



KG REDDY
College of Engineering
& Technology
Engineering India's Changemakers



**The Faculty, Staff and Students
of
Department of Electronics and Communication
Engineering**

**Extend a Hearty Welcome
to
Honorable Members of NBA Expert Committee**

Department of Electronics & Communication Engineering

Presentation

for

National Board of Accreditation

By

Dr. Manisha G

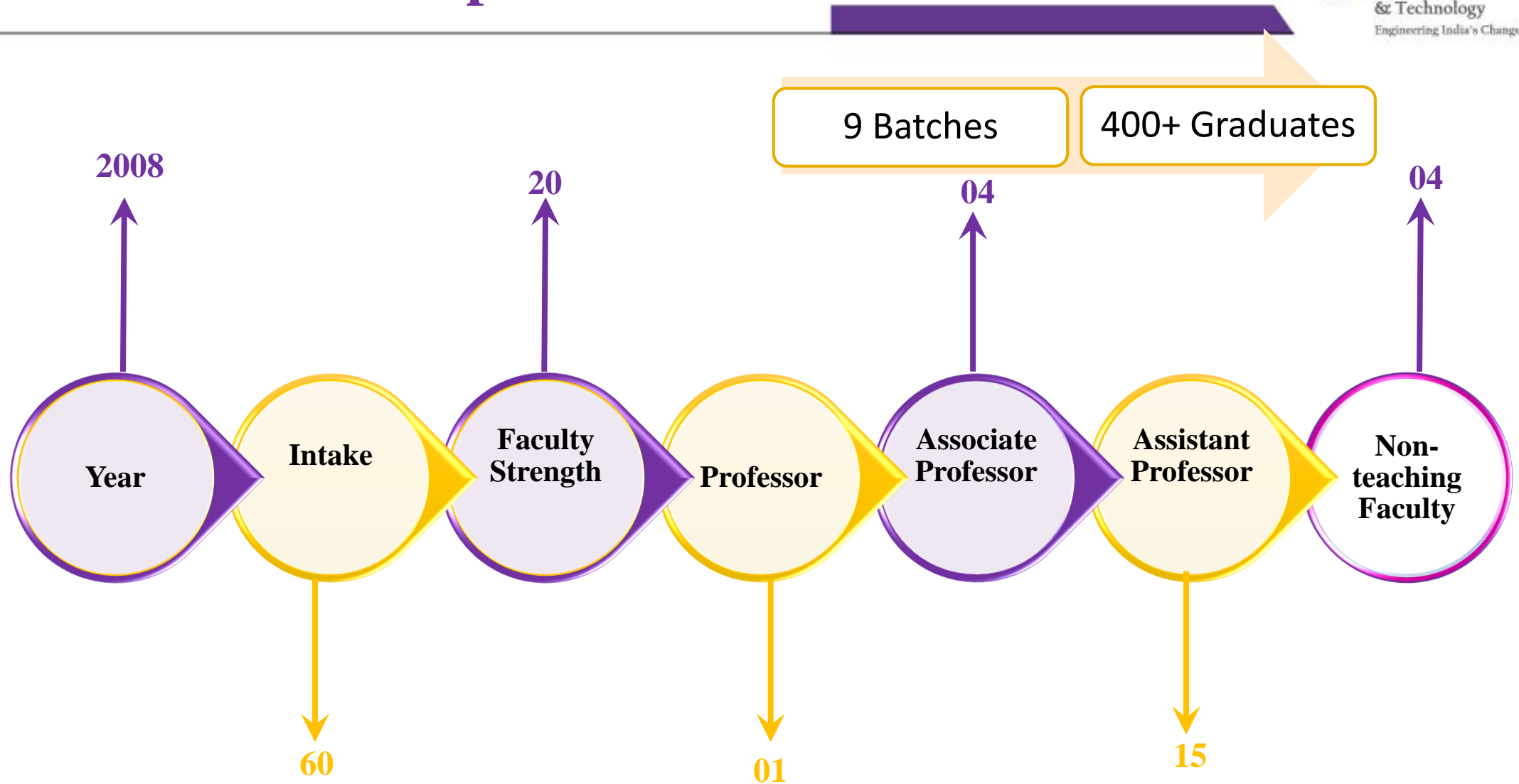
Head of the Department & Dean - CRID

- Department Achievements & Recognitions
- Criterion: 01 - Department Vision & Mission and Program Educational Objectives
- Criterion: 02 – Program Curriculum and Teaching – Learning Processes
- Criterion: 03 – Course Outcomes and Program Outcomes
- Criterion: 04 – Student Performance
- Criterion: 05 – Faculty Information and Contributions
- Criterion: 06 – Facilitates and Technical Support
- Criterion: 07 – Continuous Improvement

