis and Design	3.00	3.00	3.00	3.00	3.00	-	-	-	-	3.00	-	3.00
C314	A66HS7- Advanced Communication Skills Lab	-	-	-	-	-	3.00	3.00	-	-	3.00	3.00	3.00
C315	A66PC8- Web Technologies Lab	3.00	3.00	3.00	3.00	3.00	-	-	3.00	3.00	3.00	3.00	3.00
C316	A66PC9- Cryptography and Network Security Lab	3.00	3.00	-	-	-	3.00	-	-	-	3.00	-	3.00
C401	A67PC1- Data Warehousing & Data Mining	2.70	2.70	2.70	2.70	2.70	-	-	-	2.70	-	2.70	2.70
C402	A67PC2- Linux Programming	3.00	3.00	3.00	3.00	3.00	-	-	3.00	3.00	3.00	3.00	3.00
C403	A67PC3- Python Programming	3.00	3.00	3.00	3.00	3.00	-	-	-	-	-	-	-
C404	A67PE5-Human Computer Interaction	2.73	2.75	2.75	2.73	2.73	-	-	-	-	-	-	2.75
C405	A67PE6- Distributed Databases	3.00	3.00	3.00	3.00	-	-	-	-	-	-	-	-
C406	A67PE7- Software Process and Project Management	3.00	3.00	3.00	3.00	3.00	-	-	-	3.00	3.00	3.00	3.00

C407	A67PC7- Data Warehousing & Data Mining Lab	3.00	3.00	3.00	3.00	3.00	-	-	-	3.00	3.00	3.00	3.00
C408	A67PC8- Linux Lab	3.00	3.00	3.00	3.00	3.00	-	-	3.00	3.00	3.00	3.00	3.00
C409	A67PC9- Python Programming Lab	3.00	3.00	-	-	-	-	-	-	-	3.00	-	3.00
C410	A68PE1- Internet Of Things	3.00	3.00	3.00	3.00	3.00	-	-	-	-	-	-	3.00
C411	A68PE2- Predictive Analytics	3.00	3.00	3.00	-	3.00	-	-	-	-	3.00	-	3.00
C412	OE-IV- Principles of Electronic Communications	3.00	3.00	3.00	3.00	3.00	3.00	-	-	-	3.00	3.00	3.00
C413	A68PW4- Industry Oriented Mini Project	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
C414	A68SE5- Seminars	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
C415	A68CV6- Comprehensive Viva	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
C416	A68PW7- Major Project	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Direct Assessment		**2.67**	**2.68**	**2.66**	**2.70**	**2.71**	**2.63**	**2.32**	**2.81**	**2.73**	**2.73**	**2.71**	**2.67**

Table 3.3.2.1 Direct PO Attainment

Indirect Assessment for PO

It is done by Employer, Alumni and Exit Questionnaires.

Table: 3.3.2.2 Indirect PO Assessment

Program Outcomes	Employer	Alumni	Exit Survey	Assessment (0-3 scale)
PO1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.	2.39	2.0	2.52	2.30
PO2: Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.	2.31	1.7	2.40	2.14
PO3: Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.	2.39	1.6	2.47	2.15
PO4: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to	2.22	1.6	2.41	2.08

provide valid conclusions.				
PO5: Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.	2.44	1.6	2.49	2.18
PO6: The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.	2.36	1.5	2.37	2.08
PO7: Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.	2.39	0.9	2.37	1.89
PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.	2.36	1.5	2.37	2.08
PO9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.	2.43	1.8	2.69	2.31
PO10: Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and	2.33	1.7	2.96	2.33

design documentation, make effective presentations, and give and receive clear instructions.				
PO11: Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one‟s own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.	2.42	1.7	2.75	2.29
PO12: Life-long learning: Recognize the need for and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.	2.43	1.8	2.37	2.20

Final PO Attainment

	PO1	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**	**PO11**	**PO12**
Direct PO Attainment	2.67	2.68	2.66	2.70	2.71	2.63	2.32	2.81	2.73	2.73	2.71	2.67
80% of Direct PO Attainment	2.13	2.15	2.13	2.16	2.17	2.10	1.86	2.25	2.18	2.19	2.17	2.14
Indirect PO Attainment	2.3	2.14	2.15	2.08	2.18	2.08	1.89	2.08	2.31	2.33	2.29	2.2
20% of Indirect PO Attainment	0.46	0.43	0.43	0.42	0.44	0.42	0.38	0.42	0.46	0.47	0.46	0.44
Final PO Attainment	**2.59**	**2.58**	**2.56**	**2.58**	**2.61**	**2.52**	**2.24**	**2.67**	**2.65**	**2.65**	**2.63**	**2.58**

Table: 3.3.2.3 Final PO Assessment

Direct PSO Attainment

NBA Course code	Course Code	PSO1	PSO2
C101	A61BS1- Mathematics-I	2.85	2.89
C102	A61BS2- Engineering Chemistry	2.58	-
C103	A61BS3- Engineering Physics-I	1.70	1.70
C104	A61HS4- Professional Communication in English	2.55	-
C105	A61ES5- Engineering Mechanics	1.85	-
C106	A61ES6- Basic Electrical and Electronics Engineering	1.72	1.73
C107	A61HS7- English Language Communication Skills Lab	3.00	-
C108	A61ES8- Engineering Workshop	3.00	3.00
C109	A62BS1- Engineering Physic-II	1.13	1.12
C110	A62BS2- Mathematics-II	0.26	0.27
C111	A62BS3- Mathematics-III	1.03	1.03
C112	A62ES4- Computer Programming in C	0.59	-
C113	A62ES5- Engineering Graphics	1.78	1.79
C114	A62BS6- Engineering Chemistry Lab	3.00	3.00
C115	A62BS7- Engineering Physics Lab	3.00	3.00
C116	A62ES8- Computer Programming Lab	3.00	3.00
C201	A63HS1- Mathematics – IV	1.76	1.72
C202	A63PC2- Data Structures through C++	2.94	2.94
C203	A63PC3- Mathematical Foundations of Computer Science	3.00	3.00
C204	A63PC5- Digital Logic Design	2.79	2.80
C205	A63PC5- Object Oriented Programming through Java	2.99	2.99
C206	A63PC6- Data Structures through C++ Lab	3.00	3.00

C207	A63PC7- IT Workshop	3.00	3.00
C208	A63PC8- Java Programming Lab	3.00	3.00
C209	A64PC1- Computer Organization	2.87	2.87
C210	A64PC2- Database Management Systems	2.99	2.98
C211	A64PC3- Operating Systems	2.00	1.98
C212	A64PC4- Formal Languages and Automata Theory	1.53	1.53
C213	A64HS5- Business Economics and Financial Analysis	-	2.97
C214	A64PC6- Computer Organization Lab	3.00	3.00
C215	A64PC7- Database Management Systems Lab	3.00	3.00
C216	A64PC8- Operating Systems Lab	3.00	3.00
C301	A65PC1- Design and Analysis of Algorithms	2.93	2.92
C302	A65PC2- Data Communication & Computer Networks	2.91	2.94
C303	A65PC3- Software Engineering	2.95	2.95
C304	A65HS4- Fundamentals of Management	-	3.00
C305	A65PE6- Information Security	2.93	2.78
C306	A65PC7- Design and Analysis of Algorithms Lab	3.00	3.00
C307	A65PC8- Computer Networks Lab	3.00	3.00
C308	A65PC9- Software Engineering Lab	3.00	3.00
C309	A66PC1- Compiler Design	2.59	2.40
C310	A66PC2- Web Technologies	3.00	3.00
C311	A66PC3- Cryptography and Network Security	2.67	2.69
C312	A66PE5- Mobile Computing	2.98	2.99
C313	A66PE6- Object Oriented Analysis and Design	3.00	3.00
C314	A66HS7- Advanced Communication Skills Lab	-	-
C315	A66PC8- Web Technologies Lab	3.00	3.00
C316	A66PC9- Cryptography and Network Security Lab	3.00	3.00

C401	A67PC1- Data Warehousing & Data Mining	2.70	2.70
C402	A67PC2- Linux Programming	3.00	3.00
C403	A67PC3- Python Programming	3.00	3.00
C404	A67PE5-Human Computer Interaction	2.76	2.58
C405	A67PE6- Distributed Databases	3.00	3.00
C406	A67PE7- Software Process and Project Management	3.00	3.00
C407	A67PC7- Data Warehousing & Data Mining Lab	3.00	3.00
C408	A67PC8- Linux Lab	3.00	3.00
C409	A67PC9- Python Programming Lab	3.00	1.50
C410	A68PE1- Internet Of Things	3.00	3.00
C411	A68PE2- Predictive Analytics	3.00	3.00
C412	OE-IV - Principles of Electronic Communications	3.00	3.00
C413	A68PW4- Industry Oriented Mini Project	3.00	3.00
C414	A68SE5- Seminars	3.00	3.00
C415	A68CV6- Comprehensive Viva	3.00	3.00
C416	A68PW7- Major Project	3.00	3.00
Direct Assessment		**2.66**	**2.69**

Table: 3.3.2.4 Direct PSO Assessment

Indirect PSO Attainment

It is done by Employers, Alumni and Exit Questionnaires.

Table: 3.3.2.5 Indirect PSO Assessment

Program Outcomes	Employer	Alumni	Exit Survey	Assessment (0-3 scale)
PSO1: To Develop & motivate human resource to pursue Information Technology course; carry on research in real time applications & related fields and track their career.	2.32	2.2	2.44	2.32
PSO2: To implement the IT Infrastructure for Design & Deployment of the Project.	2.34	1.64	2.46	2.15

Final PSO Assessment

	PSO1	PSO2
Direct PSO Attainment	2.66	2.69
80% of Direct PSO Attainment	2.13	2.15
Indirect PSO Attainment	2.32	2.15
20% of Indirect PSO Attainment	0.46	0.43
Final PSO Attainment	**2.59**	**2.58**

Table: 3.3.2.6 Final PSO Assessment

CRITERION 4	Students' Performance	150

4. STUDENTS' PERFORMANCE (150)

Item (Information to be provided cumulatively for all the shifts with explicit headings, wherever applicable)	CAY	CAY*m1*	CAY*m2*	CAY *m3*	CAY *m4*	CAY *m5*	CAY *m6*
Sanctioned intake of the program (*N*)	60	60	60	60	60	60	60
Total number of students admitted in first year *minus* number of students migrated to other programs/institutions plus no. of studentsmigrated to this program (*N*1)	59	56	58	53	53	57	57
Number of students admitted in 2nd year in the same batch via lateralentry (*N*2)	06	04	06	01	00	00	01
Separate division students, if applicable (*N3*)	NIL	NIL	NIL	NIL	NIL	NIL	NIL
Total number of students admitted in the Program (*N*1 + *N*2 + N3)	65	60	64	54	53	57	58

Table B.4a

CAY – Current Academic Year

CAYm1- Current Academic Year minus1= Current Assessment Year

CAYm2 - Current Academic Year minus2=Current Assessment Year minus 1

LYG – Last Year Graduate minus 1

LYGm1 – Last Year Graduate minus 1LYGm2 – Last Year Graduate minus 2

Year of entry	Total No. students admitted *N*1 + *N*2 + N3 (As defined above)	Number of students who have successfully graduated without backlogs in any semester/year of study (Without Backlog means no compartmentor failures in any semester/year of study)			
		I Year	II Year	III Year	IV Year
2020-21(CAY)	65				
2019-20 (CAYm1)	60	20			
2018-19 (CAYm2)	64	28	30		
2017-18 (CAYm3)	54	30	31	31	
2016-17 (LYG)	53	28	25	25	25
2015-16(LYG*m*1)	57	30	28	28	27
2014-15 LYG m2)	58	38	35	35	35

Table B.4b

Year of entry	*N*1 + *N*2 + N3 (As defined above)	Number of students who have successfully graduated in stipulated period of study) [Total of with Backlog + without Backlog]			
		I Year	II Year	III Year	IV Year
2020-21(CAY)	65				
2019-20 (CAYm1)	60	28			
2018-19 (CAYm2)	64	34	46		
2017-18 (CAYm3)	54	39	40	42	
2016-17 (LYG)	53	33	32	33	33
2015-16(LYG*m*1)	57	35	40	38	37
2014-15 LYG m2)	58	47	48	50	48

Table B.4c

Enrolment Ratio (20)

	N	N1	Enrollment Ratio [(N1/N)*100]
2020- 21 (CAY)	60	59	98.33
2019-20 (CAYm1)	60	56	93.33
2018-19 (CAYm2)	60	58	96.67
Average [(ER1 +ER2 +ER3)/3]			96.11

Item (Students enrolled at the First Year Level on average basis during the previous threeacademic years starting from current academic year)	**Marks**
>=90% students enrolled	20
>=80% students enrolled	18
>=70% students enrolled	16
>=60% students enrolled	14
>=50% students enrolled	12
Otherwise	0

Table B.4.1

Success Rate in the stipulated period of the program (40)

Success rate without backlogs in any semester/year of study (25)

SI= (Number of students who have graduated from the program without backlog)/ (Number of students admitted in the first year of that batch and actually admitted in 2nd year via lateral entry and separate division, if applicable)

Average SI = Mean of Success Index (SI) for past three batches

Success rate without backlogs in any year of study = 25 × Average SI

Item	Last Year of Graduate, LYG(2016-17)	Last Year of Graduate minus 1, LYG*m*1 (2015-16)	Last Year of Graduate minus 2, LYG*m*2 (2014-15)
Number of students admitted in the corresponding First Year + admitted in 2nd year via lateral entry and separatedivision, if applicable	53	57	58
Number of students who have graduated without backlogs in the stipulated period	25	27	35
Success Index (SI)	0.47	0.47	0.60
Average SI	**0.51**		

Table B.4.2.1

Success rate without backlogs in any year= 25* 0.60 = 12.75.

Success rate in stipulated period of study (15)

SI= (Number of students who graduated from the program in the stipulated period of course duration)/ (Number of students admitted in the first year of that batch and actual admitted in 2nd year via lateral entry and separate division, if applicable)

Average SI = mean of Success Index (SI) for past three batches

Success rate = 15 × Average SI

Item	Last Year of Graduate (LYG)(2016-17)	Last Year of Graduate minus 1,LYG*m*1(2015-16)	Last Year of Graduateminus 2 LYG*m*2(2014-15)
Number of students admitted in the corresponding First Year + admitted in 2nd year via lateral entry and separate division if applicable	53	57	58
Number of students who have graduated in thestipulated period	32	34	46
Success Index (SI)	0.60	0.60	0.79
Average Success Index	0.66		

Table B.4.2.2

SUCCESS RATE =15 * 0.80 =9.95

Note: If 100% students clear without any backlog then also total marks scored will be 40 as both 4.2.1 & 4.2.2 will be applicable simultaneously.

Academic Performance in Third Year (15)

*Academic Performance Level = 1.5 * Average API (Academic Performance Index)*

API *= ((Mean of 3rd Year Grade Point Average of all successful Students on a 10 point scale) or (Mean of the percentage of marks of all successful students in Third Year/10)) x (number of successful students/number of students appeared in the examination)*

Successful students are those who are permitted to proceed to the Final year.

Academic Performance	CAYm3 (2017-18)	LYG (2016-17)	LYGm1(2015 16)
Mean of CGPA or Mean Percentage of all successful students(X)	7.54	6.00	5.95
Total no. of successful students (Y)	44	37	41
Total no. of students appeared in the examination (Z)	44	38	41
API = X* (Y/Z)	7.54	5.84	5.95
Average API = (AP1 + AP2 + AP3)/3	6.44		

*Assessment [1.5 * Average API]: 9.66*

Second Year (15)

*Academic Performance Level = 1.5 * Average API (Academic Performance Index)*

***API** = ((Mean of 2nd Year Grade Point Average of all successful Students on a 10 point scale) or (Mean of the percentage of marks of all successful students in Second Year/10)) x (number of successful students/number of students appeared in the examination)*

Successful students are those who are permitted to proceed to the Third year.

Academic Performance	CAYm2 (2018-19)	CAY*m3* (2017-18)	LYG (2016-17)
Mean of CGPA or Mean Percentage of all successful students(X)	6.42	7.21	6.46
Total no. of successful students (Y)	60	44	38
Total no. of students appeared in the examination (Z)	61	45	38
API = X* (Y/Z)	6.31	7.05	6.46
Average API = (AP1 + AP2 + AP3)/3	6.61		

Table B.4.4

Assesment [1.5 * AverageAPI]: 9.91

Placement, Higher Studies and Entrepreneurship (40)

Assessment Points = 40 × average placement

ITEM	LYG (2016-17)	LYGm1 (2015-16)	LYGm2 (2014 -15)
Total No. of Final Year Students (N)	37	41	55
No. of students placed in companies or Government Sector (x)	23	30	28
No. of students admitted to higher studies with valid qualifying scores (GATE or equivalent State or National Level Tests, GRE, GMAT etc.) (y)	4	9	7
No. of students turned entrepreneur in engineering/technology (z)	0	0	0
x + y + z =	27	39	35
Placement Index : (x + y + z)/N	0.73	0.95	0.64
Average placement= (P1 + P2 + P3)/3	0.77		

Table B.4.5

Assessment [40 * Average Placement] :30.93

4.5 a. Provide the placement data in the below mentioned format with the name of the program and the assessment year:

Programs Name and Assessment Year CAYm1 (2016-20)				
S.no	**Name of the student placed**	**Enrollment no.**	**Name of the Employer**	**Appointment letter referenceno. with date**
1	Anirudh Shinde	16K91A1244	ACXIOM CONSULTING	4/10/2019
2	Puvvada Sree Kamala	16K91A1238	TATA CONSULTANCY SERVICES	TCSL/DT20195218329/HYDERABAD
3	Nirusha Chappidi	16K91A1231	TATA CONSULTANCY SERVICES	TCSL/DT20195523903/HYDERABAD
4	Sathananda Deekshith	16K91A1252	TATA CONSULTANCY SERVICES	TCSL/DT20184502925/HYDERABAD
5	Ashok Rao Marthin	16K91A1227	TECH MAHINDRA	ASHOK RAO MARTHINENI/PT/1875509/MAY-21
6	P Shiva Kumar	16K91A1235	Euthissa Care Technolgies	16/9/2019
7	A Vinvitha	16K91A1201	COGNIZANT	13978782
8	Endal Rishika	16K91A1214	COGNIZANT	9360595
9	E Lalith Kumar	16K91A1215	MASS MUTUAL GLOBAL SERVICES INDIA LLP	2/2/2021
10	Dasari Bhargav	16K91A1211	ACCENTURE	C9537217
11	Duvvala Pranay Raj	16K91A1213	IBM	4/8/2021
12	Chandala Akhil	16K91A1208	INNOVACX	4/11/2019
13	D Pravalika	16K91A1210	INNOVACX	4/11/2019

14	M Srikari	16K91A1222	COGNIZANT	13978783
15	M Keerthi Reddy	16K91A1223	COGNIZANT	13978785
16	Samala Vikas Reddy	16K91A1243	COGNIZANT	13978790
17	S Shiva Ram	16K91A1245	IBM	4/8/2021
18	M Shravya	16K91A1224	TATA CONSULTANCY SERVICES	TCSL/DT20195543901/HYDERABAD
19	M Soumya	16K91A1226	MULTIPLIER AI SOLUTIONS	5/9/2019
20	R Sushmita Reddy	16K91A1239	MULTIPLIER AI SOLUTIONS	5/9/2019
21	V KAVYA	16K91A1253	MULTIPLIER AI SOLUTIONS	5/9/2019
22	R John Puneeth	16K91A1241	TATA CONSULTANCY SERVICES	TCSL/DT20184502930/HYDERABAD
23	M Vishal Kumar	16K91A1228	TATA CONSULTANCY SERVICES	TCSL/DT20184510930/HYD

Table B.4.5a

Programs Name and Assessment Year CAYm2 (2015-19)				
S.no	**Name of the student placed**	**Enrollment no.**	**Name of the Employer**	**Appointment letter referenceno. with date**
1	A SUPRIYA	15K91A1202	TATA CONSULTANCY SERVICE	TCS/DT20184596613/HYDERABAD
2	M KOUSHIKA	15K91A1219	TATA CONSULTANCY SERVICE	TCS/DT20184542458/HYDERABAD
3	M SIRI VALLI	15K91A1220	TATA	TCS/DT20173997433/HYDERABAD

			CONSULTANCY SERVICE	
4	A SREE LAXMI MANI DEEPIKA	15K91A1204	TATA CONSULTANCY SERVICE	TCS/DT20184543186/HYDERABAD
5	PUNNA SUMA NETHA	15K91A1227	TATA CONSULTANCY SERVICE	TCS/DT20184552102/HYDERABAD
6	N ROHITH KUMAR	15K91A1222	WIPRO	13/5/2019
7	M RACHANA	15K91A1247	COGNIZANT	13055226
8	G ANUSHA REDDY	15K91A1213	COGNIZANT	13055223
9	A HARSHITHA	15K91A1235	ALIENS DEVELOPERS	18/2/2019
10	A PRIYANKA	15K91A1236	PATH FRONT	PFSDS/B001/398/25012019
11	A VAMSIDHAR REDDY	15K91A1203	PRAMATI	28/12/2018
12	P AKSHAY KUMAR REDDY	15K91A1224	CSSI	8/1/2019
13	B PRANATHI	15K91A1206	VIRTUSA	8063016
14	A SUDHA	15K91A1201	PRAMATI	28/12/2018
15	M SRINATH	15K91A1246	ACCENTURE	22/9/2018
16	D ANIL	15K91A1210	ERWIN TECHNOLOGIES	26/10/2018
17	K SRAVANI	15K91A1216	VIRTUSA	8063018
18	MOHD. SALMAN	15K91A1218	PATHFRONT	PFSDS/B001/398/250120110
19	M SREE SAI	15K91A1221	PATHFRONT	PFSDS/B001/397/250120253
20	P DINESH REDDY	15K91A1225	PATHFRONT	PFSDS/B001/397/250120894

21	SHAIK SALMAN FARSI	15K91A1229	INTENSE TECHNOLOGIES	18/2/2019
22	M ROJA	15K91A1244	APTROID(SL)	18/2/2019
23	Y RAMESH REDDY	15K91A1232	APTROID(SL)	18/2/2019
24	P ROHITH	15K91A1250	VALUE MOMENTUM	8/9/2018
25	K RANDEEP KUMAR	15K91A1242	GLENWOOD SYSTEMS	10/9/2018
26	G AISHWARYA	15K91A1251	ATOS SYNTEL	5/3/2019
27	D CHANDANA	15K91A1240	COGNIZANT	27/4/2019
28	P NAGA RANI	15K91A1249	PATHFRONT	PFSDS/B001/405/25012019
29	G SREEJA	15K91A1241	ACCENTURE	22/9/2018
30	D KRUTHIKA	15K91A1239	COGNIZANT	13055286

Programs Name and Assessment Year CAYm3 (2014-18)				
S.no.	**Name of the student placed**	**Enrollmentno.**	**Name of the Employer**	**Appointment letter referenceno. with date**
1	D VAMSHI CHARAN REDDY	14K91A1219	ASPIRE SYSTEMS	9/6/2018
2	N SRI DEVYA DURGA SARVANI	14K91A1239	ASPIRE SYSTEMS	9/6/2018
3	P SINJUSHA	14K91A1240	ASPIRE SYSTEMS	9/6/2018
4	A SUSHMITHA REDDY	14K91A1203	ASPIRE SYSTEMS	9/6/2018
5	B BHAVITHA	14K91A1208	ASPIRE SYSTEMS	9/6/2018
6	K SAMHITHA	14K91A1236	ASPIRE SYSTEMS	9/6/2018
7	P MANIDHAR	14K91A1241	INTENSE TECHNOLOGIES	22/8/2018