Part – 1

Department Achievements & Recognitions

Overview of the Department



Department Strengths / Faculty Contributions

- Student Performance in Academics and Placements
- Infrastructural Facilities – Research Laboratory
- Faculty Contributions towards Research and Innovations – R & I Culture
- Student Performance in Co-Curricular and Extra Curricular Activities



Faculty Achievements



Student Achievements



Elite Student Forum



IBC Hackathon

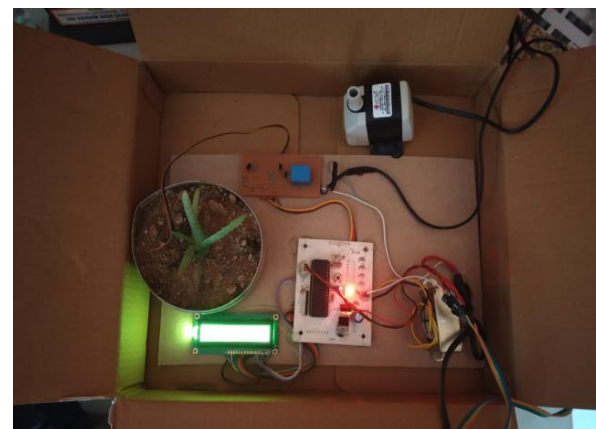
IBC Hackathon



Employability Skills Training Award



IBC Hackathon Congress



Automatic irrigation soil moisture content control

GATE 2017 Scorecard

Graduate Aptitude Test in Engineering

Name

P VENKATESH

Registration Number

EC17S41410439

Examination Paper

Electronics and Communication Engineering (EC)

P. Venkatesh

(Candidate's Signature)

GATE 2017 GATE 201

Gate Score Card

Criterion – 1

Vision, Mission and Program Educational Objectives

Department Vision & Mission

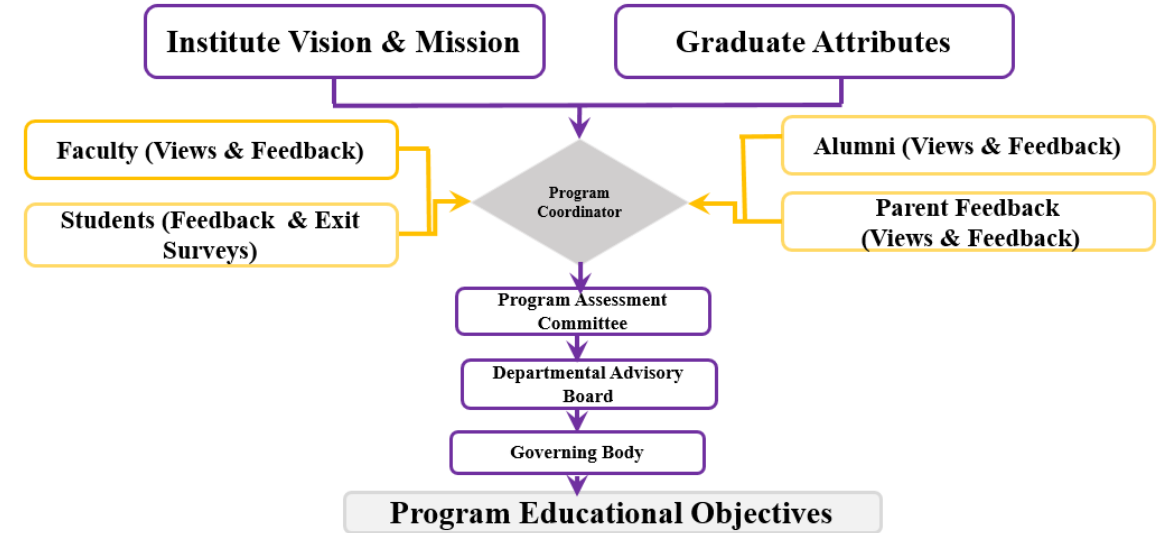
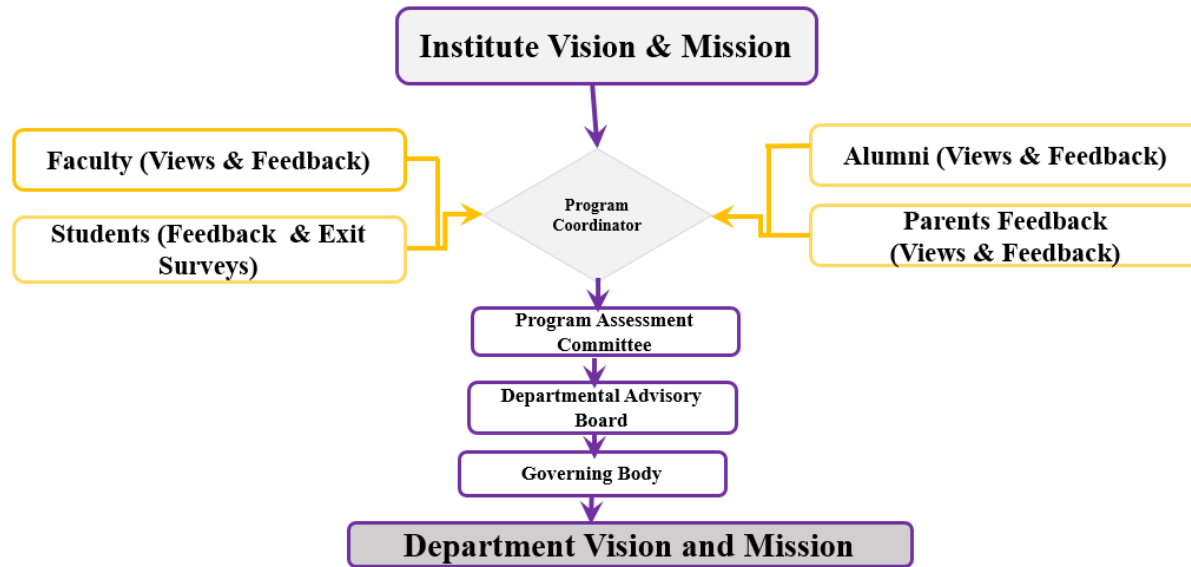
Vision