8	A SRI LATHA	14K91A1205	INTENSE TECHNOLOGIES	22/8/2018
9	G BHARGAVI	14K91A1226	INTENSE TECHNOLOGIES	22/8/2018
10	K VINAY KUMAR	14K91A1234	INTENSE TECHNOLOGIES	22/8/2018
11	SAKETH AREPALLY	14K91A1206	WIPRO	13/5/2018
12	G NANDHINI	14K91A1224	WIPRO	13/5/2018
13	G SUSHMITHA	14K91A1230	WIPRO	13/5/2018
14	P RAMESH	14K91A1242	WIPRO	13/5/2018
15	P SAI AKSHAY	14K91A1243	WIPRO	13/5/2018
16	ABHISHEK KUMAR SINGH	14K91A1201	ACCENTURE	28/1/2019
17	K KEERTHI	14K91A1233	ACCENTURE	28/1/2019
18	S NIVEDITHA	14K91A1248	ACCENTURE	28/1/2019
19	T SAI ROHITH	14K91A1250	ACCENTURE	28/1/2019
20	V SNEHA LAXMI	14K91A1254	ACCENTURE	28/1/2019
21	BYREDDY SNEHA	14K91A1213	INFOSYS	12/10/2018
22	G SUSHMA	14K91A1228	INFOSYS	12/10/2018
23	V SRUTHI	14K91A1251	INFOSYS	12/10/2018
24	B MADHAVI	15K95A1201	INFOSYS	12/10/2018
25	KULDEEP SINGH	14K91A1207	PATHFRONT	21/10/2018
26	PRASANN GARG	14K91A1244	PATHFRONT	21/10/2018
27	V SRAVANI	14K91A1253	PATHFRONT	21/10/2018
28	V SANKALPITHA	14K91A1252	PATHFRONT	21/10/2018

Professional Activities (20)

Professional societies/chapters and organizing engineering events (5)

Academic Year: 2020- 21			
S.no	**Programme hosted by**	**Details of activity**	**Faculty/Students Participated**
1	TKRCET	The need and importance of innovation and intellectual property rights for Academic Community	93
2	TKRCET	Advanced Data Processing using ML, ANN & DL	80
3	TKRCET	Business Analytics using Python	90

Academic Year: 2019 -20			
S.no	**Programme hosted by**	**Details of activity**	**Faculty/Students Participated**
1	TKRCET	Python for Data science	72
2	TKRCET	Internet of Things	50
3	TKRCET	Data Analytics with AI	68

Academic Year: 2018 -19			
S.no	**Programme hosted by**	**Details of activity**	**Faculty/Students Participated**
1	TKRCET	Machine Learning using Python	40
2	TKRCET	Block chain Technology	68
3	TKRCET	Recent Trends in Industries	75

Publication of technical magazines, newsletters, etc. (5)

NEWSLETTER

2020-2021	2019-2020	2018-2019	2017-2018
March 2020	March 2019	March 2018	March 2017
June 2020	June 2019	June 2018	June 2017
September 2020	September 2019	September 2018	September 2017
December 2020	December 2019	December 2018	December 2017

2020-2021

Issue	Editorial Board	Publisher
March 2020	Dr. N. Satyanarayana S. Tarun Kumar (18K91A1253) K. Vinod Kumar(17K91A1226)	TKRCET
June 2020	Dr. N. Satyanarayana S. Tarun Kumar (18K91A1253) K. Vinod Kumar(17K91A1226)	TKRCET
September 2020	Dr. N. Satyanarayana S. Tarun Kumar (18K91A1253) K. Vinod Kumar(17K91A1226)	TKRCET
December 2020	Dr. N. Satyanarayana S. Tarun Kumar (18K91A1253) K. Vinod Kumar(17K91A1226)	TKRCET

2019-2020

Issue	Editorial Board	Publisher
March 2019	Mrs. C. Jaya Lakshmi K. Vinod Kumar(17K91A1226) P. Sree Kamala (16K91A1238)	TKRCET
June 2019	Mrs. C. Jaya Lakshmi K. Vinod Kumar(17K91A1226) P. Sree Kamala (16K91A1238)	TKRCET
September 2019	Mrs. C. Jaya Lakshmi K. Vinod Kumar(17K91A1226) P. Sree Kamala (16K91A1238)	TKRCET
December 2019	Mrs. C. Jaya Lakshmi K. Vinod Kumar(17K91A1226) P. Sree Kamala (16K91A1238)	TKRCET

2018-2019

Issue	Editorial Board	Publisher
March 2018	Dr. K. M. V. Madan Kumar Mrs. C. Jaya Lakshmi P. Sree Kamala (16K91A1238) B. Pranathi (15K91A1206)	TKRCET

June 2018	Dr. K. M. V. Madan Kumar Mrs. C. Jaya Lakshmi P. Sree Kamala (16K91A1238) B. Pranathi (15K91A1206)	TKRCET
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2017-2018

Issue	Editorial Board	Publisher
March 2017	Dr. K. M. V. Madan Kumar Mrs. C. Jaya Lakshmi B. Pranathi (15K91A1206) B. Darshitha(14K91A1218)	TKRCET
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Department of Information Technology

News Letter

Frequency: 3 months
Apr-June 2020
Volume-VI Issue- 2

Our Sincere Thanks to

Chairman	:	Sri. Teegala Krishna Reddy
Secretary	:	Sri. Teegala Harinath Reddy
Treasurer	:	Sri. Teegala Amarnath Reddy
Principal	:	Dr. D. V. Ravi Shanker
Editor-in-Chief	:	Prof. Dr. N. Satyanarayana, Head of Dept, IT
Faculty Advisors	:	Mrs. C. Jaya Lakshmi, Assoc.Professor, Dept. of IT

Our Motto is **"Indian in character, International in Excellence"**

Message from Management

Sri Teegala Harinath Reddy
Secretary, TKRES

Sri Teegala Krishna Reddy
Chairman, TKRES

Sri Teegala Amarnath Reddy
Treasurer, TKRES

At the outset, we congratulate the IT Department and specially the Newsletter Committee Members for their efforts in bringing out the News letter. Newsletter is an amalgamation of all the events held in the department and it plays an instrumental role in providing a greater exposure of the achievements accomplished by the students and the faculty. We wish all the very best in your endeavors.

Principal's Message:

Dr.Prof.D.V.Ravi Shankar

As students are the members of a progressive society, the teachers shall not fight today 'battle with yesterday's weapon, but they must prepare them to face all the eventualities of life. Thus, teachers' are the architects of a country. Consequently the true education should deepen our insight, widen our horizon and create a meaningful outlook. Equally the students are fortunate enough to have born in a free nation, with all the facilities to shape their career in such a way, that they should be part of a good and healthy society with progressive attitude towards divinity.

Administrative Officer:

G. L. Narsimha Reddy

All the best for TKRCET students for your bright future.

From the Editor's Desk:

Prof. Dr. N. Satyanarayana
Head of Dept. IT
Editor-in-Chief,
Dept. News Letter

I feel immense pleasure in releasing newsletter "ANVESHANA" Volume –VI Issue -2,mainly focuses on the Achievements of the Students and Faculty members from the IT dept in Curricular, Co-curricular and Extracurricular Activities.

The recent trends in the area of Information Technology and related areas.

About Our Department

The Department of Information Technology Established in the year 2006, and offers B. Tech degree in IT with an intake of 60. It has Sophisticated infrastructural, state-of-art labs and experienced faculty. The department is keen in academic exposure of the students to the latest domain trends by conducting a series of seminars, conferences, guest lectures, faculty development programmes, etc.

About Vision and Mission

If You Think of Vision and Mission as an Organization's Head and Heart, the Values it holds are its Soul.

--- Buzotta

Our Department's Vision and Mission are articulated in line with the Vision and Mission of our institution.

Our Department's Vision

Department of Information Technology strives to mould professionals so as to meet the global needs of the Industry as well as Research.

Our Department's Mission

Department of Information Technology Strives to continuously engage in

- Ensuring a quality teaching learning process in which theoretical knowledge is practically implemented to solve the global issue
- Preparing students for their career development to reach high peaks in multiple areas

Programme Educational Objectives (PEOs) Offered by IT Dept.

PEO 1

To create and sustain a community of learning in which students acquire knowledge and apply in their concerned fields with due consideration for ethical, ecological and economic issues

PEO 2

To provide knowledge-based services so as to meet the needs of the society and industry

PEO 3

To make the students understand, design and implement the concepts in multiple arenas.

PEO 4

To educate the students in disseminating the research findings with good soft skills so as to become successful entrepreneurs

Program Outcomes (POs)

A student will be able to

1. **Engineering knowledge**: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. **Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5. **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
6. **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7. **Environment and sustainability**: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11. **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12. **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PSO1:

To Develop & motivate human resource to pursue Information Technology course; carry on research in real time applications & related fields and track their career.

PSO2:

To implement the IT Infrastructure for Design & Deployment of the Project.

Faculty Development Program

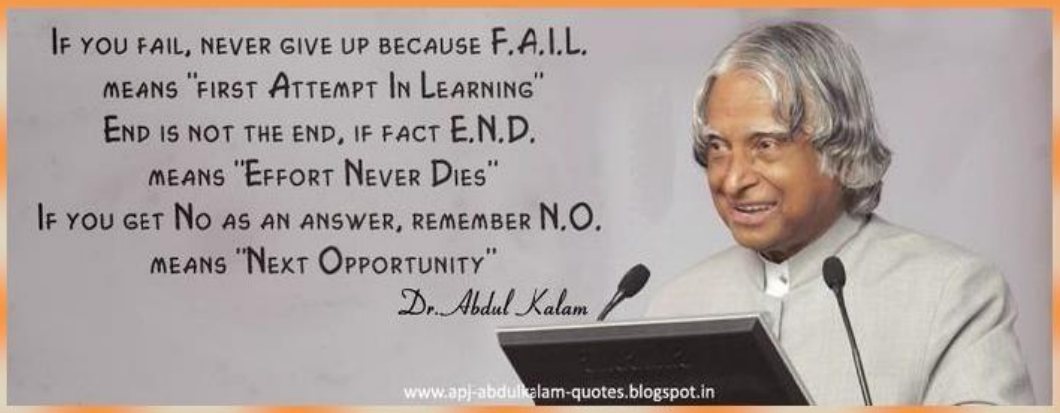
- Mrs. B. Shivani attended a 5 – Day Faculty Development Program on " Artificial Intelligence and Machine Learning in the month of May2020.
- Mrs. T. Radhika attended a 5- Day Faculty Development Program on "Artificial Intelligence and Machine Learning in the month of May2020.
- Mrs. T. Radhika attended a Faculty Development Program on Advances in " Python (Django and Flask), Python for Data Science and cyber security" in the month of May 2020 for one week conducted by Chadalawada Ramanamma Engineering College, Tirupathi.
- Mrs. T. Madhumathi attended webinar on "Problems faced by Women during COVID-19:Impact, Prevention & mitigation" held on june 30,2020.

EDITORIAL BOARD

Dr. N. Satyanarayana

S. TARUN KUMAR (18K91A1253)

K. VINOD KUMAR(17K91A1226)


IF YOU FAIL, NEVER GIVE UP BECAUSE F.A.I.L.
MEANS "FIRST ATTEMPT IN LEARNING"
END IS NOT THE END, IF FACT E.N.D.
MEANS "EFFORT NEVER DIES"
IF YOU GET NO AS AN ANSWER, REMEMBER N.O.
MEANS "NEXT OPPORTUNITY"
Dr. Abdul Kalam
www.apj-abdulkalam-quotes.blogspot.in

Participation in inter-institute events by students of the program of study (10)

A.Y:2017-18					
S.No	**College**	**Nature of Contest (Paper contest/ Design contest/ Technical Quiz/ Paper Expo etc.)**	**Date(s)**	**Participants**	**Awards**
1	JNTUH	Impack 2K17	21st & 22nd Jan	G. Harika Reddy	Participated
2	JNTUH	Impack 2K17	21st & 22nd Jan	Singusha ponigati	Participated
3	JNTUH	Impack 2K17	21st & 22nd Jan	Krishna Chaitanya	Participated
4	JNTUH	Impack 2K17	21st & 22nd Jan	Samhitha. K	Participated
5	JNTUH	Impack 2K17	21st & 22nd Jan	Madhulika	Participated
6	JNTUH	Impack 2K17	21st & 22nd Jan	D. Tarun Kumar	Participated
7	JNTUH	Impack 2K17	21st & 22nd Jan	M. Bhavya	Participated
8	JNTUH	Impack 2K17	21st & 22nd Jan	Nandhini	Participated
9	JNTUH	Impack 2K17	21st & 22nd Jan	G. sreeja	Participated
10	Hyderabad	Inter state under - 19 cricket	12th june	E. Sanketh	Selected
11	Quli qutub shah govt. polytechnic	Internet of Things	19th Aug	P. Dinesh Reddy	Partcipated
12	Govt. polytechnic, Masab tank	Mobile banking	31st Aug 2017-1st sep 2017	P. Dinesh Reddy	Got certificate
13	Govt. polytechnic, Masab tank	Mobile banking	31st Aug 2017-1st sep 2017	P. Rohith	Got certificate

14	Hyderabad	Rally of Rivers	1st sep 2017	Naga Rani	participated
15	Hyderabad	Rally of Rivers	1st sep 2017	Koushika	participated
16	Hyderabad	Rally of Rivers	1st sep 2017	Deepika	participated
17	Hyderabad	Rally of Rivers	1st sep 2017	Srivalli	participated

A.Y:2018- 19					
S.No	**College**	**Nature of Contest (Paper contest/ Design contest/ Technical Quiz/ Paper Expo etc.)**	**Date(s)**	**Participants**	**Awards**
1	Xplore New	Ethical hacking	25th Feb	P. Sree Kamala	participation
2	Xplore New	Ethical hacking	25th Feb	M. Sowmya	participation
3	Anurag group of Institutions	National level Technical fest	16th & 17th Mar	P. Lokesh	participation
4	Anurag group of Institutions	National level Technical fest	16th & 17th Mar	M. Sowmya	participation
5	Sri Indu College of Eng. & Tech.	Poster Presentation	23rd March	Ch. Nirusha	participation
6	Sri Indu College of Eng. & Tech.	Poster Presentation	23rd March	Soumya	participation
8	My Captain	Artificial Intelligence	May	P. Sreekamala	participation
9	Computer society of india	Mobile Apps Development In Android and IOS	4th & 5th Aug	M. Koushika	participation
10	JNTUH	Recent Trends in optimization Studies for engineering Applications	13th & 14th Aug2018	Ashok Rao	participation
11	JNTUH	Recent Trends in optimization	13th & 14th	Vikas Reddy	participation

		Studies for engineering Applications	Aug2018		
12	JNTUH	Recent Trends in optimization Studies for engineering Applications	13th & 14th Aug2018	S. Shiva Ram	participation
13	JNTUH	Recent Trends in optimization Studies for engineering Applications	13th & 14th Aug2018	P. Shiva Kumar	participation
14	JNTUH	Recent Trends in optimization Studies for engineering Applications	13th & 14th Aug2018	M. Shravya Reddy	participation
15	BITS Pilani	AI	25th & 26th Feb2018	S. Anurudh	participation
16	JNTUH	Recent Trends in optimization Studies for engineering Applications	13th & 14th Aug2018	D. Sree lekha	participation
17	JNTUH	Recent Trends in optimization Studies for engineering Applications	13th & 14th Aug2018	M. Keerthi Reddy	participation
18	NPTEL ONLINE CERTIFICATION	Data Base Management Systems	Aug – Sep 2018	P. sree kamala	Got 56% score
19	MEERPET MUNCIPALITY R.R.DIST	Swatchha Survekshman 2018	9/1/2018	E. Nikhila	participation

A.Y:2019-20					
S.No	**College**	**Nature of Contest (Paper contest/ Design contest/ Technical Quiz/ Paper Expo etc.)**	**Date(s)**	**Participants**	**Awards**
1	The Hyderabad Cricket Association	Hyderabad Under -19	Jan	E. Sanketh	Vinoo Mankad Trophy
2	Yashoda Cancer Institute	Yashoda cancer awareness 5K Run	Feb	K. Vinod Kumar	Participation
3	Telangana State level Recruitment board	Telangana State level Recruitment board	Jun	K. Vinod Kumar	Selected
4	NPTEL	C++	Jan – Mar	M. Prathyusha	certified
5	NPTEL	Ethical Hacking	12 weeks, July	A. sreeja	Certified
6	NCC	ATC VI(IUC –RDC)	16/09/2019	E. Nikhila	Ranked cadet
7	NCC	Annual Training Camp –X	9/9/2019-18/9/2019	E. Nikhila	Participation

CRITERION 5	FACULTY INFORMATION AND CONTRIBUTIONS	200

Name of the Faculty Member	Degree(highest degree)	University	Year of attaining higher qualification	Association with	Designation	Date on which Designated as Professor /	Date of Joining the Institution	Department	Specialization	Research Paper	Ph.D. Guidance	Faculty Receiving	Currently Associated (Y/N) Date of Leaving (In case Currently	Nature of Association
Dr.N.Satya Narayana	PhD	Nagarjuna University	2009	YES	Professor	02/12/2019	2/12/2019	IT	CSE	60	10	-	YES	Regular
U.Aswani Kumar	M.Tech (PhD)	JNTUH	2010	YES	Associate Professor	1/04/2013	24/01/2007	IT	CSE		-		YES	Regular
V.Ravi Kumar	M.Tech (Ph.D)	JNTUH	2010	YES	Associate Professor	1/04/2013	08/09/2008	IT	CSE		-		YES	Regular
C.Jaya Lakshmi	M.Tech	JNTUH	2011	YES	Associate Professor	1/04/2013	04/07/2007	IT	CSE		-		YES	Regular
J.Jyostna	M.Tech	JNTUH	2010	-	Assistant Professor	-	10/07/2013	IT	SE				NO(5/08/2021)	Regular
D.Kavitha	M.Tec	JNTUH	2011	YE	Assistant	-	30/07/2011	IT	CS		-		YES	Regular

	h			S	Professor				E					
T.Madhumathi	M.Tech	JNTUH	2011	YES	Assistant Professor	-	19/10/2012	IT	CSE		-		YES	Regular
B.Shivani	M.Tech	JNTUH	2012	YES	Assistant Professor	-	25/09/2012	IT	CSE		-		YES	Regular
T.Radhika	M.Tech	JNTUH	2013	YES	Assistant Professor	-	03/09/2012	IT	CSE		-		YES	Regular
K.Naresh	M.Tech	JNTUH	2012	-	Assistant Professor		01/12/2012	IT	SE		-		NO(14/06/2019)	Regular
M.Bala Krishna	M.Tech	JNTUH	2015	-	Assistant Professor	-	1/12/2016	IT	SE				NO(29/07/2021)	Regular
J.Ramesh	M.Tech	JNTUH	2017	YES	Assistant Professor	-	10/03/2020	IT	CSE		-		YES	Regular
N.Paparayudu	M.Tech	JNTUH	2012	YES	Assistant Professor	-	21/02/2019	IT	SE				YES	Regular
G.Aruna	M.Tech	JNTUH	2012	-	Associate Profe	-	19/10/2012	IT	CSE				NO(02/02/2019)	Regular

	(Ph.D)				ssor									
KMV Madan Kumar	Ph D	Nagarjuna University	2012	-	Professor	15/01/2013	14/02/2009	IT	CSE				NO(26/06/2019)	Regular
Kunda Venkata Prasad	Ph D		2015	-	Professor	20/01/2017	20/01/2017	IT	CSE				NO(30/05/2020)	Regular
Dr.Murganantham	Ph D	Anna University	2020	YES	Associate Professor	-	01/07/2021	IT	CSE				YES	Regular
B.Naga Jyothi	M. Tech	JNTUH	2015	-	Assistant Professor	-	01/03/2018	IT	CSE				NO(20/06/2020)	Regular

Student-FacultyRatio (SFR) (20)

CAY: 2020-2021

Number of UG Programs (n) = 01

Number of PG Programs (m) = Nil

Number of students in UG 2nd year (U1) = 60+6 = 66

Number of students in UG 3rd year (U2) = 60+4= 64

Number of students in UG 4th year (U3) = 60+6= 66

Number of students in the department = U1+U2+U3= 196

Number of Faculties in the department (excluding I year faculty) : 12

CAY: 2019-2020

Number of UG Programs (n) = 01

Number of PG Programs (m) = Nil

Number of students in UG 2nd year (U1) = 60+4 = 64

Number of students in UG 3rd year (U2) = 60+6= 66

Number of students in UG 4th year (U3) = 60+1= 61

Number of students in the department = U1+U2+U3=191

Number of Faculties in the department (excluding I year faculty) : 12

CAY: 2018-2019

Number of UG Programs (n) = 01

Number of PG Programs (m) = Nil

Number of students in UG 2nd year (U1) = 60+6 = 66

Number of students in UG 3rd year (U2) = 60+1= 61

Number of students in UG 4th year (U3) = 60+1= 61

Number of students in the department = U1+U2+U3= 188

Number of Faculties in the department (excluding I year faculty) : 13

Year	CAY(20-21)	CAYm1(19-20)	CAYm2(18-19)
u1.1	66	64	66
u1.2	64	66	61
u1.3	66	61	61
Total No. of Students in the Department (S)	196	191	188
No. of Faculty in the Department (F)	12	12	13
Student Faculty Ratio (SFR)	16.33	15.92	14.46
Average SFR	15.57		

Provide the information about the regular and contractual faculty as per the format mentioned below:

Faculty Cadre Proportion (25)

	Total number of regular faculty in the department	**Total number of contractual faculty in the department**
CAY	**12**	**-**
CAYm1	**12**	**-**
CAYm2	**13**	**-**

The reference Faculty cadre proportion is 1(F1):2(F2):6(F3).

F1 : Number of Professors required = 1/9 x Number of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of students(N).

F2: Number of Associate Professors required = 2/9 x Number of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of students(N).

F3: Number of Assistant Professors required = 6/9 x Number of Faculty required to comply with 20:1 Student-Faculty ratio based on no.ofstudents(N).

Year	**Professors**		**Associate Professors**		**Assistant Professors**	
	Required F1	**Available**	**Required F2**	**Available**	**Required F3**	**Available**
CAY(20-21)	1	1	2	3	6	8
CAYm1(19-20)	1	1	2	3	6	8
CAYm2(18-19)	1	2	2	3	6	8
Average Numbers	RF1 =1	AF1 =1.3	RF2 =2	AF2 =3	RF3 =6	AF3 =8

Cadre Ratio Marks={(1.3/1)+((3*0.6)/2)+((8*0.4)/6))}*12.5:=

[[(1.3)+[(1.8/2)]+[(3.2/6)]]*12.5=34.12

Faculty Qualification (25)

FQ =2.5 x [(10X +4Y)/F)] where

x is no. of regular faculty with Ph.D.,

Y is no. of regular faculty with M.Tech. F is no. of

Regular faculty required to comply 20:1 Faculty Student ratio.

Years	**X**	**Y**	**F**	**FQ=2.5 * [(10x + 4Y) / F)]**
CAY	**1**	**11**	**9**	**2.5*[(10*1+4*11)/9]=15.00**
CAYm1	**2**	**10**	**9**	**2.5*[(10*2+4*10)/9]=15.00**
CAYm2	**2**	**11**	**9**	**2.5*[(10*2+4*11)/9]=17.78**
Average Assessment				**12**

Faculty Retention (25)

N.o of regular faculty members in CAY=12 CAYm1=12 CAYm2=13

Description	**2019-2020**	**2020-2021**
N.o of Faculty Retained	11	9
Total No of Faculty	13	13
% of Faculty Retained	85	69
Average	77.00	

Retention Details

S.No	**Name of the Faculty**	**2018-2019**	**2019-2020**	**2020-2021**
1	Dr.N.Satyanarayana	-	√	√
2	U.Aswani Kumar	√	√	√
3	V.Ravi Kumar	√	√	√
4	C.Jaya Lakshmi	√	√	√

5	J.Jyostna	√	√	-
6	D.Kavitha	√	√	√
7	T.Madhumathi	√	√	√
8	B.Shivani	√	√	√
9	T.Radhika	√	√	√
10	K.Naresh	√	√	-
11	M.Bala Krishna	√	√	-
12	J.Ramesh	-	-	√
13	N.Paparayudu	-	-	√
14	G.Aruna	√	√	-
15	KMV Madan Kumar	√	√	-
16	Kunda Venkata Prasad	√	√	-
17	Dr.Murganantham	-	-	√
18	B.Naga Jyothi	√	√	-

Innovations by the Faculty in Teaching and Learning (20) To

Incorporate innovations in Teaching and Learning are:

Google Classroom

Google Classroom is mainly used for taking online classes. For conducting the classes, a large number of teachers turned to Google Classroom. It‟s a decent forum for engaging with students and taking courses. The assignment for students were posted and students responded by posting their answers.

A mind map is used visually organize information in a hierarchical way to understand the topics very easily.

The College has established Research and Development center to encourage interdisciplinary activities so that students can come up with challenging ideas The main aim of the Research and development center is to transform students can thus provide a variety of solutions in different areas.

Expert video subject lectures delivered by the various eminent resource persons are available in the digital library and it facilitates the faculty and make students to encourage E-Tutorials of NPTEL, MOOCs.

Students are encouraged to visit NPTEL videos, related to subject concerned to enrich their knowledge base about the subject.

Socially relevant innovative ideas of students are converted into market accepted products. Faculty members use department library, other IEEE Xplore to enhance their teaching skills. The faculty members are encouraged to participate in short term courses, staff development programs and workshops on advanced topics to keep pace with the advanced level of knowledge and skills.

Faculty encourages Brainstorming for creative thoughts where students build on to develop higher order thinking skills.

Faculty as participants in Faculty Development / Training activites / STTPs. (15)

Name of the Faculty	Max. 5 per Faculty		
	CAYm1(19-20)	CAYm2(18-19)	CAYm3(17-18)
U.Aswani Kumar	5	5	5
V.Ravi Kumar	5	5	5
C.Jaya Lakshmi	5	5	5
J.Jyostna	5	5	5
D.Kavitha	3	5	5
T.Madhumathi	5	5	3
B.Shivani	5	5	5
T.Radhika	5	5	5
K.Naresh	0	5	3
M.Bala Krishna	5	5	3
G.Aruna	-	5	5
KMV Madan Kumar	-	-	5
Sum	43	55	54
RF=Number of Faculty required to comply with 20:1 Student-Faculty ratio	9.80	9.55	9.40
Assessment = 3 * (sum/0.5RF))	26.33	34.55	34.47
Average assessment over three years	31.78		

Research and Development

Academic Research (30)

Academic Research (20)

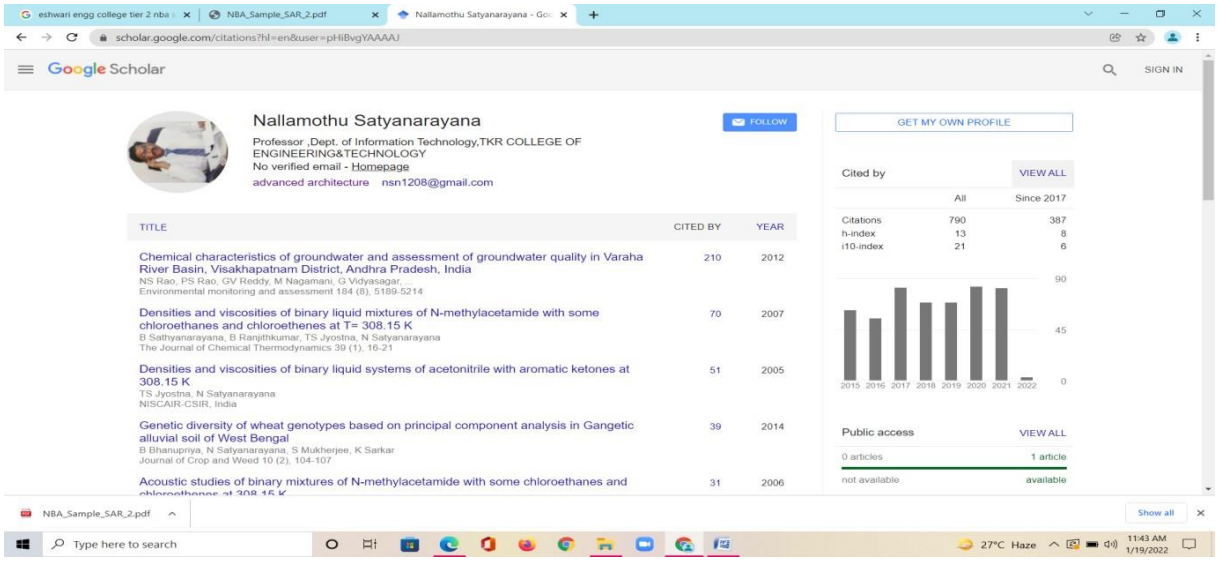
Academic research includes research paper publications, Ph.D. guidance, and faculty receiving Ph.D. during the assessment period.

Number of quality publications in refereed/SCI Journals, citations, Books/Book Chapters etc. (15)

Name of the Faculty	Number of quality publications in refereed /SCI Journals, Citations	Books / Book Chapters
Dr.N. Satya Narayana	07	-
U. Aswani Kumar	02	-
V.Ravi Kumar	01	-
KMV Madan Kumar	02	-
Kunda Venkata Prasad	03	
Dr.Murganantham	04	Secured and Optimal Routing with QOS in MANETS Techniques to improve the life time of wireless sensor network.

Ph.D. guided /Ph.D. awarded during the assessment period while working in the institute (5)

Faculty Name (research guide)	Name of the scholar	Topic of research	University & year of registration	Status
Dr.N.Satya Narayana	A.Pratap Reddy	Performance Analysis of Routing Protocol for Adhoc Wireless Networks	JNTUH,Hyderabad September 2010.	Awarded Ph.D May 2015.
	CH.Niranjan	Reconfigurable wireless communication networks for multimedia applications	JNTUH,Hyderabad September 2010.	Awarded Ph.D May 2016.
	K. Jayaram Nayak	Novel algorithms for Balanced Job Scheduling in Grids	JNTUH,Hyderabad September 2012.	Awarded Ph.D May 2017.
	S. Neelima	Multiobjective HABCBAT and AWF algorithms for Optimal Association Rule Mining.	JNTUH,Hyderabad November 2012.	Awarded Ph.D March 2019.
	V.Sudhershan Rao	Secure and Practical computation outsourcing techniques in Cloud Computing.	JNTUH,Hyderabad	Awarded Ph.D January 2021.
	K.Deepika	An optimized budgetary features selectiontechnique for improving accuracy for student academic performance.	JNTUH,Hyderabad November 2012.	Awarded Ph.D March 2021
	D Esther Rani	Knowledge Extraction and Analysis for the prediction of region specific crop yield.	JNTUH,Hyderabad	Thesis Submitted
	A.Vani	Enchancement of K-Means clustering algorithm for various application trends.	Rayalaseema University May 2010.	Awarded Ph.D December 2017
	N. Satish	Optimizing service reliability in software defined mobile adhoc networks.	Rayalaseema University May 2010.	Thesis Submitted
	M. Jagadeesh	Performance of energy efficiency and scalability in multipath routing protocols in wireless sensor networks.	Rayalaseema University May 2010.	Thesis Submitted


Google Scholar
Nallamothu Satyanarayana
Professor ,Dept. of Information Technology,TKR COLLEGE OF ENGINEERING&TECHNOLOGY
No verified email - Homepage
advanced architecture nsn1208@gmail.com
FOLLOW
GET MY OWN PROFILE
Cited by
VIEW ALL
All Since 2017
Citations 790 387
h-index 13 8
i10-index 21 6
TITLE CITED BY YEAR
Chemical characteristics of groundwater and assessment of groundwater quality in Varaha River Basin, Visakhapatnam District, Andhra Pradesh, India 210 2012
Densities and viscosities of binary liquid mixtures of N-methylacetamide with some chloroethanes and chloroethenes at T= 308.15 K 70 2007
Densities and viscosities of binary liquid systems of acetonitrile with aromatic ketones at 308.15 K 51 2005
Genetic diversity of wheat genotypes based on principal component analysis in Gangetic alluvial soil of West Bengal 39 2014
Acoustic studies of binary mixtures of N-methylacetamide with some chloroethanes and 31 2006
Public access
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0 articles
1 article
not available
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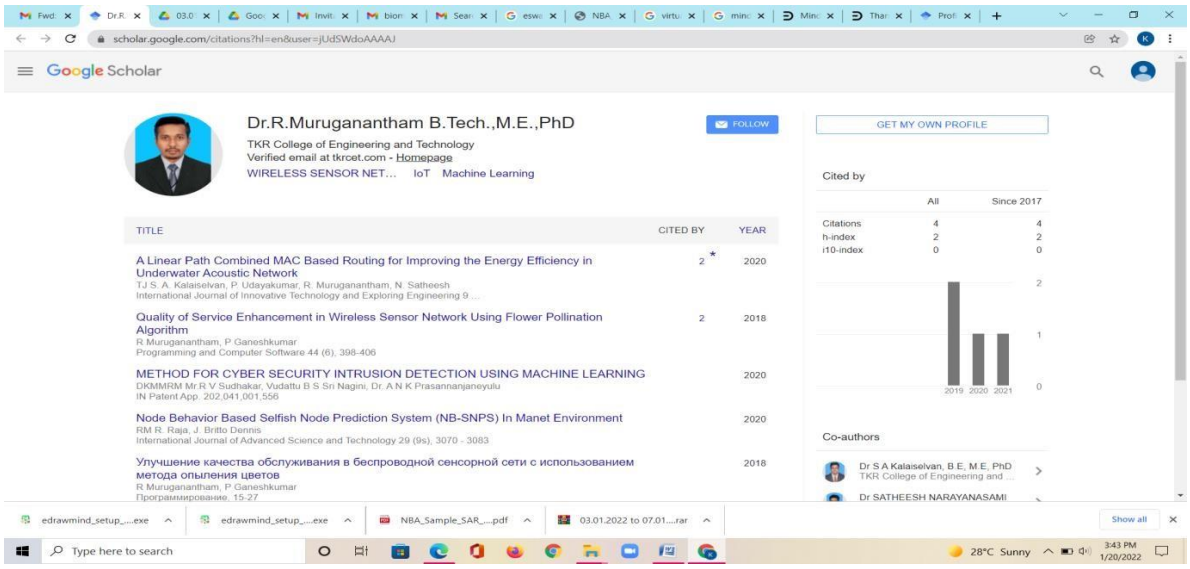
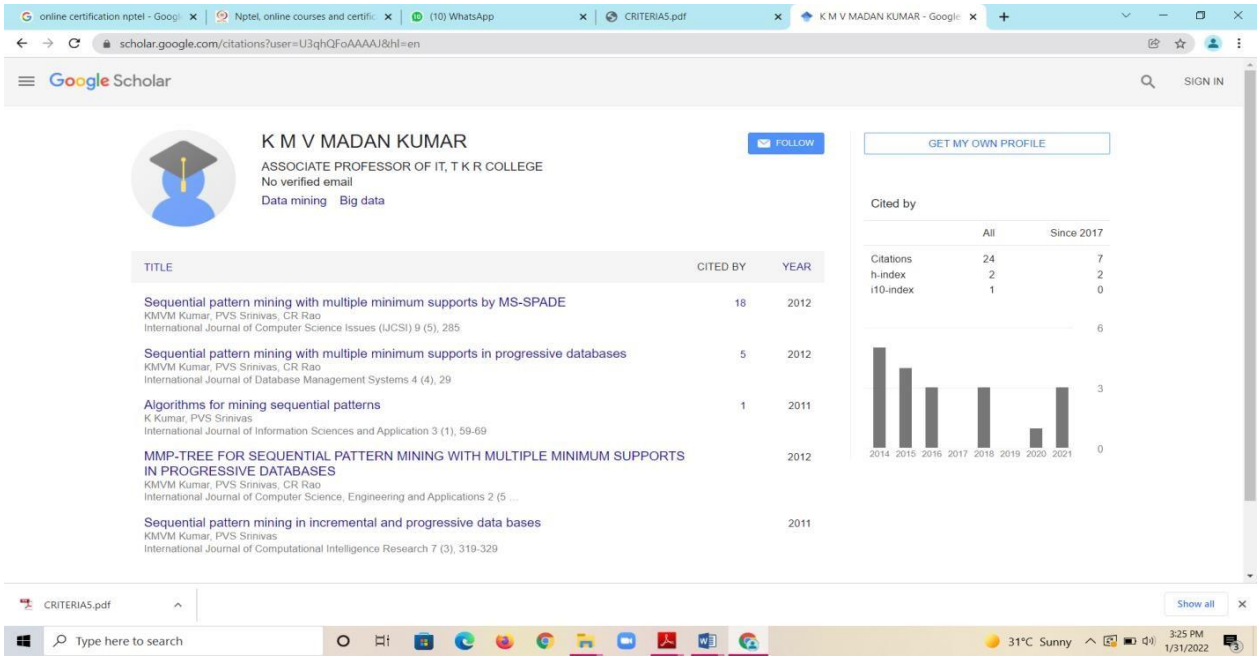

Google Scholar
Dr.R.Muruganantham B.Tech.,M.E.,PhD
TKR College of Engineering and Technology
Verified email at tkrcet.com - Homepage
WIRELESS SENSOR NET... IoT Machine Learning
FOLLOW
GET MY OWN PROFILE
Cited by
All Since 2017
Citations 4 4
h-index 2 2
i10-index 0 0
TITLE CITED BY YEAR
A Linear Path Combined MAC Based Routing for Improving the Energy Efficiency in Underwater Acoustic Network 2 2020
Quality of Service Enhancement in Wireless Sensor Network Using Flower Pollination Algorithm 2 2018
METHOD FOR CYBER SECURITY INTRUSION DETECTION USING MACHINE LEARNING 2020
Node Behavior Based Selfish Node Prediction System (NB-SNPS) In Manet Environment 2020
Улучшение качества обслуживания в беспроводной сенсорной сети с использованием метода опыления цветов 2018
Co-authors



Sponsored Research (5) : NO

Development activities (10)

Instructional materials:

- Question Banks comprising of indicative set of questions are given to students in all theory courses as mandatory practice.
- Lab Manual of lab courses
- Power Point Presentation

Working models/charts/monograms etc:

Charts for performing Experiments are being displayed in the Laboratories.

This prototype models helps the students to understand the working of basics and recent technologies in a better manner. Also, this can be used for better teaching and learning process.

Consultancy (from Industry) (5)2019-20

Project Title	Duration	Funding Agency	Amount	Action
Alumini Tracking System	9 Months	Pixel Designers	25,000	Under Process

2018-19

Project Title	Duration	Funding Agency	Amount	Action
Student Attendance System	6 Months	Pixel Designers	20,000	Completed

2017-18

Project Title	Duration	Funding Agency	Amount	Action
Library Management System	8 Months	Pixel Designers	30,000	Completed

Faculty Performance Appraisal and Development System (FPADS) 30

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Approved by AICTE, Affiliated to JNTUH)

Accredited by NAAC with 'A' Grade

(Autonomous)

FACULTY DETAILS Academic Year:

Name :
Department :
Qualification :
Designation :
Date of Joining :
E-Mail Id :
Total Experience :

TEACHING EXPERIENCE IN TKRCET: 10 Marks

Name	Designation	Period		Verified by HOD
		From	To	

Note: Each year carries 1 Mark to a Maximum of 10 Marks

TEACHING WORKLOAD

A) Total Teaching 10 Marks

Class	Year/Sem	Subject	Work Load	Verified by HOD
Total				

B) Remedial Classes 5 Marks

Class	Year/Sem	Subject	N.o of classes taken	Verified by HoD

Academic Performance based on Results 10 Marks

Year	Semester	Subjects	Theory	Practical	Pass Percent	Verified by HOD
Total						

Note : Marks to be awarded for each subject as per the following table given for Theory and Practical Subjects and the total of marks obtained to be divided by the number of subjects to arrive at the final mark.

Table: Pass percent and marks to be given for Theory and Practical Subjects

Practical subjects	**Theory subjects**
80-100% - 10 marks 60-80% - 8 marks 40-60% - 6 marks <40% - NIL	90-100% - 10 marks 80-90% - 8 marks 70-80% - 6 marks 60-70% - 4 marks <60% - NIL

Student Guideship	5 Marks

No. of UG projects Guided	No. of Ph. D Scholars Guided	
	Pursuing	Completed

Note : UG projects guided : 3 Marks No of PhD scholars Guided : 5 Marks

Dedication to Service		**10 Marks**
90-100%	-	10 Marks
80-90%	-	08 Marks
80-70%	-	07 Marks
<70%	-	Nil

Note : The percent of duty days to be arrived based on the no. of days the faculty has actually attended duty over the total no of actual working days.

Student Feedback **10 Marks**

Year	Semester	Subject	Feedback - Excellent/ Good / Average / Poor	Marks based on grade	Verified by Dean Academics
Total					

Note :Marks to be given for each subject as shown below based on grade and total marks to be divided by number of subjects.

Grade		**Marks**
Excellent	:	10 marks
Good	:	08 marks
Average	:	04 marks

E-Learning Certification

5 Marks

Name of Certificate	Name of the course	Period	Verified by HOD

Publication:

I. Articles 5 Marks

Title	Journal, Volume, issue & Pages	Cited in			UGC Journals	Verified by HOD
		SCI	Scopus	Others		

Note :Articles Published : SCI – 5 marks each; Scopus – 5 marks each; UGC Approved – 2 marks

II. Articles presented in Conferences **5 Marks**

Title	Date and Organizer of the Conference	International National /	Verified by HOD

Note : International Conference – 5 marks National Conference – 3 mark

III. BOOKS **2 marks**

Title with ISBN	**Authors**	**Publisher**	**International / National / Local**	**Verified by HOD**

Note: International – 2 marks each;

National/Local – 1 mark each;

Patents: **5 Marks**

Year	Description of patent	Status & Funds Received	Verified by HoD

Note : Patents approved : 5 Marks

Workshops attended/FDPs/EDPs/ Seminars / Symposia / Conferences / Webinars / Faculty Exchange Programme: **10 Marks**

Name of the event	Period	Place	Attended	Institute	Verified by HoD

Membership in Professional Bodies: 5 Marks

Name of the Professional Bodies	Verified by DEAN/PRINCIPAL

Additional Responsibilities: 08 Marks

1.

2.

3.

Date: **Signature of Faculty:**

ASSESSMENT BY HOD and DEAN/PRINCIPAL

	Mark	Remarks	Signature
HOD (70 Marks) DEAN/PRINCIPAL (30 Marks) TOTAL			

Note : Excellent – 75 marks / Good – 60 marks / Average – 50 marks

Visiting / Adjunct /Emeritus Faculty etc. (10) -NO-

CRITERION 6	FACILITIES AND TECHNICAL SUPPORT	80

Adequate and Well Equipped Laboratories, and Technical Manpower : (30)

The Department of Information Technology owns excellent laboratories which are extensively utilized round the I/II/III/IV-year. The laboratories are well equipped with the current technology Open source and software packages to enrich the learning experience with the support of Program specific curriculum, which is carefully designed to include the modern technological trends. Each laboratory maintains a stock register detailing the history of the equipment available.

Each laboratory operates on a specific schedule which is stated by the corresponding Time Table of the specific semester/branch Technical support is provided with the help of Laboratory Technicians guided by the faculty members Laboratory Technicians provide technical assistance such as trouble shooting of system, maintenance of system and its software.

They also help to detect the errors and to clear the errors in the programming languages. They facilitate in smooth conduct of lab experiments. Based on the need, technical staff extends their support to faculty and students even beyond working hours. The details of technical manpower support of the laboratories are depicted in Table A.6.1.