- To be recognized as a full-fledged center for *learning and research* in various fields of Electronics and Communication Engineering through industrial collaboration and to provide consultancy for solving the real time *socio-economic problems*

Mission

- To provide *innovative teaching and learning* in the contemporary technologies in Electronics and Communication Engineering to support the professional aspirations of the students.
- To promote innovation through research and development among faculty and students by providing opportunities for *inter-disciplinary learning* in collaboration with industry.
- To encourage *professional development* of students that will inculcate *ethical values* and *leadership skills* while working with the community to address *societal issues*

Department Vision & Mission /PEOs – Process Flow



Print Media	Brochure, HoD Chamber, Display Boards in Department Corridor, Department Notice Board, Staff Room, Laboratories, Course File, Student Handbook
Electronic Media	Institute website https://kgr.ac.in/electronics-communication-engineering/#vision-mission , Social Media
Direct Interaction	Stakeholders (Internal & External) – Effective Process Implementation

PEOs and Mission Statements Mapping

PEO1: To be equipped with skills for *solving complex real-world problems* related to VLSI, Embedded Systems, Signal/Image processing, and Digital and Wireless Communication

PEO2: To develop *professional skills* that will equip them to succeed in their careers and encourage *lifelong learning* in advanced areas of Electronics and communications and related fields.

PEO3: To communicate effectively, *work collaboratively and exhibit high levels of professionalism, moral and ethical responsibility*

PEO4: To develop the ability to understand and analyze engineering issues in a broader perspective with ethical responsibility towards *sustainable development*.

	Mission Statement		
PEO	M1	M2	M3
PEO1	3	2	2
PEO2	2	2	3
PEO3	2	2	3
PEO4	3	3	3

3: High 2: Medium 1: Low

M1: To provide *innovative teaching and learning* in the contemporary technologies in Electronics and Communication Engineering to support the professional aspirations of the students.

M2: To promote innovation through research and development among faculty and students by providing opportunities for *inter-disciplinary learning* in collaboration with industry.