Table B.6.1.(A). Details of IT Lab

S. No.	Name of the Laboratory	No. of students per setup (Batch Size)	Name of the Important equipment	Weekly utilization status (all the courses for which the Lab is utilized)	Technical Manpower support		
					Name of the technical staff	Designation	Qualification
1.	IT-LAB-I **ODD SEM** CPPS, DWDM, Python Programming	Batch Size (30) **1:1**	Wipro desktops intel core 2duo, 2.93ghz processor GBRam 320GB HDD, Computer system with JDK 1.7 Computer system with turbo c. Computer with My Sql 5.5. Computer system with UML /UMBRELLA/ROSE. Computer system with Linux-C compiler. Computer system with LAMP/XAMMP. STAR.	48%	J. Ramesh	Assistant Professor	M.Tech
					P.Mamatha	Programmer	MCA

S. No.	Name of the Laboratory	No. of students per setup (Batch Size)	Name of the Important equipment	Weekly utilization status (all the courses for which the Lab is utilized)	Technical Manpower support		
					Name of the technical staff	Designation	Qualification
1.	IT-LAB-I **EVEN SEM** IT Workshop, Project	Batch Size (30) **1:1**	Wipro desktops intel core 2duo, 2.93ghz processor, 4 GB Ram 320GB HDD, Computer system with JDK 1.7 Computer system with turbo c Computer with My Sql 5.5 Computer system with UML/UMBRELLA/ROSE Computer system with Linux-C compiler Computer system with LAMP/XAMMP STAR	48%	N. Paparayudu	Assistant Professor	M.Tech
					P.Mamatha	Programmer	MCA

Table B.6.1(B). Details of IT Lab

S. No.	Name of the Laboratory	No. of students per setup (Batch Size)	Name of the Important equipment	Weekly utilization status (allthe courses for whichthe Lab is utilized)	Technical Manpower support		
					Name of the technical staff	Designation	Qualification
1	**IT-LAB-II ODD SEM** DS, LP/OS, LP, OS & CN	Batch Size (30) **1:1**	**DELL vostro 3681 Desktop** Dell 19 monitor-E1916HV 10th Generation Intel(R)core(TM) I5-10400-Processo (6 core,12M cache,12.9GHz to 4.3GHz) 8GBRam,8*1GB,DDR4,2666MHz.256GB, Computer with My Sql 5.5 Computer system with UML/UMBRELLA/ ROSE. Computer system with Linux-Compiler. Computer system with LAMP/XAMMP. STAR.	50%	V. Ravi	Associate professor	M.Tech (Ph.D)
					P. Mamatha	Programmer	MCA

S. No.	Name of the Laboratory	No. of students per setup (Batch Size)	Name of the Important equipment	Weekly utilization status (allthe courses for whichthe Lab is utilized)	Technical Manpower support		
					Name of the technical staff	Designation	Qualification
1	**IT- LAB-II EVEN SEM** DBMS, OOPS, WT, CASE TOOL	Batch Size (30) **1:1**	**DELL vostro 3681 Desktop** Dell 19 monitor-E1916HV 10th Generation Intel(R)core(TM) I5-10400-Processo (6 core,12M cache,12.9GHz to 4.3GHz) 8GBRam,8*1GB,DDR4,2666MHz.256GB, Computer with My Sql 5.5 Computer system with UML/UMBRELLA/ ROSE. Computer system with Linux-Compiler. Computer system with LAMP/XAMMP. STAR.	50%	V. Ravi	Associate professor	M.Tech (Ph.D)
					P. Mamatha	Programmer	MCA

Table B.6.1d Details of Centre of Excellence

S. No.	Name of the Laboratory	No. of students per setup (Batch Size)	Name of the Important equipment	Weekly utilization status (allthe courses for which the Lab is utilized)	Technical Manpower support		
					Name of the technical staff	Designation	Qualification
1.	Centre of Excellence	40	Device name: IR04 Processor:Intel(R) Core(TM),i5-10500 CPU @3.10GHz 8GB DDR3 1 TB SATA HardDiskDrive. 64 Bit OS. Window security.	50%	Dr. B. Rajinikanth	Professor	Ph.D

Additional facilities created for improving the quality of learning experience in Laboratories (25)

S. No	Facility Name	Details	Reason (s) for creating facility	Utilization	Areas in which students are expected to have enhanced learning	Relevance to PO's/ PSO's
1.	Tutorial Class Room	Conducted for analytical courses	Room is utilized when student group is small. Elective and Analytical courses arehandled in this space.	100%	Subjects opted by students	**POs:**1,2,5, 6,,10, 12 **PSOs:**1,2
2.	Seminar Hall	Technical videos by experts	Utilized for organizing Guest Lectures, Seminars, Conferences, FDPs, Webinars and any other similar events.	100%	Courses specified in Curriculum	**POs:**1,2,5, 6, 12 **PSOs:**1,2
3.	Departmen Library	Program Specific text books and reference books	Stacked with Books, Magazines, Journals,Project Reports etc. for the use of department students and faculty.	100%	Courses specified in Curriculum	**POs:**1,2,5, 6,12 **PSOs:**1,2
4.	Centre of Excellence	Research	Innovative Ideas	100%	Research	**Pos:1,2,3,4,5,6,7,8, 9,10,11,12 PSOs:1,2**

Laboratories: Maintenance and overall ambience (10)

Laboratory Maintenance:

1. Informative notice board containing safety, Do‟s & Don‟ts is properly maintained.
2. Well trained technical staffs are available for maintenance of computer and software.
3. Maintenance and Servicing of each lab is done every month and a servicing register is maintained.
4. Department is having internet speed of 200 Mbps and Wi –Fi speed of 100Mbps for students and Faculty usage.
5. Department is having three 30 KVA UPS, 240 VDC along with batteries are used as backup to support power failures.
6. As per the requirements minor repairs are carried out by the lab instructors and Faculty members.
7. Chart assisted learning to demonstrate the process is available.
8. Major repairs are outsourced as per the institutional policy.
9. Student‟s login / logout register is maintained in all laboratories.
10. Each laboratory maintains a stock register detailing the equipment history within it.
11. Two teaching faculty and a Lab instructor are in-charge of the overall functioning / maintaining of all labs.
12. All the computers are protected with licensed anti-virus software.
13. First aid kit is available in all laboratories.
14. Fire extinguishers are available in all floors.

Weekly maintenance:

1. Floor mopping of Labs are done twice in a week by housekeeping department of the college.
2. The fault is identified with the help of the Lab technician and the faculty Incharges weekly maintenance report is prepared and sent to the manager for action.

Monthly maintenance

1. The monthly maintenance report is generated in which the current condition of the equipments (Both consumables, non consumables and the furniture‟s) are mentioned and submitted to the principal.

2. After checking by a scrutinizing committee, the problems identified are rectified.

3. Calibrations of equipments are done for every six months and a separate file is maintained for calibration reports.

Yearly maintenance

1. Scrap items in the Laboratories are identified with the concern of the Lab incharges, HOD and inspection committee.
2. After decision by the inspection committee members the scrap items are sent to the scrap yard
3. Fire extinguishers are regularly refilled.

Preventive maintenance:

1. The working conditions of the equipments are periodically checked.
2. The students are given instructions in handling the equipments before doing the experiments
3. Laboratory manual is given to students which include Do‟s and Don‟ts of the Laboratory, list of experiments and the procedure of doing the experiments.
4. Stock register is maintained in Laboratories and audits are conducted by stock verification committee to check the availability and working of the equipments.
5. UPS back up is provided for all system based Laboratories.
6. Regular Antivirus software updation for proper working of the systems.

Breakdown maintenance

1. Minor repairs are carried out by the Lab technicians. When there is a Major repair, service report is obtained from industry person. Approval for Service of equipments is obtained from HOD, Principal, Purchase Manager, Chairman and fault is rectified.
2. Service register is maintained in each Laboratory.

UPS maintanance

The department of information technology is maintaining, UPS maintenance for the entire campus. The procedure for the UPS maintenance is given below.

1. The batteries of the UPS are cleaned regularly to prevent corrosion, removal of dust and are recorded in service register by UPS incharge.
2. Every monthly UPS incharge checks the water level, voltage level, loose connections in battery terminals and back up of UPS. If there is any deviation it is rectified by UPS incharge and is recorded in the service register.
3. Minor problems like battery low beep etc.. are carried out by UPS incharge.
4. When there is a major failure in UPS, service person from industry is called and fault is rectified.

Overall Ambience:

The infrastructure and added facilities in the Laboratories create the right ambience for the students to conduct experiments in the Laboratories.

1. Department has full-fledged State of Art laboratories to cater to all UG and PG courses as per curriculum requirements.
2. For every lab sufficient number of windows is available for ventilation and natural light.
3. Lighting system is very effective, along with the natural light in every corner of the rooms.
4. Cup-boards are available in each lab for students to place their belongings
5. Each Lab is equipped with white/black board, computer, Internet, and such other amenities
6. Each lab is equipped with Projectors to aid the teaching process.
7. Laboratory manuals are prepared and are available in soft and hardcopy.
8. Laboratories are kept open beyond office hours as per the need.
9. Research laboratory is available 24X7 for all faculties and students to carry out research work and projects.
10. Exclusively, a project lab has been provided for the students to carry out their mini and major project work. This will promote innovation and creativity in students.
11. All laboratories are well furnished.
12. Lab assessments are done as per the lab rubrics.
13. All windows in the Labs are covered by curtains.
14. All the doors are sufficiently wide and available in adequate numbers, to evacuate people outside in case of emergency. 15. The buildings are designed by professional architects, who give utmost care in providing academic ambience in all labs.
15. Every lab is assigned with a main faculty and a co faculty for effective functioning of labs.
16. All the labs are conducted as per the specified Timetable.
17. Number of each program is marked on the program/tables.
18. Do‟s and Don‟ts are displayed in the Laboratory.
19. List of programs are placed in the Laboratory.

Facilities:-

1. The lab utilized by the students for project work.
2. The mini projects are done by our students with the available facilities in all the Laboratories.
3. The personal computers are available for students to do project work.
4. Project Labs are furnished with required programs and modern software tools as are available for the students.
5. 155 Mbps internet connection is made available in the project Labs.
6. Wi-Fi connection is provided in the project Laboratory.
7. The students were using the reputed journals & papers through internet facility for their project work.

Utilization:-

1. Utilization for Project Labs start from 9.45 A.M-1.20 P.M during working hours and from 3.45 P.M – 5.00 P.M after the working hours.
2. On prior request and permission by the students can access the facility during non-working days also.
3. Laboratories are operated beyond the college hours for the convenience of the students.
4. Students can utilize the project Labs for final year projects and mini projects.

PROJECT LABORATOR (5)

The project laboratory has a key role in promoting practical and hands on learning throughoutthe program. It is mainly utilized for the Capstone Project and Mini Project Work.

- ✓ Odd Semester

  A68PW7 – Project Work I

- ✓ Even Semester

  A68PW7 – Project Work II

The laboratory is opened to the students from 9.00 a.m. to 5.00 p.m. If the students are willing to work on their projects, even after the working hours they are allowed to work along with a faculty member / lab technician.

1. Every lab integrates project making exercise.

2. Internet facilities have been provided.

3. Open source software is useful for the faculty who are pursuing their research projects and also useful for students in their projects

4. Apart from project lab, all the labs in the department are also used for doing projects.

5.As an additional outcome of the project laboratory, many projects are also carried out for theinstitute. Likewise

- System Registration Application

The project lab is equipped with the major equipment which are shown below:

Table 6.4 Important Equipment in Project Laboratory

Name of the Equipment
DELL Yostro 3681 Desktop • Dell 19 Monitor-E1916HV • 10th Generation Intel(R)core(TM) • I5-10400-Processor • (6 core,12M cache,12.9GHz to 4.3GHz) • 8GBRam,8*1GB,DDR4,2666MHz.256GB, • M.2Pcle,NVMe solid state drive +1TB 720 rpm3.5 SATA Hard Drive. • Windows 11 Pro • English 3yr Advance Exchange Service • Computer system with turbo C
Dell 19 monitor-E1916HV 19-inch LED Backlit LCD Monitor.
DELL USB Multimedia Key Board
DELL USB Optical Mouse
Epson LQ 1150 printer-2
Netgear 24 port Switcher-3
20 KVA Numeric Digital DELL True Online UPS System using IGBT Technology (DC 240V) Exide 6EL Tubular Batteries with M.S.Rack
DELL DVD Writer

DELL LED Projector

6.5. Safety Measures in Laboratory (10)

SAFETY MEASURES IN LABORATORIES

Sr. No.	Name of the Laboratory	Safety measures
1.	IT Lab-I	**Precautions in Laboratory:** • General Rules of Conduct in Laboratories are displayed. • Fire Extinguishers are placed in proper location to steer clear of fire accidents. • Good ventilation: Air conditioner and fan are fitted in the lab for the computer user to be comfortable. • Dust free environment: Collection of dusts prevented as often as possible in the computer. The floor is always being kept clean. • Periodical servicing of the lab equipment. • Avoiding the use of cell phones. • Appropriate storage areas • Permission denied for pen drives. • Sign the log-out register before leaving the lab. • Computers should be turned off properly before leaving the lab. • Students must remove their foot wears before • The student must check the computer unit and its peripherals attached before using it. The student must immediately inform the instructor if there‟s any defect, error or damage observed at the computer (hardware/software). • Protection from power problems: The surge protectors, the use of UPS to prevent any damage caused by power fluctuations • Good lightening: The laboratories are well illuminated to provide light to make the room bright for all the activities carried out. • Proper dress code for students was insisted. • Anti-virus software installed in all the computer system. • First Aid boxes are available in all areas throughout the department.

2.	IT Lab-II	• General Rules of Conduct in Laboratories are displayed. • Fire Extinguishers are placed in proper location to steer clear of fire accidents. • Good ventilation: Air conditioner and fan are fitted in the lab for the computer user to be comfortable. • Dust free environment: Collection of dusts prevented as often as possible in the computer. The floor is always being kept clean. • Periodical servicing of the lab equipment. • Avoiding the use of cell phones. • Appropriate storage areas • Permission denied for pen drives. • Sign the log-out register before leaving the lab. • Computers should be turned off properly before leaving the lab. • Students must remove their foot wears before • The student must check the computer unit and its peripherals attached before using it. The student must immediately inform the instructor if there‟s any defect, error or damage observed at the computer (hardware/software). • Protection from power problems: The surge protectors, the use of UPS to prevent any damage caused by power fluctuations • Good lightening: The laboratories are well illuminated to provide light to make the room bright for all the activities carried out. • Proper dress code for students was insisted. • Anti-virus software installed in all the computer system. • First Aid boxes are available in all areas throughout the department.
3.	Centre of Excellence	• General Rules of Conduct in Laboratories are displayed. • Fire Extinguishers are placed in proper location to steer clear of fire accidents. • Good ventilation: Air conditioner and fan are fitted in the lab for the computer user to be comfortable. • Dust free environment: Collection of dusts prevented as often as possible in the computer. The floor is always being kept clean. • Periodical servicing of the lab equipment. • Avoiding the use of cell phones. • Appropriate storage areas

		• Permission denied for pen drives. • Sign the log-out register before leaving the lab. • Computers should be turned off properly before leaving the lab. • Students must remove their foot wears before • The student must check the computer unit and its peripherals attached before using it. The student must immediately inform the instructor if there‟s any defect, error or damage observed at the computer (hardware/software). • Protection from power problems: The surge protectors, the use of UPS to prevent any damage caused by power fluctuations • Good lightening: The laboratories are well illuminated to provide light to make the room bright for all the activities carried out. • Proper dress code for students was insisted. • Anti-virus software installed in all the computer system. • First Aid boxes are available in all areas throughout the department.

CRITERION 7	Continuous Improvement	50

7. CONTINUOUS IMPROVEMENT (50)

Actions taken based on the results of evaluation of each of the POs & PSOs (20)

PO Attainment Levels and Actions for improvement – CAYm1 – Mention for relevant POs

POs	Target Level	Attainment Level	Observations
PO1: Engineering Knowledge			
PO1	**2.22**	**2.55**	Target achieved
Action 1: More problems will be given for practice **Action 2:** Practical approach of teaching programming to be adopted			
PO2: Problem Analysis			
PO2	**2.22**	**2.50**	Target achieved
Action 1: Students will be motivated to solve the Engineering problems.			
PO3: Design/development of Solutions			
PO3	**2.22**	**2.59**	Target achieved
Action 1: Students will be motivated to solve the problems independently			
PO4: Conduct Investigations of Complex Problems			
PO4	**2.22**	**2.58**	Target achieved
Action 1: Students will be encouraged to design experiments for enriching their knowledge.			
PO5: Modern Tool Usage			
PO5	**2.22**	**2.55**	Target achieved
Action 1: Arranged guest lecturer and seminar for awareness of modern engineering tools.			

PO6 : The Engineer and Society			
PO6	**2.22**	**2.69**	Target achieved
Action 1: Conducted Social Service activities as part of NSS			
PO7: Environment and Sustainability			
PO7	**2.22**	**2.43**	Target achieved
Action 1: Encouraged students to take up socio-economic based activities. **Action 2:** Students are encouraged to do projects on E-waste management.			
PO8: Ethics			
PO8	**2.22**	**2.67**	Target achieved
Action 1: Instructions were given to the students regarding the ethics to be followed in the college.			
PO9 : Individual and Team Work			
PO9	**2.22**	**2.76**	Target achieved
Action 1: Students will be involved in group discussions, seminars and presentations, so that they can develop their soft and interpersonal skills.			
PO10: Communication			
PO10	**2.22**	**2.82**	Target achieved
Action 1: Students are trained in Communication skills. **Action 2:** Library hour is added in the timetable, so that the student can spend quality time in reading many books, magazines, journals to improve their communication skills and technical knowledge.			
PO11: Project Management and Finance			
PO11	**2.22**	**2.70**	Target achieved
Action 1: Conducted workshop on “Entrepreneurship development opportunities” to create awareness among students			
PO12: Life-long Learning			

PO12	**2.22**	**2.69**	Target achieved
Action 1: Seminar to be conducted on awareness on competitive exams for higher studies.			

Note: PSOs, if applicable to be added appropriately.

PSOs	**Target Level**	**Attainment Level**	**Observations**
PSO1: To develop and motivate human resource to pursue IT course; carry on research in real-time applications and related fields and track their career.			
PSO1	**2.22**	**2.63**	Target achieved
Action 1: Conducted Workshop, Seminars on recent technologies **Action 2:** Students are encouraged to participate in paper presentation, workshops ,etc.			
PSO2: To implement the IT infrastructure for design and deployment of the projects.			
PSO2	**2.22**	**2.65**	Target achieved
Action 1: Conducted Workshop, Seminars on "Entrepreneurship development" **Action 2:** Guest lectures on current trends.			

Table B.7.1

Similar Tables should be presented for CAY*m*1 and CAY*m*2

Academic Audit and actions taken thereof during the period of Assessment (10)

(Academic Audit system/process and its implementation in relation to Continuous Improvement)

The Academic audits are conducted as per the affiliated university / institute standards and evaluated. The process consists of internal audits and external audits. Audits are conducted for faculties, Laboratories, and departmental activities. The academic audit team consist of Dean Academic of the institution, IQAC member of the department and senior faculty member.

The following records are verified during the internal academic audits.

- Academic Calendar
- Syllabus coverage
- Individual time table
- Work load
- Class list
- Lab batch list and lab records
- Lesson plan
- Attendance register
- Model question papers / previous university question papers
- Assignment questions
- Quiz question papers
- Result analysis
- Internal Assessment and External Assessment
- Attendance (coaching class)
- Additional resources to students (notes, ppt, etc.)

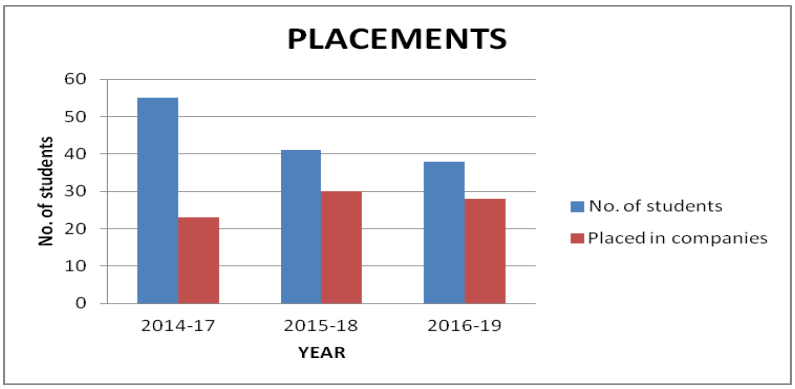
Improvement in Placement, Higher Studies and Entrepreneurship (10)

Assessment is based on improvement in:

- *Placement: number, quality placement, core industry, pay packages etc.*
- *Higher studies: performance in GATE, GRE, GMAT, CAT etc., and admissions in premierinstitutions*
- *Entrepreneurs*

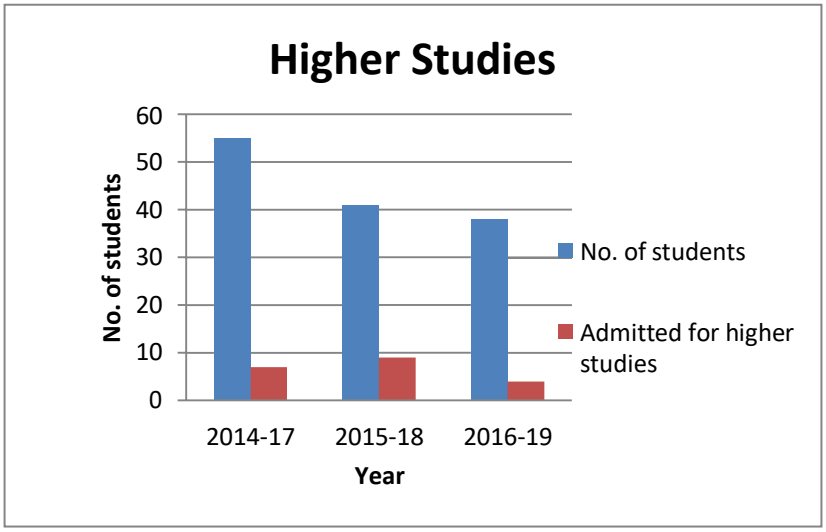
Placements:

- In 2014- 2017 Batch 23 students placed in various companies.
- In 2015 - 2018 Batch 30 students placed in various companies.
- In 2016 - 2019 Batch 28 students placed in various companies.



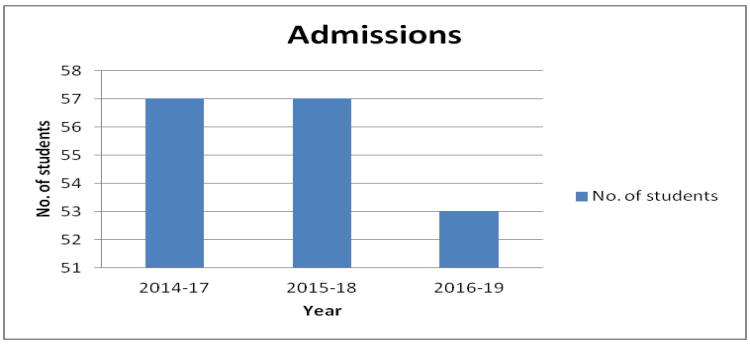
Higher Education:

- In 2014-2017 Batch 7 students went for Higher studies like M. Tech, MS.
- In 2015-2018 Batch 9 students went for Higher studies like M. Tech, MS.
- In 2016-2019 Batch 4 students went for Higher studies like M. Tech, MS.



Admitted Students:

- In 2014-2017 Batch , number of admitted students are 57
- In 2015-2018 Batch , number of admitted students are 57
- In 2016-2019 Batch , number of admitted students are 53



2016 Placed students

Name of the company	No. of Student Placed	Salary Package
Acxiom Consulting	1	2.43 LPA
Tata Consultancy Services	6	3.36L
TECH MAHINDRA LTD	1	3.40LPA
Euthissa Care Technology	1	2.40LPA
Multiplier AI Solutions	3	2.50LPA
Cognizant	5	4 LPA
Mass Mutual	1	2.41 LPA
Accenture	1	3.6LPA
IBM	2	4.25LPA
INNOVACX	2	3.5 LPA

2015 Placed students

Name of the Company	Number of Students Placed	Pay packeage
Tata Consultancy Services	5	3.5 LPA
Pramathi	2	2.5 LPA
Wipro	1	3.3 LPA
Erwin	1	4 LPA
Virtusa	2	3.6 LPA
Path Front	5	2 LPA
APTROID	2	2 LPA
Aliens Group	1	2.5 LPA
Valumomentum	1	3.6 LPA

Intense Technologies	1	3 LPA
ATOS Syntel	1	3.2 LPA
Gleen Wood System	1	2.60LPA
Cognizant	4	4 LPA
Accenture	2	3.6 LPA
CSSI	1	3.5LPA

2014 PLACED STUDENTS

Name of the company	**No.of Student Placed**	**Salary Package**
Asprie Systems	6	2.2 LPA
Intense Technologies	4	1.8 LPA
Wipro	5	3.2 LPA
Accenture	5	3.6 LPA
Infosys	4	3.25 LPA
Path Front	4	2 LPA

Improvement in the quality of students admitted to the program (10)

Assessment is based on improvement in terms of ranks/score in qualifying state level/national level entrances tests, percentage marks in Physics, Chemistry and Mathematics in 12th Standard and percentage marks of the lateral entry students.

Item		**CAY**	**CAY*m*1**	**CAY*m*2**
National Level Entrance Examination (Name of the	**No. of Students admitted**			
	Opening Score/Rank			
Entrance Examination)	**Closing Score/Rank**			
State/University/Level Entrance	**No. of Students**	59	56	58

Examination/Others	**admitted**			
TSEAMCET	**Opening Score/Rank**	16007	18194	16936
(Name of the Entrance Examination)	**Closing Score/Rank**	78422	90025	96710
Name of the Entrance Examination for Lateral Entry orlateral entry details	**No. of Students admitted**	4	6	1
	Opening Score/Rank	1000	1063	0
TSECET	**Closing Score/Rank**	1510	2852	0
Average CBSE/Any other Board Result of admitted students (Physics, Chemistry & Maths)				

Table B.7.4

CRITERION 8	First Year Academics	50

8. FIRST YEAR ACADEMICS (50)

First Year Student-Faculty Ratio (FYSFR) (5)

Please provide First year faculty information considering load

Name of the Faculty member	PAN NO	Qualification	Date of Receiving Highest Degree	Area of Specilization	Designation	Date of Joining	Teaching Load (%)			Currently Associated (Yes/No)	Nature of Association (Regular/ Contract)	Date of reliving
							CAY	CAYm1	CAYm2			
Daita Vighna Anil Kumar	AJZPA2065R	M.Sc. & PhD	14/06/2012	MATHS	PROF.	10/05/2013	35	25	25	YES	REGULAR	
Rajeshwari	ALKPC7467P	M.SC	08/05/2003	STATISTICS	ASSOC. PROF	01-07-2009	25	25	20	YES	REGULAR	
Dr.B.Rajini kanth	AJAPB3855B	M.Sc. & Ph.D	16/12/2005	ENGG. PHYSICS	PROFESSOR	04-01-2012	40	36	40	YES	REGULAR	
M.Venkateshwarlu	AJXPV2458F	M.SC	10/05/2007	PHYSICS	ASST. PROF	21-09-2007	0	25	30	YES	REGULAR	

Dr. Sudha Menon	AHMPM0098H	M.A & Ph.D	16/08/2012	ENGLISH	PROF.	18-12-2018	36	36	0	YES	REGULAR	
Rebeka glory	AYVPV4122H	MA	14/05/2015	ENGLISH	ASST. PROF	31-12-2015	0	0	32	YES	REGULAR	
S.Anusha	BKHPR0485C	M.SC	20/05/2008	CHEMISTRY	ASST. PROF	31-08-2015	36	36	36	YES	REGULAR	
R.N.S.Kalpana	AXLPR1928C	M.E/M.TECH	24/11/2010	VLSI	ASST. PROF	11-07-2016	0	0	36	YES	REGULAR	
E.Prabhakar	AAUPE9032A	M.E/M.TECH	12/12/2014	VLSI	ASST. PROF	16-06-2014	0	40	0	YES	REGULAR	
K Shalini	AXCPV2866Q	M.E/M.TECH	26/12/2015	Embedded systems	ASST. PROF	03-03-2020	40	0	0	YES	REGULAR	
M Bharath Kumar	BKCPB0814Q	M.E/M.TECH	16/12/2016	POWER ELECTRONICS	ASST. PROF	12-06-2017	40	40	0	YES	REGULAR	
G Suresh Kumar Reddy	ASWPG9878Q	M.E/M.TECH	19/12/2013	POWER ELECTRONICS	ASST. PROF	17/04/2015	0	0	36	NO	REGULAR	31-07-2019
C.Jayalakshmi	AXRPC5015F	M.E/M.TECH	30/12/2011	CSE	ASSOC. PROF	04-07-2007	20	20	20	YES	REGULAR	
N.Pavani Kumari	AIDPN3978K	M.E/M.TECH	19/11/2011	CAD/CAM	ASST. PROF	07-11-2011	0	20	0	YES	REGULAR	
Naveena latha	BGIPK1863Q	ME/M.TECH & Ph.D	25/10/2019	MACHINE DESIGN	PROF.	02-01-2016	0	0	18	YES	REGULAR	

N Paparayudu	AWJPN3573A	M.E/ M.TECH	20/12/2012	SE	ASST. PROF	21-02-2019	18	0	0	YES	REGULAR	

Data for first year courses to calculate the FYSFR:

Year	Number of students (approved intake strength) N	Number of faculty members (considering fractional load) F	FYSFR (N/F)	*Assessment = (5 ×20)/ FYSFR (Limited to Max. 5)
2018-19 CAYm2	60	4	15	6.67
2019-20 CAY*m*1	60	4	15	6.67
2020-21 CAY	60	4	15	6.67
Average	60	4	15	6.67

Table B.8.1

Qualification of Faculty Teaching First Year Common Courses (5)

Assessment of qualification = (5*x* +3*y*)/*RF*,

X = Number of Regular Faculty with Ph.D,

Y = Number of Regular Faculty with Post-graduate qualification

RF = Number of faculty members required as per SFR of 20:1, Faculty definition as defined in 5.1

Year	*X (*Number of Regular Faculty with Ph.D)	*Y (* Number of Regular Faculty with Post-graduate qualification)	*RF (*Number of faculty members required as per SFR of 20:1)	Assessment of faculty qualification *[(5x + 3y)/RF]*
2018-19 CAYm2	02	04	03	07.33
2019-20 CAY*m*1	03	03	03	08.00
2020-21 CAY	03	03	03	08.00
Average Assessment				7.77

Table B.8.2

First Year Academic Performance (10)

Academic Performance = ((Mean of 1st Year Grade Point Average of all successful Students on a 10 point scale) or (Mean of the percentage of marks in First Year of all successful students/10)) x (number of successful students/number of students appeared in the examination)

Successful students are those who are permitted to proceed to the second year.

Get details from 4.2 & 4.3

Academic performance	***2019-20 (CAYm1)***	***2018-19 (CAYm2)***	***2017-18(CAYm3)***
Mean of CGPA or mean percentage of all successful students (X)	*7.05*	*6.39*	*7.07*
Total Number of successful students (Y)	*55*	*55*	*44*
Total Number of students appeared in the examination (Z)	*56*	*58*	53
API [X*(Y/Z)]	*6.92*	*6.06*	5.87

Average API [(AP1+AP2+AP3)/3]: 6.28

Assessment = Average API: 6.28

Attainment of Course Outcomes of first year courses (10)

Describe the assessment processes used to gather the data upon which the evaluation of Course Outcomes of first year is done (5)

(Examples of data collection processes may include, but are not limited to, specific exam questions, laboratory tests, internally developed assessment exams, oral exams assignments, presentations, tutorial sheets etc.)

Course Outcome Assessment Process

- Course outcomes are assessed based on Internal marks (Assignments, Objective, Descriptive), and End semester examinations.
- To calculate the attainment process of COs the internal and external marks for each course is collected and the calculation is based on threshold.
- The value attained from the internal marks is multiplied with 0.3 (Weightage 30%) for internal attainment.
- The value attained from the external marks is multiplied with 0.7 (Weightage 70%) for external attainment.
- The final attainment of each course is addition of internal attainment and external attainment
- If the target is not attained corrective measures are taken by conducting guest lectures, seminars and workshops.

Assessment Processes and Tools

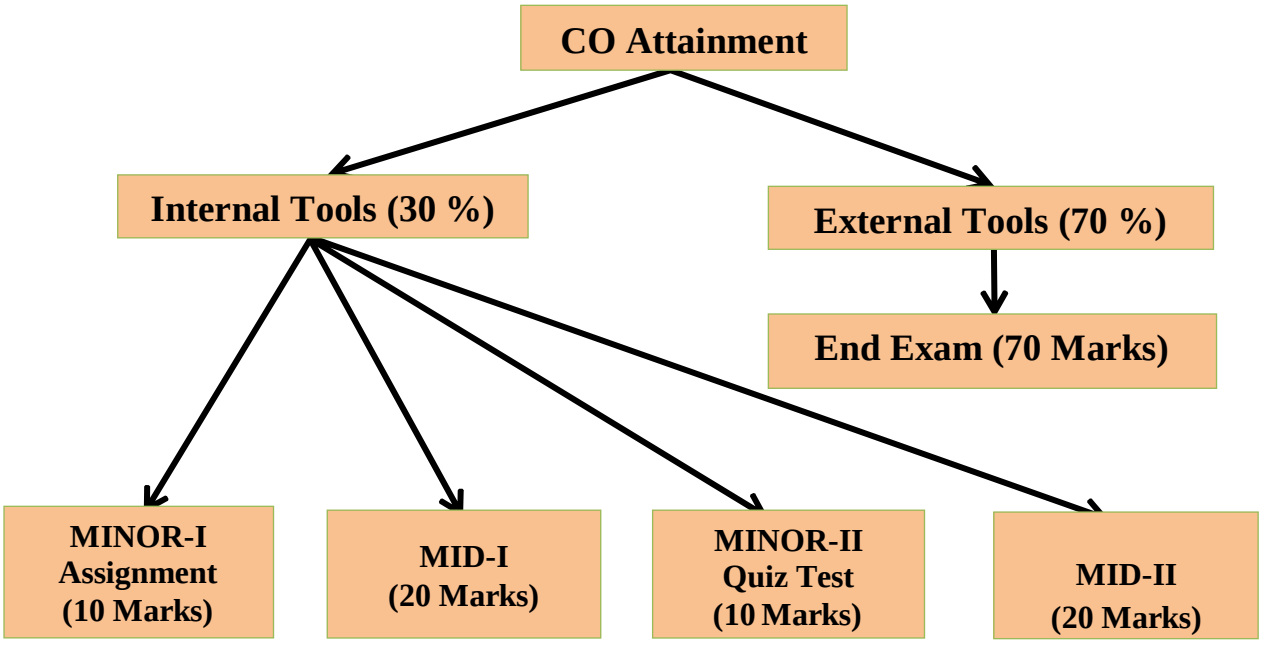


Fig.8.4.1.1. Assessment Processes and Tools

Internal Assessment Process:

Component	Internal Examinations	Components of Evaluation	Marks	Nature of examination
Theory	Internal -I	Test-I	10	Assignment
		Mid-I	05	Objective
			15	Descriptive
	Internal-II	Test-II	10	Multiple choice questions
		Mid-II	05	Objective
			15	Descriptive
		Average of Internal - I & Average of Internal –II		
Practical	Daily evaluation	Record	05	Theory, procedure, observations, calculations, and results.
		Observation	05	Theory, procedure, observations, calculations, and results.
		Viva voce	05	Viva voce.
	Practical examinations	Internal –I	15	Theory, procedure, observations, calculations, and results.
		Internal -II	15	Theory, procedure, observations, calculations, and results.
		Average of Internal - I & Average of Internal –II		

Table: 8.4.1.1 Internal Assessment Process

End Semester Assessment Process:

Component	Name of the examination	Components of Evaluation	Marks	Items used
Theory	Semester end examination	University end examination	70	Short and Long essay questions.
Practical	Semester end examination	Design/code	15	Theory, procedure, observations.
		Execution and results	45	Calculations and results.
		Viva voce	10	Viva voce

Table: 8.4.1.2 End Semester Process

Record the attainment of Course Outcomes of all first year courses (5)

Program shall have set attainment levels for all first year courses.

(The attainment levels shall be set considering average performance levels in the university examination or any higher value set as target for the assessment years. Attainment level isto be measured in terms of student performance in internal assessments with respect the COs of a subject plus the performance in the University examination)

Refer to 3.2.2 for further details

Measuring Course Outcomes attained through Semester End Examinations:

Attainment Level 1: 50% students scoring more than or equality 5 grade points out of 10.

Attainment Level 2: 60% students scoring more than or equality 5 grade points out of 10.

Attainment Level 3: 70% students scoring more than or equality 5 grade points out of 10.

Measuring CO attainment through Internal Assessments:

Attainment Level 1: 50% students scoring more than or equality 50% of marks.

Attainment Level 2: 60% students scoring more than or equality 50% of marks.

Attainment Level 3: **70%** students scoring more than or equality 50% of marks.

Course Outcome Attainment

Final Course Outcome Attainment = 30% weightage to Internal Assessment + 70% weightage to Semester End Examination

NBA Course code	Course Code-Course Name	Internal Attainment	External Attainment	Final attainment (IA*30%+EA*70%)
C101	BBSM1-Engineering Mathematics-I	2.70	2.00	2.21
C102	BBSP2-Applied Physics-I	1.80	3.00	2.64
C103	BHSEN-Professional Communication Language	2.70	3.00	2.91
C104	BBSBE-Basic Electrical Engineering	2.95	3.00	2.99
C105	BBSEG-Engineering Graphics	2	0	0.45
C106	BBSEW-Engineering Workshop	3	3	3
C107	BBEEL2-Basic Electrical Engineering Lab	3	3	3
C108	BE22-Professional Communication Language Lab	3	3	3
C109	BBSM2-Engineering	2.50	2.00	2.15

	Mathematics–II			
C110	BBSP3-Applied Physics-II	2.30	3.00	2.79
C111	BBSC1-Engineering Chemistry	3.00	3.00	3.00
C112	BBSED-Electronics Devices and Circuits	2.25	3.00	2.78
C113	BBSCP-Computer Programming Using C	2.30	2.00	2.09
C114	BP113-Applied Physics Lab	3	3	3
C115	BCH2-Engineering Chemistry Lab	3	3	3
C116	BEDCL2-Electronics Devices and Circuits Lab	3	3	3
C117	BCPL2-Computer Programming using C Lab	3	3	3

Table: 8.4.2 CO Attainment

Attainment of Program Outcomes from first year courses (20)

Indicate results of evaluation of each relevant PO and/or PSO, if applicable (15)

The relevant program outcomes that are to be addressed at first year need to be identified by the institution.

Program Outcome attainment levels shall be set for all relevant POs and/or PSOs *through first year courses.*

(Describe the assessment processes that demonstrate the degree to which the Program Outcomes are attained through first year courses and document the attainment levels. Also include information on assessment processes used to gather the data upon which the evaluation of each Program Outcome is based indicating the frequency with which these processes are carried out)

Procedure Followed to Measure PO and PSO Attainment

Assessment tools & processes used for measuring the attainment of each of Program Outcomes and Program Specific Outcomes. The following methods of assessment are identified for assessing the Program Outcomes & Program Specific outcomes

Assessment Tools and Process

Direct Method:

- Continuous Internal Examination (CIE) Tests, Assignments.
- Semester End Examinations (SEE).
- Practical Test.

PO Attainment: Mention first year details from table 3.1.3

NBA Course code	Course Code-Course Name	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101	BBSM1-Engineering Mathematics-I	2.21	2.21	2.23	2.19	2.19	2.21	-	-	2.17	2.21	2.17	2.21
C102	BBSP2-Applied Physics-I	2.66	2.64	2.64	-	2.64	-	-	-	-	-	-	-
C103	BHSEN-Professional Communication Language	2.91	-	-	-	-	-	-	2.91	2.91	2.91	2.91	2.91
C104	BBSBE-Basic Electrical Engineering	2.99	2.98	2.99	2.99	2.99	2.99	2.99	-	-	-	-	-
C105	BBSEG-Engineering Graphics	0.45	--	--	--	--	--	--	--	--	--	--	--
C106	BBSEW-Engineering Workshop	3.00	--	--	--	3.00	--	--	--	--	--	--	--
C107	BBEEL2-Basic Electrical Engineering Lab	3.00	3.00	3.00	3.00	3.00	3.00	3.00	--	--	--	--	--
C108	BE22-Professional Communication Language Lab	3.00	--	--	--	--	--	--	3.00	3.00	3.00	3.00	3.00
C109	BBSM2-Engineering	2.14	2.15	2.16	2.15	2.15	2.15	2.15	-	-	2.15	2.15	2.15

	Mathematics–II												
C110	BBSP3-Applied Physics-II	2.79	2.79	2.79	-	2.79	-	-	-	-	-	-	-
C111	BBSC1-Engineering Chemistry	3.00	3.00	-	-	-	3.00	3.00	-	3.00	-	-	-
C112	BBSED-Electronics Devices and Circuits	2.78	2.78	2.78	2.75	2.78	2.76	2.78	-	-	-	-	-
C113	BBSCP-Computer Programming Using C	2.09	2.09	2.09	2.09	2.09	-	-	-	2.13	-	2.09	2.09
C114	BP113-Applied Physics Lab	3.00	3.00	3.00	3.00	3.00	--	--	--	--	--	--	--
C115	BCH2-Engineering Chemistry Lab	3.00	3.00	--	--	--	3.00	3.00	--	3.00	--	--	--
C116	BEDCL2-Electronics Devices and Circuits Lab	3.00	3.00	3.00	3.00	3.00	3.00	3.00	--	--	--	--	--
C117	BCPL2-Computer Programming using C Lab	3.00	3.00	3.00	3.00	3.00	--	--	--	3.00	3.00	3.00	3.00
Direct Attainment*		2.65	2.74	2.70	2.69	2.72	2.76	2.85	2.96	2.74	2.65	2.55	2.56

Table B.8.5.1

* Direct attainment level of a PO is determined by taking average across all courses addressing thatPO. Fractional numbers may be used for example 1.55.

Note: Add PSOs; if applicable

Direct PSO Attainment

NBA Course code	Course Code-Course Name	PSO 1	PSO2
C101	BBSM1-Engineering Mathematics-I	2.21	2.17
C102	BBSP2-Applied Physics-I	2.64	-
C103	BHSEN-Professional Communication Language	2.91	2.91
C104	BBSBE-Basic Electrical Engineering	2.99	-
C105	BBSEG-Engineering Graphics	0.45	--
C106	BBSEW-Engineering Workshop	3.00	--
C107	BBEEL2-Basic Electrical Engineering Lab	3.00	3.00
C108	BE22-Professional Communication Language Lab	3.00	3.00
C109	BBSM2-Engineering Mathematics–II	2.15	2.15
C110	BBSP3-Applied Physics-II	2.79	-
C111	BBSC1-Engineering Chemistry	3.00	-
C112	BBSED-Electronics Devices and Circuits	2.78	-
C113	BBSCP-Computer Programming Using C	2.09	2.09
C114	BP113-Applied Physics Lab	3.00	--
C115	BCH2-Engineering Chemistry Lab	3.00	--
C116	BEDCL2-Electronics Devices and Circuits Lab	3.00	3.00
C117	BCPL2-Computer Programming using C Lab	3.00	3.00
Direct Attainment*		2.65	2.66

Actions taken based on the results of evaluation of relevant POs (5)

(The attainment levels by direct (student performance) are to be presented through Program level Course-PO matrix as indicated)

PO Attainment Levels and Actions for improvement – CAYm1 – Mention for relevant POs

POs	Target Level	Attainment Level	Observations
PO1: Engineering Knowledge			
PO1	**2.7**	**2.65**	Target not achieved
Action 1: Conducted extra classes for physics and mathematics, so that they are able to keep up with what is being taught in the classrooms			
PO2: Problem Analysis			
PO2	**2.5**	**2.74**	Target achieved
Action 1: Power point presentations and ICT teaching method will be adapted for better understanding. **Action 2:** Conducted extra tutorial classes to improve the performance of students in end examinations.			
PO3: Design/development of Solutions			
PO3	**2.6**	**2.70**	Target achieved
Action 1: Students will be motivated and trained to solve the problems independently			
PO4: Conduct Investigations of Complex Problems			
PO4	**2.4**	**2.69**	Target achieved
Action 1: Provide expert Lectures **Action 2:** ICT teaching method			

PO5: Modern Tool Usage			
PO5	**2.2**	**2.72**	Target achieved
Action 1: Arranged guest lecturer and seminar for awareness of modern engineering tools.			
PO6 : The Engineer and Society			
PO6	**2.1**	**2.76**	Target achieved
Action 1: Conducted Social Service activities as part of NSS			
PO7: Environment and Sustainability			
PO7	**2.1**	**2.85**	Target achieved
Action 1: Encouraged students to plant a tree. **Action 2:** Encouraged students to take up socio-economic based activities.			
PO8: Ethics			
PO8	**2.0**	**2.96**	Target achieved
Action 1: Instructions were given to the students regarding the ethics to be followed in the college. **Action 2**: Ethics related course added in upcoming semester.			
PO9 : Individual and Team Work			
PO9	**2.1**	**2.74**	Target achieved
Action 1: Students will be involved in group discussions, seminars and presentations, so that they can develop their soft and interpersonal skills.			
PO10 : Communication			
PO10	**2.00**	**2.65**	Target achieved
Action 1: Students are trained in Communication skills. **Action 2:** Library hour is added in the time table, so that the student can spend quality time in reading many books, magazines, journals to improve their communication skills.			
PO11 : Project Management and Finance			

PO11	**2.23**	**2.55**	Target achieved
Action 1: Conducted workshop on "Entrepreneurship development opportunities" to create awareness among students			
PO12 : Life-long Learning			
PO12	**2.93**	**2.56**	Target not achieved
Action 1: Create case studies for understanding the impact of the subjects in real time. **Action 2:** Seminar to be conducted on awareness on competitive exams for higher studies. **Action 3:** Motivating the students to analyse the depth of the subject. **Action 4:** MOU"s with organization help the students to learn recent trends with ease.			

Table B.8.5.2

Note: PSOs, if applicable to be added appropriately.

PSOs	Target Level	Attainment Level	Observations
PSO1: To develop and motivate human resource to pursue IT course; carry on research in real-time applications and related fields and track their career.			
PSO1	**2.7**	**2.65**	Target not achieved
Action 1: Extra tutorial classes provided to improve the performance of students in the exams. **Action 2:** Remedial classes conducted for weaker students. **Action 3:** Students are encouraged to participate in paper presentation, workshops etc.			
PSO2: To implement the IT infrastructure for design and deployment of the projects.			
PSO2	**2.6**	**2.67**	Target achieved
Action 1: Conducted Workshop, Seminars on "Entrepreneurship development" **Action 2:** Guest lectures on current trends.			

Table B.8.5.2

CRITERIA 9	STUDENT SUPPORT SYSTEMS	50

Mentoring System to help at individual level (5)

- An effective Student mentoring system has been implemented in Department of Information Technology.
- All the students are coming under this system from the date of joining the college.
- A Mentoring Register has been distributed to all the faculty members of the department. Each faculty member is allocated with 20 students under the mentoring system.
- Number of faculty mentors available :12
- Number of students per mentor :20
- Faculties will have a meeting with the students periodically and their Academic progress and all his activities are discussed and noted in the register
- The students personal detail along with their academic performance and progress is updated in the mentor book maintained by the mentor.

Counseling is provided on the following parameters:

- **Academic/Course work specific**-The faculty mentors discuss the issues related to academics and grades with the assigned students leading to improved academic achievement in both theory and lab subjects.

  Outcome: It helps students to learn and hone their study skills by attending classes regularly, and dropout rates have been reduced to a great extent.

- **Skill based**- Mentoring is provided by assigned faculty to guide students to enroll for additional courses and help them to develop skills and behaviors necessary to succeed professionally.

  Outcome: It helps students become aware of the current trends and equip them suitably

- **Career advancement/ higher studies** -Mentoring is also provided on the various companies visiting the campus and kind of skill sets and preparation required for each company and also on the opportunities for higher studies.

  Outcome: opportunities for placement and higher studies.

- Any discrepancies in the student behavior like Attendance , etc will be questioned and will be counseled with care

Feedback analysis and Rewards and Corrective Measures taken, if any (10)

- **Feedback collected for all courses: Yes**
- **Feedback collection process:** Feedback is collected through feedback form with the parameters to be considered, the name of the faculty handling the subjects for each class is prepared. A schedule is prepared for feedback by Dean of the Academics to the respective departments.
- Percentage of students participating: 80% to 90%

Feedback analysis process

- Feedback is taken through format for each semester.
- All students of each class are given opportunity to express their opinion with regards to effectiveness in teaching by a teacher, which is detailed in the feedback format.
- This feedback helps the department to take corrective measures whenever required. It also helps the teachers in improving their teaching methodology.
- The feedback system helps to assess the compatibility between the subject teacher and the class.
- The collected feedback is analyzed and a report is generated for each faculty for every subject.

The following are the metrics during the analysis process? :

- Teaching Methodology
- Communication Skill

- Class control
- Faculty Performance
- Interactive learning of student

The comments used during the analysis process

- To appreciate efforts of faculty
- To rectify deficiencies through counseling
- To improve teaching effectiveness
- To motivate faculty to support professional development planning

Basis of reward / corrective measures Reward:

- Appreciation Certificate
- Performance is recorded in the faculty appraisal.

Corrective Measure:

If the feedback is low on the faculty, the faculty is counseled**,** assistance is provided wherever needed for improving teaching Indices used for measuring quality of teaching and learning:

Feedback on facilities (5)

Every Semester feedback is collected from students manually for improving the quality of Infrastructure, library, Housekeeping, hostels, Transport facility.
Any issues related to food court, bank facility, medical facility, etc. when reported to faculty, Dean or principal are solved immediately

The feedback analysis is done and corrective actions are taken for improvement.

.Self Learning (5)

The following facilities are made available for students to promote self-learning

The library is well equipped to provide Web based learning with access to on line journals,

open access resources, open access E-journals and open access directories

S.No	Materials for self learning	Available/Organized	Utilization
1	Books, articles and Materials for competitive exam	Library	Daily
2	Magazines	Library	Daily
3	Journals and Review articles	Library	Daily
4	Project Report	Library	Daily
5	NPTEL and educational videos	Library	Daily
6	Seminars, guest lectures and workshops	Department	As and when required

Table 9.4. Materials for self learning and their utilization

Career Guidance, Training, Placement (10)

Effective career guidance services are provided including counseling for higher studies.

Higher Education Cell (HEC)

The Higher Education Cell promotes the interests of students who wish to pursue higher education after their undergraduate studies. The Cell conducts programmes to:

- Create an interest in higher education as a necessity to meet career aspirations that a student can potentially achieve.
- Make the students realize the prospect of higher studies and guide them to identify their area of interest, course, college and university within India and abroad
- provide students with up-to-date information about their career growth and kindle their interest towards investing in hard work, optimum use of time and financial resources to shape their future
- Provide guidance to prepare and approach such examinations confidently

The Placement & Training Cell -Facilities:

- The Placement and Training Cell is functioning under the leadership of a Placement Officer and Department Coordinators.
- Well Equipped Placement Cell
- Fully Air-conditioned and acoustically designed Two Hi-Tech Halls to conduct Training and Pre-Placement Meetings / Briefings.
- Well furnished / Air-conditioned Hi-Tech Auditorium and Seminar Halls.
- Facilities to conduct Interviews / GDs / On-line tests

Activities for career guidance:

- The Placement & Training Cell liaises with various software companies to provide training in soft skills, personality development, Presentation skills, Group discussions, Aptitude and facing the interview board.
- The cell, after constant interaction with MNCs, gives feedback on the value added courses to be offered for various branches of Engineering.
- The Placement Cell arranges for Campus Recruitment by leading Companies through continuous Industry Institute Interaction, Company visits and excellent Partnerships.
- Coordinates with Industries for enhancing employability through intense Training in appropriate skills
- Students are referred to different Companies as well, for undergoing In-plant Training, Internships and for acquiring Practical Knowledge through exposure to industry environment; e.g., Infosys Campus Connect Foundation Program.
- The Cell motivates and counsels the students to realize their potential.

Entrepreneurship Cell (5)

- In order to nurture the entrepreneur skill among the students, the institution is having a full- fledged Entrepreneurship Development Cell (EDC).
- This cell periodically Arranges motivational lectures by personnel in the name of Popular Lecture series by young entrepreneurs

- Guest Lectures are arranged by personnel from industries to highlight the process of how to go about starting an enterprise.

9.7. Co-curricular and Extra-curricular Activities (10)

Co-curricular and extra-curricular activities provide opportunities for students to explore new fields of interest, cultivate leadership skills, and build teamwork qualities. Participation in technical contests which includes quizzes, paper presentation contests, and project exhibitions are organized. Most of these activities are initiated by the students and are engaged in developing a dynamic culture, fostering collaboration and cooperation on campus.

- A number of professional societies are functioning in the college which conducts regular programmes. The list of student chapters of professional societies include- IEEE, ISTE, , IE, IETE, CSI, ACM.

- Students are encouraged and guided to participate in design contests at national and state level, paper presentations, attending national and international conferences and participate in competitions conducted by IITs, NITs, other engineering and Arts and Science colleges.

Extra Curricular Activities

The following Extra Curricular Activities are undertaken throughout the year:

- National Service Scheme
- National Cadet Corps
- YUGA Club

NSS – National Service Scheme

- NSS Unit strives to inculcate among students, the concept of social responsibility and service to the needy. Our NSS Unit regularly conducts awareness programmes on Road Safety, AIDS, hazards of Smoking and Alcohol Consumption etc. It also organizes Blood Donation Camps and supports in Polio Vaccination Camps. NSS Unit visits orphanages and special school for differently abled children to motivate them and to offer support.

- NSS Unit conducts an annual Seven Day Special Camp in remote village for the up liftment of that village. Some of the activities during the camp are General Medical Camp in association with SRM General Hospital, Dental Camp with SRM Dental

Hospital, Nursing Camp focusing on Maternal Care, importance of rainwater harvesting and preventing water-borne diseases, awareness on First Aid and,,Say No to Polythene Bags', visit to schools for mentally retarded, Orphanage, Old Age homes, First Aid Training etc.

- During special camp, care is taken to motivate the young school children of the village for their betterment in the educational career, sports activities, talks on environment pollution and safety. It also provides training like tailoring, making decorative items to the village people.

NCC - National Cadet Corps

We have started NCC with 40 students in the year 2010. It is recommended by Director National Cadet Corps of Tamilnadu and the Director of Public Instructions. During one week camp conducted at Kattankulathur, training was given to the students.

NCC students participate in all the public programmes conducted in the campus.

Culturals:

Culturals are an integral part of the academic activities in our college. With a view to provide holistic education, boost confidence, acquire leadership qualities and strengthen organizational abilities, students are given opportunities to participate and organize cultural activities. SWAGAT, the Freshers party, is organized as a welcome programme for the first year students. TALENTIA,the inter-department cultural extravaganza, consists of both off stage and on stage events which help students to realize and showcase the plethora of their talents, bringing the creativity of students to the fore. Our students participate and win prizes in many cultural competitions like solo and group dance, singing, instrumental music, street play and photography organized by IIT Madras, Anna University, MIT Madras, College of Engineering, Guindy, SSN college of Engineering and so on.

Citizen Consumer Club

Citizen consumer club was started with the objective of creating awareness among the students about consumer rights, responsibilities, legalities and the presence of consumer court for which various programmes are conducted.

SPORTS -Facilities

The men and women teams win medals in many sports events organized at National level and State level. Our students are winners and runners up in throw ball, volley ball, table tennis tournaments conducted by other engineering colleges and sports bodies.

OUTDOOR GAMES	INDOOR GAMES
Volleyball, Football, Kabaddi, Basket ball, Badminton, Cricket, Kho-kho	Carom, Chess, Badminton, Table Tennis

EQUIPMENTS

Volleyball with net, Basketball with racket and net, , Ball badminton racket with net, Football, handball , Tennis ball, Cricket bat, ball, stumps, bails, Cricket mat, High jump post, Discus, Javelin Shot put, Running spike, First aid boxes, knee caps, Skipping rope, Weighing machine.	Measuring tape, Chess board, coins, Carom board, powder, coins, Hurdles and Hammer andFoot pump and hand pump, Pole vault with bar, Pole vault extension bar, Relay line box and pattern, Table tennis board with racket Cross bar and toe board, Fox 40 Whistle and Stop watch, Olympic torch.

CRITERION 10	Governance, Institutional Support and Financial Resources	120

10 GOVERNANCE, INSTITUTIONAL SUPPORT AND FINANCIAL RESOURCES (120)

Organization, Governance and Transparency (100)

State the Vision and Mission of the Institute (5)

(Vision statement typically indicates aspirations and Mission statement states the broad approach to achieve aspirations)

Institute Vision

The Institution endeavours towards imparting quality education with ethical values and strives to make students technically competent to reach heights and make our nation self-reliant and globally recognized

Institute Mission

The Institution is committed and dedicated to mould the students into quality engineers and technologists with aplomb by providing world-class scientific and technical education through:

Ensuring excellent branch wise infrastructural facilities with eminent and qualified faculty
Making the institute a research/resource centre to enhance scope for consultancy and R&D

- The Vision and Mission statements are displayed in the public domain, the official website of the college, http://www.tkrcet.ac.in
- They are printed on Assignment books, Records, Mid Exam Books, department Brochures, etc.
- It is displayed in the Principal‟s office, Dean‟s office, Admin office, in the chambers of all Heads of the departments, Staff rooms, in all floors of the College, in all the labs including computer labs and in the central Library.

Governing body, administrative setup, functions of various bodies, serviceProcedures, recruitment and promotional policies (10)

List the governing, senate, and all other academic and administrative bodies; their memberships, functions, and responsibilities; frequency of the meetings; and attendance therein, in a tabular form. A few sample minutes of the meetings and action-taken reports should be annexed. The published rules including service rules, policies and procedures; year of publication shall be listed. Also state the extent of awareness among the employees

Governing Body:

The Board of Governors is the highest body that monitors the progress of the college and suggests activities for the growth and overall development of the institution. It also aims at giving desired shape to the institution to meet the highest standards in the field of education.

The Board of Governors of the college has been constituted as per the University Grants Commission (UGC), New Delhi, India, guidelines for autonomous colleges during the eleventh plan period (2007-2012).

The main objective of the Board of Governors is to offer transparent and effective governance in building and developing the institution, taking the confidence of stakeholders. T.K.R Educational Society (TKRES), the sponsoring academy of the college, in one of its executive meetings resolved to have an eminent educationist as the chairman of the Board of Governors.

The TKRES felt that under the stewardship of an eminent personality with highly focused and concerted ideas in the field of education can definitely build the institution for the future.

Governing Body Composition

S.No	Name	Designation	Position in BoG
1	Prof. P. Rami Reddy	Former Registrar, JNTUH	Chairman
2	Sri. Teegala Krishna Reddy	Chairman,TKR Educational Society,Hyderabad	Member
3	Dr.Teegala Harinath Reddy	Secretary,TKR Educational Society	Member

4	Mr.Teegala Amarnath Reddy	Treasurer,TKR Educational Society	Member
5	Prof.Vardachariar Kannan	Professor, Dept of Mathematics,Central University,Hyderabad	UGC Nominee/Academician
6	Prof. G.K.Vishwanath	Director,UGC-HRD,JNTUH,Kukatpally,Hyderabad	University Nominee
7	S. Bhavani	Principal,(GPWM)-Badangpet,RangaReddy, Telangana.	State.Govt.Nominee/ Academician
8	Mr.K.C.Chaudhary	Deputy Director MSME Hyderabad,Telangana	Industry Nominee
9	Dr.A.Suresh Rao	Dean Academics,TKRCET	Member
10	Dr.D.Nageshwar Rao	Controller of Examinations,TKRCET	Member
11	Mr.G.L.N.Reddy	Administrative officer,TKRES	Member
12	Mr.U.Aswani Kumar	Additional Controller of Exams,TKRCET	Member
13	Dr.D.V.Ravi Shankar	Principal,TKRCET	Member Secretary

Functions & Responsibilities

Primary Accountabilities

The Board of Governors of an institution is collectively responsible for overseeing the institutions activities, determining its future direction, and fostering an environment in which the institutional mission is achieved.

To approve the mission and strategic vision of the institution

The key responsibility of the BoG is to develop and implement the mission, vision, quality policy and strategic plan of the institution. The short term and long term goals are reviewed periodically if necessary, revised strategies are implemented. It should suggest to the institute to achieve quality both in internal and external parameters like teaching-learning process, good academic and administrative practices, bench marking, risk management

including financial, physical, staff so as to meet the interests of stakeholders viz students, parents, alumni, employers, local communities, government and others representing public interest.

The BoG is supported by various existing committees in aspects like, revision of curriculum, operational planning of strategic issues to meet the meet the vision and mission statements in true sense. The Institutional Development Committee ensures the implementation of the BOG suggestions. The strategic plan may be reviewed once in five years.

To ensure the establishment and monitoring of proper, effective and efficient systems of control and accountability

The Board of Governors shall ensure the preparation of annual budgets and review the audit and performance reports for the smooth functioning of the institution.

- Submit to the AFRC/State Government the expenditure report for the fixation of the fees and other charges
- payable by students on the recommendations of the Finance Committee, who seek admission into the college.
- Institute scholarships, fellowships, studentships, medals, prizes and certificates on the recommendations of the Academic Council.
- Follow proper procurement guidelines and ensure appropriate spending for the right cause.
- The associated risks shall also be reviewed from time to time and advise suitable remedial measures to have sustainability.

To put in place suitable arrangements for monitoring the performance of managerial and administrative positions

Members of Board of Governors shall ensure that

- The Head of the institution implements the decisions of BOG in true spirit for the growth of the institution using the process of decentralization.
- The Head of the institution shall plan the future growth of the institution.
- The required documentation is maintained to meet the statutory requirements.
- That processes to evaluate the performance of Head of institution are established.

Openness and transparency in the operation of governing bodies

In order to maintain high ethical standards, transparency and openness are to be ensured in the working of the institution by the Board of Governors.

To promote transparency and openness at every level

- All the minutes of meetings of various committees are made available for the important stake holders.
- Preparing annual reports showing the activities in an academic year and putting the report on the website.
- Conducting proceedings of governing bodies in as open a manner as possible (and permissible by statutes), including the review of those of the governing body and any reports on the outcomes of such reviews.
- Detailing student admission information to ensure public trust in the integrity of the processes used regarding the selection and admission of students using clear and transparent criteria, procedures and processes.
- Ensuring that vacancies are widely publicized both within and outside the institution.

To maintain Register of Interests

All members of BOG shall give a declaration of interests, if any in the working of the institute. The register of interests should be collected and made available to the stakeholders and keep them updated whenever necessary.

Key Attributes of Governing Bodies.

The BoG has been constituted in accordance with the guidelines of the UGC for autonomous colleges. As per the guidelines, as and when required, independent members may be co-opted into the BOG to carry out primary responsibilities.

The Chair of the Governing Body is responsible for the leadership of the governing body, and is, therefore, ultimately accountable for its effectiveness. The Chair ensures the institution is well connected with its stakeholders. The Head of Institution is responsible to the governing body for advice on strategic direction and for the management of the institution. The head of the institution is accountable to the governing body, and regularly reviews, having regard to the authority conferred by the instruments of governance.

Composition of Board of Governors

The Governing Body is constituted as per the Guidelines of the UGC.

S.No	Number	Category	Nature	Period
1	1 chairman	Educationist	Chairman	As per the resolutions and bylaws of TKRES
2	5 members	Management	Nominated by the	

			TKRES	
3	Member	Teachers of the college	Nominated by the Principal based on seniority	2 years from the date of appointment
4	1 member	Educationist or industrialist	Nominated by Tkres	2 years from the date of appointment
5	1 member	UGC nominee	Nominated by the UGC	6 (six) years from the date of nomination by the UGC
6	1 member	State government nominee	Nominated by the State Government,an Academician from Technical education sector	As per State University
7	1 member	University nominee	Nominated by the university	As per the University
8	1 member	AICTE nominee	Nominated by the AICTE	As per AICTE
9	1 member	Principal of college	Ex-officio	

Effectiveness and Performance Review of Governing Bodies

- Ensure that the members are properly inducted for further development, as deemed necessary.
- Regular review process to be conducted and revise the regulations as deemed necessary.
- Item wise bench marking may be adopted for review process.

Regulatory Compliance

Governing bodies ensure compliance with the statutes, ordinances and provisions regulating their institution, including regulations by statutory bodies, such as the AICTE and UGC, as well as regulations laid down by the State government and affiliating university (if any).

- Take all final decisions on matters of fundamental concern to the institution.
- The regulatory compliance includes demonstrating compliance with the „not-for-

profit‟ purpose of education institutions.

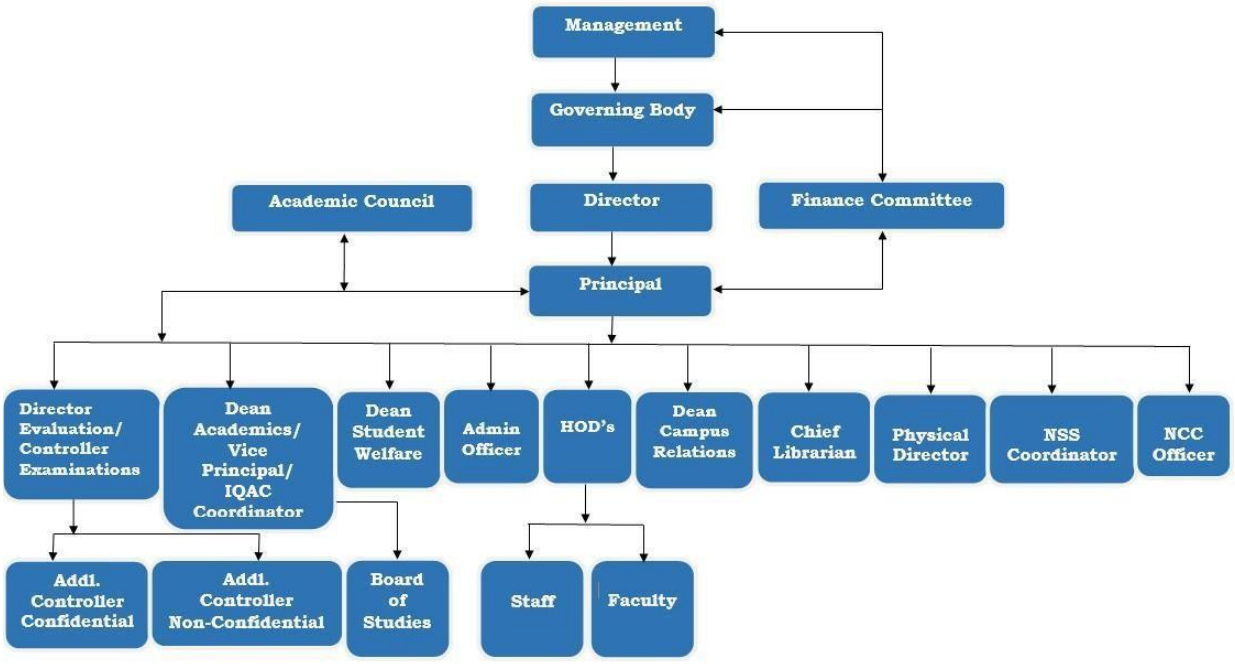
Frequency of meet

The meeting will be held twice a year

Minutes of the last meeting and Action taken Report is annexed

S.No	Academic Year	No.of Meetings Conducted
1	2020-21	1
2	2019-20	1

Administrative set up in the college:



Roles & Responsibilities

Position	Functions
Management	• Chief patron of the Institution. • They are the final authority for annual (financial) budget allocations and all related approvals. • They hold signatory roles in major administrative, recruitment, purchase, expansion, and Policy decisions of the Institution.

Governing Body Chairman	• Provide inspiring leadership for transparent and effective administration. • Ensure effective, efficient and optimal use of resources towards the growth and development of institution. • Develop processes and controls for financial resources with the help of finance committee. • Motivate the members and other committees to function in unison to implement strategic plan of the institution. • Encourage and ensure proper maintenance of register of interests and shall solve amicably, if any, conflicts of interests. • Suggest to implement the best suitable practices in and around to enhance quality of teaching-learning process, employability of students, good support mechanism to students and staff. • Allow the head of institution to work independently and effectively. • Prepare appropriate appraisal systems including the Head of the institution.
Principal	• To conduct the meetings of the Board of Governors as per the stipulated guidelines • To hold Academic Council meetings as per the norms. • To coordinate and motivate the faculty, administrative authorities and the supporting staff, so that to play their respective roles more effectively. • Shall work for the common goal of providing effective technical education and guiding to enable the students to carve out promising career and lifelong learning.
	• Budget estimates relating to income from fees and other sources. • Budget estimates relating to the grant received/receivable from the UGC/AICTE, if any, and income from fees, etc. collected for the activities to undertake the scheme of

Finance Committee	autonomy. • To seek all major and minor expenditure proposals from different committees, analyze them, establish the priorities and forward a tentative budget to Governing Body in time. • To plan proper utilization of resources for implying effective fund management.
Academic Council	• Scrutinize and approve the proposals with or without modification of the Boards of Studies with regard to courses of study, academic regulations, curricula, syllabi and modifications thereof, instructional and evaluation arrangements, methods, procedures relevant thereto etc., provided that where the Academic Council differs on any proposal, • It will have the right to return the matter for reconsideration to the Board of Studies concerned or reject it, after giving reasons to do so. Implement the orders issued time to time by the State Government and the affiliating University in the admission of students to different programmes of study offered by the college. • Make regulations for sports, extra-curricular activities, and proper maintenance and functioning of the playgrounds and hostels
Dean Academics/Vice Principal/IQAC Coordinator	• To discharge routine duty of Principal in his absence. • Head of the Internal Quality Assurance cell. • Alumni interaction. • Prepare and execute academic calendar. • Oversee the teaching-learning process. • Carry out result analysis and submit corrective measures to Principal. • Initiate better teaching learning methods. • Co-curricular activities. • Formation of student council.

Director Evaluation/Controller Examination	• To prepare and announce in advance the calendar of examinations; • To arrange for printing of question papers; • To arrange to get performance of the candidates at the examinations properly • assessed, and process the results; • To arrange for the timely publication of results of examinations and other tests ; • To postpone or cancel examinations, in part or in whole, in the event of malpractices • if the circumstances so warrant, and take disciplinary action or initiate any civil or criminal proceedings against any person or a group of persons or a college or an institution alleged to have committed malpractices.
Dean student Welfare	• To arrange for congenial living environment in the campus including Hostels for the students. • To monitor day to day essential support required for academic and co-curricular activities of students. • To arrange for special care for the weaker and needy sections of students. • To prepare plan and execute programmes for holistic development of the students. • To nominate student representatives to various bodies of the college in approval with Academic Council.
Head of the Department	• Responsible for all the academic affairs of the Department. • Looks after day to day activities relating to teaching and other workloads of his/her teaching and non-teaching staff. • Reports to the Principal regarding all the requirements of his/her department such as Faculty Member, supporting staff, equipment, books & journals, maintenance etc. • Represents his/her department and will report to the Principal all the requirements/short comings for the development and

	proper functioning of the Department, during weekly/fortnightly meetings.
Administrative Officer	• Provides guidance to college administrative and management staff on all phases of budget development, preparation, monitoring and management; assist in projection of budget needs and provides data on current and prior years expenditures; assists the Dean in strategic planning for the college. • Maintains an effective oral and written communications process between college administrators and their staff and the Office of the Dean regarding fiscal and other matters. • Acts as a liaison between the college, accounting, purchasing, and payroll departments; ensures college compliance with University policy and procedures. • Acts as a liaison with Human Resource Services to ensure that proper procedures are followed during the Faculty and Staff hiring process.
Training& Placement Officer	• Director T & P is solely responsible for planning, connecting, organizing, culminating all activities leading to placement needs of the graduating students. • He develops and nurtures contacts/connects with industries/companies/ organizations/alumni database in view of placement needs. • He ensures the smooth coordination with various stakeholders required for the process of placement. He initiates the process of feedback collection from the visiting companies/organizations for offering placement and shares with concerned departments for better understanding and possible improvements in the subsequent sessions/years. • He coordinates activities for pool-in placement drives.

	• Facilitate career guidance to the students. • He significantly contributes in building brand value of the institution.
Chief Librarian	• To supervise and co-ordinate the work of University Library system • To provide instructions to new members in the use of the Library. • To plan book acquisition programme of the library and select books for order, especially in the area of social science. • To work out exchange and gift arrangements with several hundred institutions in India and abroad. • To contribute to the educational function of the University by providing bibliographical guidance to research scholars of the University and Visiting Scholars from other Indian Universities. • To develop programme of library management for improving the efficiency of the library. - General correspondence relating to financial matters.
Physical Director	• To promote sports activities in the university. • To help schools/hostels in conducting in their sports meets. • To conduct annual sports competitions, presentation and arrange prize/certificates. • To prepare agenda and convene meeting of the various sports clubs and University Sports Committee, and take consequential action thereon. • To purchase of sports equipment, articles etc. • To supervise the work of junior and field staff and assign work to them.
NCC Coordinator	• To Conduct Registration for students. • To organize NCC Training camps as per the Authorized NCC Commandant.

	• To perform daily camps/parade practices. • To prepare them for selections in 26th January- Republic Day; 15th August- Independence Day celebrations. • Preparing the candidates for NCC Certificate Examinations.
NSS Coordinator	• He / She will plan NSS regular activities and special camping programme. • The Programme officer will ensure that NSS volunteers complete the prescribed hours in regular activities and participate in special camping programme as per requirements. • He/ She will divide the NSS unit into different groups and assign the definite task and targets and projects to each group. • He/ She will supervise the work of NSS volunteers. • He/ She will maintain the necessary records and registers prescribed by programme coordinator of the university
Faculty	• Teaching. • Development of Curriculum, developing learning resource material & Laboratory development. • Evaluation including administering tests, invigilation during conduct of tests. • Innovation in teaching, laboratory work and instructional materials, continuing education activities, academic and administrative planning and development work at departmental level and assisting at institution level. • Teaching including laboratory instruction and academic activities such as acting as Class review Committee member, invigilator, Lab In charge, Coordinator (Attendance), assistance in conduct of seminars, symposia, guest lecturers. • Students assessment and evaluation, aside from acting as paper setter.

Technical staff	• To assist the faculty, research scholars and students in their research work. • To provide technical assistance in their field. • To maintain and operate all types of sophisticated equipment and computers. • To maintain the Lab/Computer Lab. for research work. • To handle Lab/Classroom/Auditorium, LCD, Projector, Computers audio-visual equipment.

Academic and Administrative bodies

Details of the committees are given below along with the names of the members.

Members of Academic Council

S.no	Name	Designation	Position
1	Dr.D.V.Ravi Shankar	Principal, TKRCET	Chairman
2	Dr. B.Padmaja Rani	Prof of CSE, JNTUH CEH	University Nominee
3	Dr. R.Markandeya	Prof.ofMetallurgical Engg,JNTUH CEH	University Nominee
4	Dr. J.Suresh Kumar	Professor of ME,JNTU CEH	University Nominee
5	Professor D.V.L.N. Somayajulu	Director, IIIT, Kurnool	Academician
6	Prof N. Sai Srinath	Professor, Mechanical Engg, NIT, Warangal.	Academician
7	Dr.N.Ravi	Scientist FARCI,Hyderabad	Representative of Industrial Relations
8	Mr.A. Venkata Appa Rao	SeniorAdvocate,Asmangadh,Hyderabad	Legal Advisor

9	Dr.A.Suresh Rao	Dean Academics,Vice- Principal and HOD, CSE Dept	Member Secretary
10	Dr.G. Gopala Krishna	HOD, Mech Dept	Special Invitee
11	Dr. D. Nageshwar Rao	Controller of Examinations,HOD, ECE	Special Invitee
12	Dr. S. Narasimha	HOD, EEE Dept	Special Invitee
13	Mr. K.V.S.R. Satya Sai	HOD,Civil Dept.	Special Invitee
14	Dr.N. Satyanarayana	HOD,IT Dept	Special Invitee
15	Mr.U.Aswani Kumar	Addnl.Controller of Examinations	Special Invitee

Meeting Schedule

The Committee meets at least twice in an academic year.

Functions & Responsibilities

- To look into the quality control of the Institution‟s Educational System. The outcome of specific teaching-learning process of individual department is periodically evaluated by the Council and if required, methods for improvement are suggested.
- To match the course outcome with the POs, PEOs and prescribed curriculum.
- To find out the necessity of any add-on & bridge courses to be undertaken for fulfillment of the PEOs & POs, as per the recommendation of the Department.
- The committee analyzes the performance data (Performance Index of Students, Course progress, attendance, course handouts etc.) of the departments & suggests improvement in teaching - learning and evaluation process.
- The Committee ensures the attainment of POs & PEOs with the prevailing teaching - learning and evaluation process.

The committee suggests possible changes to be made in

- The prescribed curriculum
- Add-on courses
- Bridge courses

- Programme outcomes
- PEOs based on the information gathered from departments updated as per the latest global, national & local industrial scenario

Board of Studies (BOS)

The Board of Studies is the basic constituent of the academic system of the college. Its functions will include framing the syllabi for various courses, reviewing and updating syllabi from time to time, introducing new courses of study, determining details of continuous assessment, recommending panels of examiners under the semester system etc.

Meeting of BOS

The principal of the college shall draw the schedule for meeting of the Board of Studies by different departments. The meeting may be scheduled as and when necessary, but at least once a year to finalize the syllabi of various programs and courses offered by the institution. The term of the nominated members shall be two years.

Members of BOS (IT Department)

S.no	Name	Designation	Position
1	Dr. N.Satyanarayana	Professor, and Head Dept of IT, TKRCET.	Chairman
2	Dr.R.B.V.Subramanyam	Professor, Dept of CSE, NIT-Warangal	Subject Expert
3	Dr. Hameed	Professor, Dept of CSE,Osmania University	Subject Expert
4	Prof. G. Venkatram Reddy	Professor, SIT, JNTUH, Kukatpally, Hyderabad.	University Nominee
5	Dr. V. Sree Kumar	Senior Manager, E& R Dept Infosys. PVT. LTD., Hyderabad.	Industry Representative
6	V. Ravi Kumar	Assoc. Prof. , Dept of IT, TKRCET.	Member

7	C. Jaya Lakshmi	Assoc. Prof. , Dept of IT, TKRCET.	Member

Functions & Responsibilities

- Prepare syllabi for various courses keeping in view the objectives of the college, interest of the stakeholders and national requirement, for consideration and approval of the Academic Council.
- Elaborate discussions starting of new courses, programmes etc., suggest methodologies for innovative teaching and evaluation techniques.
- Coordinate research, teaching, extension and other academic activities in the Department /college.
- Suggest panel of names to the Academic Council for appointment of paper setters, evaluators, Examiners etc.

Finance Committee

The Finance Committee will advise the Board of Governors on financial matters. It shall prepare income and expenditure statements of the college in the prescribed format submit to AFRC for fixation of tuition and others fees of the college. The Finance Committee will be an advisory body to the Board of Governors.

Meetings of Finance Committee

Finance committee shall meet at least twice in a financial year. The meetings can be organized in the month of April and September of every year. The meeting in the month of March shall be the budget meeting and in September in will be another budget meeting for review. The Meeting of Finance Committee can be called for at short notice in case of urgent and immediate requirements.

Members of Finance Committee

S.no	Name	Designation	Position
1	Dr.D. V. Ravi Shankar	Principal	Chairman
2	Dr. A. Suresh Rao	Vice – Principal	Member
3	G. L. Narsimha Reddy	A. O	Member
4	K. Mallikarjun	Chief Accountant	Member

Functions & Responsibilities

- Budget estimates relating to income from fees and other sources.
- Budget estimates relating to the grant received/receivable from the UGC/AICTE, if any, and income from fees, etc. collected for the activities to undertake the scheme of autonomy.
- To seek all major and minor expenditure proposals from different committees, analyze them, establish the priorities and forward a tentative budget to Governing Body in time.
- To plan proper utilization of resources for implying effective fund management.
- To prepare a detailed plan of expenditure for day-to-day running of the Institution
- Preparation of audited account reports for the above;
- To mobilize resources through donations from society, through funding agencies under various schemes, etc.

Disciplinary Committee

Members of Disciplinary Committee

S.No	Name	Designation	Position
1	Dr. K. Raju	Dean (Student Welfare)	Chairman
2	Sri G.L.Narsimha Reddy	Administrative Officer	Member
3	Dr. D. Nageshwar Rao	HOD-ECE	Member
4	Dr.N. Satyanarayana	HOD-IT	Convener
5	Dr. B. Rajinikanth	Dean (R & D and Consultancy)	Member

Meeting Schedule As and when required

Functions & Responsibilities

- This committee looks into issues concerning student discipline in coordination with all branches.
- This watch-dog committee, on receiving allegations, if inter - branch and of severe nature, looks into it and sends the recommendations to the Principal for taking necessary disciplinary and remedial actions.

- This committee also at times looks into the lapses of the system particularly in matters of educational environment and recommends action to rectify it.

Purchase Committee

Members of Purchase Committee

S.No	Name	Designation	Position
1	Dr.D.V.Ravi Shankar	Principal, TKRCET	Chairman
2	Dr.A. Suresh Rao	Dean (Dean Academics), TKRCET	Member
3	Dr. B. Rajinikanth	Dean (R & D and Consultancy)	Convener
4	Sri.K.Mallikarjun	Accounts Officer	Member
5	Dr. D.Nageshwara Rao,	HOD-ECE	Convener

Meeting Schedule

The Committee meets at least four times a year.

Functions

- The function of the Committee is to ensure that the allocated funds are properly utilized.
- The Committee sends information to the Departments regarding the allocation of Annual budget funds.
- The Committee periodically looks into the process of procurement and assesses the Quality & Quantity aspect of procurement and also ensures proper documentation of purchase of materials / equipment commissioning and functioning.
- Re appropriation of unused funds in the department.

Planning & Evaluation Committee

Members of Planning & Evaluation Committee

S.no	Name	Designation	Position
1	Dr. D. V. Ravi Shankar	Principal	Chairman
2	Dr. A. Suresh Rao	Vice – Principal	Member
3	Dr. D. Nageshwar Rao	Controller, of Examinations	Member

4	U. Aswani Kumar	Asst.Controller of Examinations	Member
5	K. Kishore Kumar	Asst.Controller of Examinations	Member

Functions & Responsibilities

- To visualize and formulate perspective plans for the development and growth of the college.
- To formulate Plan for campus development, facilitating implementation of the provision of the perspective plan etc.,
- To review the students and faculty development programmes.
- To draw new schemes of development for the college.
- To promote teaching innovations and student placement programmes.
- To plan for sustaining the quality of education, quality improvement and accreditation of the college.
- To send the proposals to University for extension of affiliation.
- To send proposals to AICTE, UGC etc., for continuation of approval / introduction of new courses /
- Reduction in Intake / Closure of Course etc.
- To prepare, implement and execute strategic plan.
- To plan and execute various activities to be conducted in a year.

Library Committee

Members of Library Committee

S.no	Name	Designation	Position
1	Dr. D. V. Ravi Shankar	Principal	Chairman
2	Dr. A. Suresh Rao	Vice – Principal	Member
3	Prof. G. Srinivas Reddy	Chief Librarian	Convener
4	K. Mamatha	Asst. Librarian	Member
5	S. Shobharani	Asst. Librarian	Member
6	K. V. R. Satya Sai	HOD Civil	Member
7	Dr. S. Narasimha	HOD EEE	Member

8	Dr. G. Gopala Krishna	HOD Mech	Member
9	Dr. N. Satyanarayana	HOD IT	Member
10	Dr. D. V. S.R Anil Kumar	HOD H & S	Member
11	B. Rajinikanth	HOD H & S	Member

Functions& Responsibilities

- To prepare the list of books / references as per the requirement of various departments.
- To monitor the effective utilization of library, digital library and e-resources.
- Collecting the requirements of the text books, reference books, journals and ensuring adequate number of copies are made available in the library as per norms.
- Finalizing the list of books, journals, magazines and equipment to the institute as well as department libraries and propose budgetary estimates to the administration.
- Conducting annual stock verification.

Student Welfare Committee

Members of Student Welfare Committee

S.no	Name	Designation	Position
1	Dr.D.V.Ravi Shankar	Principal, TKRCET	Chairman
2	Dr.K. Raju	Dean Student welfare, Assoc. Prof, EEE	Convener
3	Dr.A.Suresh Rao	Professor & HOD-CSE	Member
4	Mrs.J.Sunitha Kumari	Assoc.Prof & NSS Coordinator	Member

Functions & Responsibilities

- The Student Welfare Committee is dedicate towards indicating not only a healthy relationship between the students and the faculty / staff but also nurturing the students so that they develop an all-round personality.
- Creating the right ambition on campus for a vibrant knowledge culture and intellectual system is one of top priorities.

Examination Committee

Members of Examination Committee

S.no	Name	Designation	Position
1	Dr.D.V.Ravi Shankar	Principal	Chairman
2	Dr.A. Suresh Rao	Vice – Principal	Member
3	Dr.D.Nageshwar Rao	Controller of Examinations	Member
4	U. Aswani Kumar	Asst. Controller of Examinations	Member
5	K.Kishore Kumar	Asst. Controller of Examinations	Member
6	K. V. R. Satya Sai	HOD Civil	Member
7	Dr. S. Narasimha	HOD EEE	Member
8	Dr.G. Gopala Krishna	HOD Mech	Member
9	Dr. N. Satyanarayana	HOD IT	Member
10	Dr.D.V.S.RAnil Kumar	HOD H & S	Member
11	B. Rajinikanth	HOD H & S	Member
12	Aruna Kumari (Mech)	Professor,JNTUH	JNTUH Nominee

Functions & Responsibilities

- Prepares relevant time tables of the Institute based on the Examination Time Table.
- Prepares and display an overall Supervision Duty List.
- Committee collects list of examiners for assessment and moderation of each subject from respective HODs.
- Ensures that the evaluation and moderation process is completed on time.
- Prepares smooth conduct of Examinations, time – table schedules, Invigilation duty chart, Seat allotment in the Examination halls etc.
- Ensures that the entire exam related documents reach the university in time.
- Conducts Internal Assessment examination as per academic calendar.
- Distributes marks lists to the students after the results of various examinations received from the University.
- Processes all Circulars, Guidelines, Office Orders, Notifications received by the University.

RTI Committee

Members of RTI Committee

S.No	Name	Designation	Position in the committee
1	Dr.K.Raju	Dean Students welfare ,Assoc.Prof,EEE	Convener
2	Dr.D.V.Ravi Shankar	Principal	Chairman
3	Dr.A.Suresh Rao	Vice-Principal	President
4	Dr.D.Nageshwar rao	HOD,ECE	Member
5	Dr.Rajinikanth	HOD,S&H	Other
6	Mr.P.Johnson	Public Information officer	PIO
7	Mr.K.Indra Kiran Reddy	Assistant Public Information officer	APIO

Functions & Responsibilities

- To promote transparency and accountability in the functioning of the institution.
- To set up a practical regime for giving citizen's access to Information that is under the control of institution.

Feedback Committee

Members of Feedback Committee

S.No	Name	Designation	Position
1	Dr.D.V.Ravi Shankar	Principal, TKRCET	Chairman
2	Dr.A.Suresh Rao	Dean (Academics), TKRCET	Convener
3	HOD‟s	Civil, EEE, ECE, Mech, CSE, A&ML, Data Science and IT Departments	Members

Meeting Schedule

The Committee meets at-least 4 times in an academic year

Functions & Responsibilities

- The Committee looks into the feedback collected from the Stakeholders
- Ongoing Students
- Outgoing Students
- Alumni
- Employers
- Parents
- Entrepreneurs (from our students)

Based on the feedback of the above stakeholders, the committee recommends necessary addition or alteration to the academic process, infrastructure, teaching quality, law & order environment, research facility, library, computing facility, etc. Recommend review of PEOs and POs and revise as felt necessary

Timetable Committee

Members of Timetable Committee

S.No	Name	Designation	Position
1	Dr.D.V.Ravi Shankar	Principal, TKRCET	Chairman
2	HOD‟s	Civil, EEE, ECE, Mech, CSE, IT and S&H departments	Members
3	Mr. U. Ashwin Kumar	Examinations In charge	Member
4	Department Time table coordinators	Civil, EEE, ECE, Mech, CSE, IT and S&H departments	Members
5	Dr.A. Suresh Rao	Dean (Academics), TKRCET	Convener

Meeting Schedule

As required for finalization of time tables before the commencement of the Academic sessions.

Functions & Responsibilities

- Address the inter Departmental service course requirements
- Asses the constraints of faculty and resources
- Satisfy curriculum / JNTUH requirements
- Allocation of class rooms for conducting regular class work
- Allocation of rooms for conducting Mid and Annual Examinations.

Differently Abled Persons Welfare Committee

Members of Differently Abled Persons Welfare Committee

S.No	Name	Designation	Position
1	Dr.D,V.Ravi Shankar	Principal,TKRCET	Chairman
2	Dr.A.Suresh Rao	Vice-Principal	Member
3	Dr.K.Raju	Dean Students Welfare	Member
4	Mr.G.L.Narsimha Reddy	AO,TKRCET	Member
5	Dr.N.Satyanarayana	HOD/IT,TKRCET	Member
6	Mrs.J.Sunitha Kumari	Assoc.Prof, NSS Coordinator	Member
7	Mr.K.Mohan Rao	Senior Staff Member	Member
8	Mr.V.Suryanarayana	Parent	Member
9	Sameer Ahmed	Student	Member
10	C S Rathish Kumar	Student	Member
11	Metla Srinu	Student	Member

Functions & Responsibilities

- To ensure freedom to function.
- To show equality of facilities and benefits without any gender bias.
- To provide equal growth opportunities.
- To arrange Writers for the students having vision and functional disability.
- To encourage continuing education programmes.
- To provide guidance and counseling to differently-abled.

Committee for Prevention of Caste Based Discrimination (SC/ST)

Members of Prevention of Caste Based Discrimination

S.No	Name	Designation	Position
1	J.Sunitha Kumari	Assoc.Prof	Chairperson
2	Chinapaga Ravi	Assoc.Prof	Member
3	Dr.B.Sunil Srinivas	Professor	Member
4	Ravula Ramaswamy	Asst.Prof	Member

5	P.Manga Rao	Asst.Prof	Member
6	A.Ramesh	Asst.Prof	Member
7	Nageshwar rao M	Asst.Prof	Member

Functions & Responsibilities

- To help individuals or a group of students belonging to the SC/ST/OBC regarding issues related to Caste Based Discrimination.
- To enhance the diversity among the students, teaching and non-teaching staff population and at the same time eliminate the perception of Caste Based Discrimination.
- To ensure equity and equal opportunity to the community at large in the College and bring about Social Inclusion.
- To sensitize the college on the problems of Caste Based Discrimination at Workplace.

Internal Quality Assurance Cell (IQAC)

Members of Internal Quality Assurance Cell

S.No	Name of the Member	Department	Position
01	Dr. D. V. Ravi Shankar	Principal	Chairman
02	Mr. K.V.R. Satya Sai	Civil Engineering	Member
03	Ms. V. Swarupa	Electrical & Electronics Engineering	Member
04	Mr. M. Venkata Reddy	Mechanical Engineering	Member
05	Dr. P. Gayatri	Electronics & Communication Engineering	Member
06	Dr. V. Krishna	Computer Science & Engineering	Member
07	Ms. T. Madhumathi	Information Technology	Member
08	Ms. A. Meena	Humanities & Sciences	Member
09	Dr. T. Naveen Reddy	Basic Sciences	Member
10	Dr. A. Suresh Rao	Dean Academics	Coordinator

Functions & Responsibilities

- Development of quality benchmarks/parameters for various academic and administrative activities of the institution.
- Monitor the action taken by departments on feedback response from students, parents and other stakeholders on quality-related institutional processes.
- Dissemination of information on various quality parameters of higher education.
- Documentation of the various programmes /activities leading to quality improvement.
- Development of Quality Culture in the institution.
- Preparation of the Annual Quality Assurance Report (AQAR) and submit to NAAC

Committee For Extra-Curricular

S.no	Name	Designation	Position
1	Dr. D. V. Ravi Shankar	Principal	Chairman
2	Dr. A. Suresh Rao	Vice – Principal	Member
3	Johnson	Physical Director	Coordinator
4	Koteshwar Rao	NCC Coordinator	Coordinator
5	Sunitha Kumari	NSS Coordinator	Coordinator

Service Rules

They shall come into force (deemed to have come into force) with effect from 1st June 2017 and shall apply to all the regular employees of the Institute.

S.no	Policies & Rules	Year of Publication	Awareness Among
1	Service Conditions	2017	Employees
2	Leave Rules	2017	Employees
3	Code Of Conduct For employees	2017	Employees
4	Roles And Responsibilities	2017	Employees
5	Planning	2017	Employees
6	Salaries And Incentives	2017	Employees
7	Promotions	2017	Employees

8	Consultancy, R & D And Teaching Assignments	2017	Employees
9	Incentives – Students	2017	Students

Recruitment Policies

The employees will be classified as follows:

i) Teaching Staff

ii) Non-Teaching staff including administrative, supporting technical staff and non-technical employees.

They are further classified as:

a) Regular employee: means the qualified person employed in a regular post and has successfully completed the probation for a period of two years and whose regular service has been confirmed in writing.

b) Probationary employee: is a person who is provisionally employed with a view to being considered for eventual absorption in the regular service of the Institute. The period of probation, however, will be stipulated in the letter of appointment, which may be extended at the discretion of the Management. Further, before absorption of the concerned, it is considered essential that the performance of the probationer is objectively judged and evaluated in prescribed format by the HOD or Principal, who recommends his/her service to confirm/extend probation or even for termination, if found not suitable.

c) Staff on contract: All the subordinate and secretarial staff members, lab assistants, supporting technical staff etc. fall in this category, whose service conditions will be as per mutually agreed terms of contract, which they have entered with the Institute and whose contract may or may not be renewed.

d) Temporary/Adhoc appointees: means employees who are employed for work which is essentially of temporary nature or who are employed in connection with the temporary increase in permanent work or are employed in a post of permanent or temporary employee or probationer who are temporarily absent due to any reason, including one permitted by the institute to go on advanced studies.

e) Apprentices Trainees: means persons engaged for training and who will be on stipend during the period. However, regularization of their services is purely at the discretion of the Institute.

f) Casuals: means persons employed for work of a casual or occasional nature.

iii) The Management shall fix the number of posts in each INSTITUTION in all categories from time to time and also prescribe qualifications, mode of recruitment, and the scales of pay etc., to each category of posts, which may be reviewed and revised by the Management from time to time, depending upon the exigencies. The pay scales of the Teaching Staff are covered under AICTE scales. Hence, their payments will be fixed in the appropriate grades and scales depending upon qualifications, experience, exposure and merit etc., as applicable and as amended from time to time, except the staff recruited temporarily or on adhoc basis or on consolidated pay.

iv) Notwithstanding anything contained in these rules and regulations, the Management may employ persons on a temporary/adhoc basis or on contract basis to different posts in the organization under their control on consolidated pay or on daily wages, wherever the necessity and circumstances so warrant.

v) For all the non-teaching staff, the terms and conditions with regard to pay etc.

Promotion Policies

i) All promotions shall be considered on the basis of merit-cum-seniority basis from among the staff subject to the following conditions.

ii) There shall be a vacancy existing at the higher cadre as per the AICTE prescribed staff pattern and cadre ratio.

iii) The staff member should have obtained the qualification prescribed by AICTE for consideration for the post.

iv) The staff member should have completed the years of service a prescribed as for consideration for the vacant post.

v) Associate Professor: 5 years for M.E / M.Tech Graduates or 3 Years for Ph.D.

vi) Professor: 5 years of service at AP Level.

vii) Those who are promoted shall be put in the Scale of Pay applicable to that category.

Decentralization in working and grievance redressal mechanism (10)

List the names of the faculty members who have been delegated powers for taking administrative decisions. Mention details in respect of decentralization in working. Specify the mechanism and composition of grievance redressal cell including Anti Ragging Committee & Sexual Harassment Committee.

List of faculty members who are administrators/decision makers for various assigned responsibilities

S.No	Name	Designation
1	Dr.D.V.Ravi Shankar	Principal
2	Dr.A.Suresh Rao	Dean &Vice-Principal
3	Mr.G.L.Narsimha Reddy	Administrative Officer
4	Dr.D.Nageshwar Rao	Controller of Examination
5	U.Aswani Kumar	Additional Controller of examination
6	HOD‟s of all Departments	

Grievance Redressal Cell

S.No	Name	Designation	Position
1	Dr. D. V. Ravi Shankar	Principal	Chairman
2	Dr. A. Suresh Rao	Vice – Principal	Member
3	Dr.D.Nageshwar Rao	HOD(ECE)&COE	Member
4	Dr.G.Gopala Krishna	HOD(ME)	Member
5	Dr.D.V.S.R.Anil Kumar	HOD(H&S)	Member
6	Dr.K.Raju	Assoc.Prof(EEE)	Convener

Responsibilities:

- Getting the feedback from Students / Staff.
- Conducting meetings with members.
- Issues must be discussed and solved with the help of Head of Institutions.

Women Welfare Cell / Sexual Harassment Committee

S.no	Name	Designation	Position
1	Dr.D.V.Ravishankar	Principal	Chairman
2	Dr.T.Anitha Reddy	MD,DGO	Member
3	Mrs.K.Padmaja Devi	Senior Women Faculty, ECE	Member

4	Mrs.C.Uma Devi	Senior Women Faculty, S&H	Member
5	Dr.B.N Laxmi	Prof. of CSE Dept	member
6	K.Sukanya	Assoc. Professor, ECE	Member
7	Mrs.Vijaya Kuchana	Professor& Principal	Member

Functions

- To ensure freedom to function
- To encourage Women faculty as mentors
- To show equality of facilities and benefits without any gender bias
- To provide equal growth opportunities

Anti-Ragging Committee

S.no	Name	Designation	Position
1	Dr.D.V.Ravi Shankar	Principal	Chairman
2	Mr.G.L.Narsimha Reddy	A.O	Nodal Officer
3	Dr.S.Narsimha	HOD(EEE)	Member
4	Dr.G.Gopala Krishna	Professor(MECH)	Member
5	Dr.N.Satyanarayana	Professor& HOD (IT)	Member
6	Dr.D.Nageshwar Rao	Professor, HOD(ECE)&CE of exam branch	Member
7	Dr.A.Suresh Rao	Professor&HOD(CSE), Vice-Principal	Member
8	Mr. K.V.S.R. Satya Sai	Professor & HOD(Civil)	Member
9	Dr.B.Rajini Kanth	Professor & HOD(PS)	Member
10	Dr.D.V.S.R.Anil Kumar	Professor of Maths & HOD(H&S)	Member
11	Dr.B.Renuka	Professor & HOD(MBA)	Member
12	Mr.K.Indra Kiran Reddy	Asst.Prof(CSE)	Member
13	Mr.U.Aswani Kumar	Assoc.Prof & Adl.CE of Exam branch(Admin I/C)	Member
14	Circle Inspector of Police, Meerpet	Circle Inspector of Police, Meerpet	Member

15	Sub-Inspector of Police, Meerpet	Sub-Inspector of Police, Meerpet	Member
16	Mr.Mahipal Reddy	Press	Member
17	Ms.Ravali	Warden(Girls Hostel)	Member
18	Mr.Manoj	Warden(Boys Hostel)	Member
19	A.Yadagiri	Parent	Member
20	Mr.P.Johnson	Physical Director	Member
21	S.Tarun Kumar	Student(IT)	Member
22	G.Sai Likitha	Student(CSE)	Member

Responsibilities

- Wall- Posters are displayed at prominent places of college, educating the students about Punishments awarded for indulging in ragging as per the Act-No. 26, Andhra Pradesh Prohibition of Ragging Act, 1997.
- Specific area wise duties are allotted to the faculty members to take rounds all over the college premises including Hostels, Canteen, and Bus stop to prevent any sort of raging the junior students.
- Lists of Anti-Ragging committee members are displayed prominently on all Department notice boards with Phone numbers of committee members.
- Staff members also travel in the college buses along with students to give assurance and prevent ragging in the college buses.

Delegation of financial powers (10)

Institution should explicitly mention financial powers delegated to the Principal, Heads of Departments and relevant in-charges. Demonstrate the utilization of financial powers for each year of the assessment years.

The Principal has been given financial powers with autonomy. Principal is one of the authorized signatory for operating institute bank accounts. Further, Principal has an imprest amount of 10000 per month for the institute miscellaneous expenditure.

10.1.5. Transparency and availability of correct/unambiguous information in public Domain (5)

(Information on policies, rules, processes and dissemination of this information to Stakeholders is to be made available on the web site)

Information about the institute, staff, students and facilities are being hosted on the institute website (www.tkrcet.ac.in) along with information of policies/procedures related to admission, academics, placement, and exam branch.

Budget Allocation, Utilization, and Public Accounting at Institute level (30)

Summary of current financial year's budget and actual expenditure incurred (for the Institution exclusively) in the three previous financial years.

Total Income at Institute level: For CFY, CFY*m*1, CFY*m*2 & CFY*m*3

CFY: Current Financial Year, CFY*m*1 (Current Financial Year minus 1),CFY*m*2 (Current Financial Year minus 2) and CFYm3 (Current Financial Year minus 3)

For 2020-21

Total Income:				Actual expenditure (till …):			Total No. of students:3709
Fee	**Govt.**	**Grant(s)**	**Other Sources (specify)**	**Recurring including Salaries**	**Non-recurring**	**Special Projects/Another, specify**	**Expenditure per student**
143521700	110,696,300	-	15,508,172	188,187,727	38,593,317		61144

Table B.10.2a

For 2019-20

Total Income:				Actual expenditure (till …):			Total No. of students:3243
Fee	Govt.	Grant(s)	Other Sources (specify)	Recurring including Salaries	Non-recurring	Special Projects/Another, specify	Expenditure per student
135,261,500	99,930,700	-	14,438,560	186,093,631	50,228,118		72871

For 2018-19

Total Income:				Actual expenditure (till …):			Total No. of students:3347
Fee	Govt.	Grant(s	Other Sources (specify)	Recurring including Salaries	Non-recurring	Special Projects/Any other, specify	Expenditure per student
122,991,225	98,250,700	-	9,356,563	216,135,388	21,020,423		70856

For 2017-18

Total Income:				Actual expenditure (till …):			Total No. o students:3350
Fee	Govt.	Grant(s	Other Sources (specify)	Recurring including Salaries	Non-recurring	Special Projects/Any other, specify	Expenditure per student
105,286,875	95,018,700	-	5,282,576	213,886,981	23,726,853		87745

Note: Similar tables are to be prepared for CFY*m*1, CFY*m*2 & CFY*m*3.

Items	Budgeted in CFY	Actual expense in CFY (till …)	Budgeted in CFY*m*1	Actual Expenses in CFY*m*1	Budgeted in CFY*m*2	Actual Expenses in CFY*m*2	Budgeted in CFY*m*3	Actual Expenses in CFY*m*3
	2020-21	2020-till date	2019-20	2019-20	2018-19	2018-19	2017-18	2017-18
InfrastructureBuilt-Up	1,984,637	1837627	1,682,752	1558104	856,860	793,389	10,547,385	9,766,097
Library	95,091	88047	348,906	323061	533,009	493,527	1,160,258	1,074,313
Laboratory equipment	4,279,626,	3962617	3,032,730	2808083	1,878,790	1,739,620	6,057,496	5,608,793
Laboratory consumables	48,937	45312	23,629	21879	128,893	119,345	1,010,464	935.615
Teaching andnon-teaching staff salary	165,151,182	152,917,761	157,745,263	146,060,429	184,998,209	171,294,638	184,998,209	171,294,638
Maintenaneand spares	12,113,490	11216194	11,267,379	10,432,758	14,697,549	13,608,842	17,386,205	16,098,338
R&D	-	-	-	-	-	-	-	-
Training andTravel	6,211	5751	19,250	17,824	39,159	36,258	396,271	366,918
Miscellaneous expenses *	14,635,797	13551664	14,247,121	13191779	14,737,037	13,645,405	11,377,688	10,534,896
Others, specify	53,902,088	49,909,341	71,924,846	66,597,080	41,527,429	38,451,323	41,842,070	38,742,657
Total	252,217,059	233,534,314	260,291,876	241,010,997	259,396,935	240,182,347	274,776,046	254,422,265

Table B.10.2b * Items to be mentioned.

Adequacy of budget allocation (10)

(The institution needs to justify that the budget allocated during assessment years was adequate)

Financial Year	Budget Allocated
2020-21	193,288,603
2019-20	201,084,256
2018-19	191,551,669
2017-18	202,024,184

Utilization of allocated funds (15)

(The institution needs to state how the budget was utilized during assessment years)

Financial Year	Approved Budget	Actual expenditure	Percentage of Utilization
2020-2021	193,288,603	186,643,192	97
2019-2020	201,084,256	194,199,575	97
2018-2019	191,551,669	184,947,816	97
2017-2018	202,024,184	195,118,594	97

Availability of the audited statements on the institute's website (5)

(The institution needs to make audited statements available on its website)

Audited statements for the financial years 2018-19, 2019-20 and 2020-21 are available on College website (www.tkrcet.ac.in).

Program Specific Budget Allocation, Utilization (30)

Total Budget at program level: For CFY, CFY*m*1, CFY*m*2 & CFY*m*3

CFY: Current Financial Year, CFYm1 (Current Financial Year minus 1), CFYm2 (Current

Financial Year minus 2) and CFYm3 (Current Financial Year minus 3)

For 2020-21

Total Budget:13239118		Actual expenditure (till …): 12729921		Total No. of students: 237
Non-recurring	**Recurring**	**Non-Recurring**	**Recurring**	**Expenditure per student**
3013488	10225630	2897585	9832336	53713

Table B.10.3a

Note: Similar tables are to be prepared for CFY*m*1, CFY*m*2 & CFY*m*3.

For 2019-20

Total Budget: 3786470		Actual expenditure (till …): 13096493		Total No. of students: 215
Non-recurring	**Recurring**	**Non-Recurring**	**Recurring**	**Expenditure per student**
3786470	9833882	3640837	9455656	60914

For 2018-19

Total Budget: 12551366		Actual expenditure (till …): 12068621		Total No. of students: 193
Non-recurring	**Recurring**	**Non-Recurring**	**Recurring**	**Expenditure per student**
1498932	11052434	1441280	10627340	62532

For 2017-18

Total Budget: 13337633				**Actual expenditure (till …): 12824647**		**Total No.of students**: 201		
Non-recurring	**Recurring**			**Non-Recurring**	**Recurring**	**Expenditureper student**		
2529402	10808231			2432117	10392530	63804		
Items	**Budgeted in**	**Actual expenses in**	**Budgeted in**	**Actual Expensesin**	**Budgeted in**	**Actual Expensesin**	**Budgetedin**	**Actual Expensesin**
	2020-21	**(2020-till Date)**	**2019-20**	**2019-20**	**2018-19**	**2018-19**	**2017-18**	**2017-18**
Amount in Lakhs								
Laboratory equipment	273462	253206	201060	186166	108338	100313	363450	336528
Software	59555	55143	-	-	59018	56647	23278	21554
Laboratory consumable	3127	2895	1567	1451	7432	6882	60628	56137
Maintenance andspares	774035	716699	746989	691657	847513	784735	1043172	965900
R & D	-	-	-	-	-	-	-	-
Training and Travel	397	367	1276	1182	2258	2091	23776	22015
Miscellaneousexpenses *	935207	865933	944536	874571	849790	786843	682661	632094
Total	2045783	1894244	1895428	1755026	1874349	1735509	2196965	2034227

Table B.10.3b * Items to be mentioned.

Adequacy of budget allocation (10)

(Program needs to justify that the budget allocated over the assessment years was adequate for the program)

Financial year	Allocated Budget
2020-2021	13,239,118
2019-2020	13,620,352
2018-2019	12,551,366
2017-2018	13,337,633

Utilization of allocated funds (20)

(Program needs to state how the budget was utilized during the last three assessmentyears)

Financial year	Approved Budget	Actual Expenditure	Percentage of Utilization
2020-21	13,239,118	12,729,921	96
2019-20	13,620,352	13,096,493	96
2018-19	12,551,366	12,068,621	96
2017-18	13,337,633	12,824,647	96

Table 10.3d: Utilization of allocated funds

Library and Internet (20)

Quality of learning resources (hard/soft) (10)

Accessibility to students

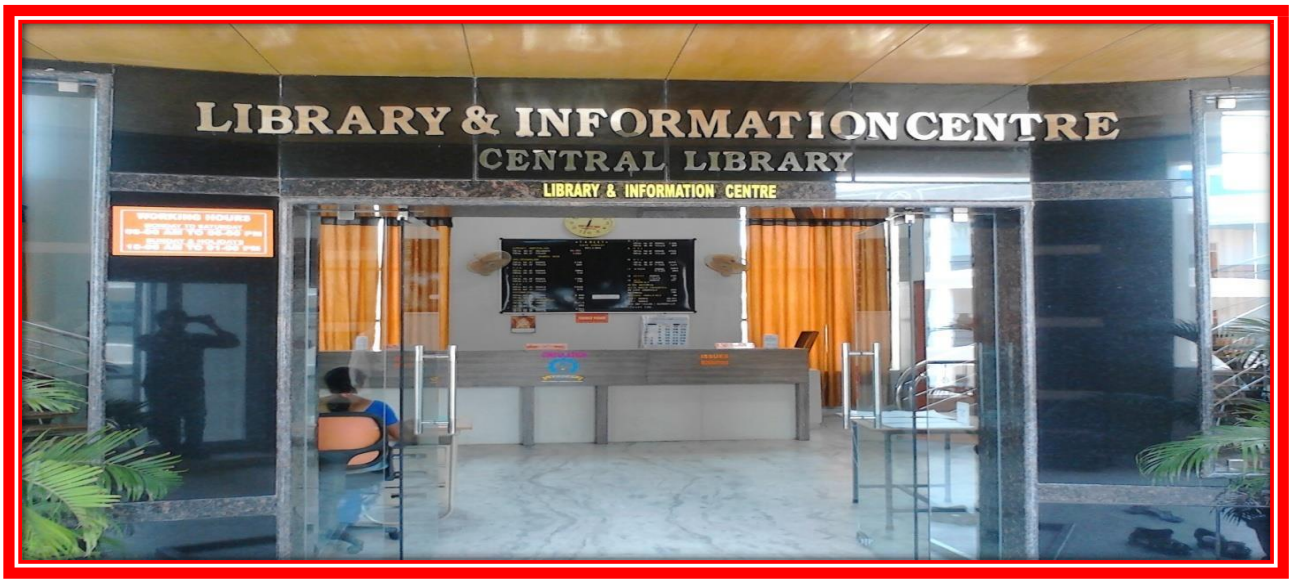
Support to students for self-learning activities

The TKRCET Library & Information Centre, Central Library has been established with a state of the art Infrastructure spread over the second and third floor of the college central block and is a Duplex with a built in area of 1510 sqm, has a seating capacity of 300 and uses the open access system. The Centre‟s vision is to provide world class knowledge resources that not only cater to the academic requirements but also the Intellectual enrichment of the users.

The Library has a rich collection of 10,193 Titles and 91,932 Volumes, 4,429 Back Volumes, 6,154 CD‟s DVD‟s (Non-Book Materials) 3,443 Projects and dissertations. This collection caters to the needs of the independent departments of Basic Sciences, Engineering &Technology, Humanities and Social Sciences, Management and Literature.

The Central Library subscribes printed National and International Journals as per the norms and more than 4,048 e-Journals like EBSCO, IEEE POP, INFLIBNET, N-LIST and DELNET subscriptions.

The housekeeping services of the Library are fully Automated with NEWGEN-LIB (ILMS) Library Management Software, Automation covers regular Library activities such as acquisition, circulation, with provision for Issues, renewals, reservations, serial control and OPAC (online public access catalogue), which generate various types of reports and statistics.



The All Departments at TKRCET Departmental Libraries for ready reference. This is exclusively used by the concerned department. The College provides AICTE and UGC recommended NPTEL, SWAYAM web and Video courses and NPTEL MOOCS (Massive Online Open Courses) and NDL(National Digital Library, IIT, Kharagpur) learning resources are encouraged. The Central Library being the service provider arranges user orientation programmes for the students and staff of TKRCET every year at the commencement of every academic year and also educates them about the system and service of the Library.

The Library & Information Centre has an advisory committee composed of faculty from various Departments, the Principal as a Chairman, Librarian as a Convener and one staff member representing each department has been constituted to help in the development activities of the library. Students Library Committee comprising of a student Co-Ordinator with student members representing their problems through the committee also participate in the developmental activities of the Library. The Committee is expected to monitor the allocation of funds for the Books, Journals, Manuals etc. and the Digital information self Learning resource, information online Journals. The Library Committee is also expected to monitor the student‟s and staff‟s utilization of the library.

Stock Area

Library Space and ambience, timings and usage, availability of a qualified Librarian and other staff, Library Automation, Online access, networking etc.

S. No	Description	Particulars
1	Carpet Area of Library	1510 Sq.m
2	Reading Space	806 Sq.m
3	Number of seats in Reading space	300
4	Number of Users(Issue Books) per day	200-300
5	Number of Users (Reading space) per day	150-200
6	**Working Hours**	**Academic (Working days) : 9:00 am to 6:00 pm** **Academic(Weekend) : 9:00 am to 6:00 pm** **Vacation : 10:00 am to 1:00 pm**
7	Number of Library Staff	10
8	Number of Library Staff with Degree in Library Science	06
9	Computerization for search, indexing, issues /returns records	NEW GEN- LIB Automation Software –(Integrated Library Management Software 3.04 version)
10	Bar-Coding used	Zebra Barcode – TLP 2844 Printer
11	Library Services on internet	❖ e-Books Access and downloading ❖ e-journals Access and down loading ❖ NPTEL -web and video courses ❖ OPAC (Online Public Access Catalogue)
12	Consortium/ other similar membership specify	EBESCO-IEEE, INFIBNET N-List, DELNET, NPTEL, SWAYAM, SWAYAM PRABHA, NDL, SONET Web and Video Lecturers, e-Books, e-Journals, and other electronic-Databases…etc.

Reference Section

Total Titles and Volumes (Books):

Number of Titles : 10,193

Number of Volumes : 91,932

Library Increments - (Added Titles and Volumes):

Year	Number of New Titles added	Number of New Editions added	Number of New Volumes added
CFY m (2020-21)	63	14	150
CFY m3 (2019-20)	174	21	500
CFY m2 (2018-19)	181	26	1540
CFY m1 (2017-18)	57	10	824

Scholarly Journal Subscription:

Year	Number of Technical Magazines / Periodicals	Total Number of Technical Journals Subscribed	
		In Hard Copy	In Soft Copy
CFY m 2020-21	34	159	4,048
CFY m3 2019-20	42	156	4,048
CFY m2 2018-19	41	155	4,048
CFY m1 2017-18	40	155	4,048

Digital Library / e-Learning:

The Digital Library is equipped with 60 multimedia systems with high speed Internet connection, enabled with Wi-Fi.

Digital has many forms and meanings in today‟s world of Information, Knowledge sharing and data security. All the Non-Book Materials (e-Resources) online journals, Scanned Documents can be stored in the Digital format.

Anyone can access Information about the online process of the Digital Library.

Digital Library

Digital Library content following Digital Contents which are made available		
S. No	**Item Description**	**Particulars**
1	NPTEL WEB Video Courses	Available
2	National Digital Libraries(NDL)	TKR College of Engineering & Technology(K9) Is now a part of the NDLI Club
3	Number of e-Books	2,188
4	Availability of an exclusive server?	Yes
5	Availability over Intranet / Internet	Yes
6	Institutional Repositories	Available
7	e-Journals	Available
8	Back Volumes	Available
9	Self-Learning Resources	Available
10	Previous Question Papers	Available

Library Expenditure on books, magazines / journals and miscellaneous content:

Year	**Expenditure in Rupees**				**Total Amount in Rs.**
	Books	**Magazine / Journals(for hard copy subscription)**	**Magazine / Journals(for soft copy subscription)**	**Misc. contents**	
CFY m 2020-21	64,044.00	2,53,794.00	5,54,664.00	1,28,570.00	**10,01,072.00**
CFY m3 2019-20	4,17,242.00	2,80,444.00	5,44,500.00	1,14,125.00	**13,56,311.00**
CFY m2 2018-19	5,30,336.00	2,69,475.00	5,23,815.00	1,18,045.00	**14,41,671.00**
CFY m1 2017-18	2,99,553.00	2,73,811.00	7,49,389.00	1,15,342.00	**14,38,095.00**

Internet (10)

- Name of the Internet provider:
- Available bandwidth:
- Wi Fi availability:
- Internet access in labs, classrooms, library and offices of all Departments:
- Security arrangements:

S.No	Particulars	Remarks
1	Name of the Internet provider	GTPL Broadband Pvt.Ltd.
2	Available bandwidth	1000Mbps
3	Wi Fi availability	Yes, campus is Wi Fi enabled
4	Internet access in labs, classrooms ,library and offices of all Departments:	Yes, Internet is accessible in all computer labs, classrooms, offices of all Departments.
5	Security arrangements	• MikroTik Router • MikroTik features include Firewall & Nat, Hotspot, Routing, Bandwidth Limiter, DNS server, Point to Point Tunneling Protocol, Hotspot, DHCP server, and many more. • MikroTik RouterOS Firewall is based on Stateful Filterig technology that can be used to detect and block many stealth scans, DoS attacks, SYN floods.

Declaration

The head of the institution needs to make a declaration as per the format given:

- I undertake that the institution is well aware about the provisions in the NBA's accreditation manual concerned for this application, rules, regulations, notifications and NBA expert visit guidelines inforce as on date and the institutes hall fully abide by them.
- It is submitted that information provided in the Self Assessment Report is factually correct.
- I understand and agree that an appropriate disciplinary action against the institute will be initiated by the NBA. In case, any false statement/information is observed during pre-visit, postvisit and subsequent to grant of accreditation.

Head of the Institute
Name: Dr.D.V.RAVI SHANKAR
Designation: PRINCIPAL
Signature:

Seal of the institution:

Place: HYDERABAD
Date: 26-02-2022 15:26:13