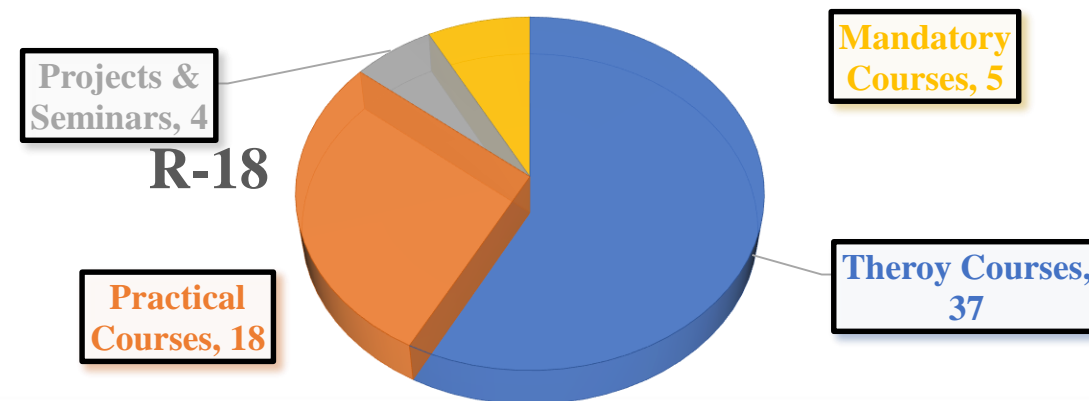
M3: To encourage *professional development* of students that will inculcate ethical values and *leadership skills* while working with the community to address *societal issues*

Criterion – 2

Program Curriculum and Teaching Learning Processes

Program Curriculum

S No.	Regulation	Theory Courses	Practical Courses	Project& Seminar Courses	Mandatory Courses	Total Courses
1	R-18	37	18	04	05	64
2	R-16	39	19	03	05	66
3	R-15	40	14	04	-	58
4	R-13	40	14	04	-	58



Teaching - Learning Process

Teaching Learning Process

1. University calendar
2. Department Academic calendar,
3. JNTUH Syllabus
4. HoD Faculty Meeting
5. Faculty Subject Options
6. Subject Allotment
7. Time Table
8. Lesson Plan
9. Detailed Lecture Notes
10. Assignments
11. Interaction using Teaching Aids
12. Tutorial Classes
13. Industrial Visits
14. Student Projects
15. Continuous Evaluation in the Laboratories
16. Continuous Assessment (Results)

Project Based Learning

- 2nd year students – Project-based assignments
3rd year students – Mini projects
4th year students – Major projects

Pedagogical Initiatives

Student-Centric Learning

Project-Based Learning

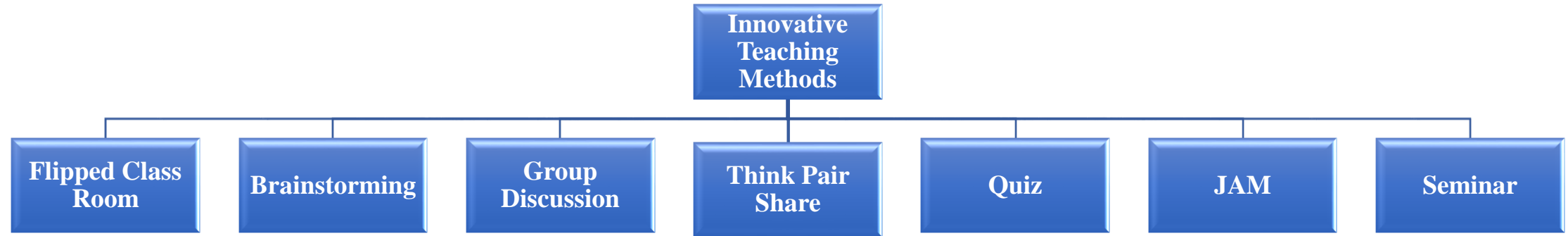
Blended and Online Learning

S No	Academic Year	Pedagogical Initiatives
1	2020-21	85
2	2019-20	95
3	2018-19	131
4	2017-18	61

- Active Learning Strategies
- Innovative Teaching – Learning Practices
- Think – Pair – Share
- Flipped Classroom
- Group Discussion / Quiz / Seminar / JAM / Brain storming Sessions
- Learning Management System through canvas – Sharing e-resources
- Mentoring / Attendance Tracking through Campus Management System
- YouTube Lectures through Light Board Technology
(https://youtube.com/playlist?list=PLD5x7w6YYEVZvZ_VG4k1SKJndNP4hKSdv)
- Online Classes through Swecha platform
- Imparting practical knowledge through laboratory experiments



Instructional Methods & Pedagogical Initiatives



Teaching - Learning Process

Advance and Slow Learners

S No	Academic Year	Year	Advance Learners	Slow Learners
1	2020-2021	2 nd year	44	23
		3 rd year	39	72
		4 th year	32	18
2	2019-2020	2 nd year	91	14
		3 rd year	46	06
		4 th year	26	05
3	2018-2019	2 nd year	35	15
		3 rd year	22	09
		4 th year	78	19
4	2017-2018	2 nd year	35	8
		3 rd year	50	38
		4 th year	26	16

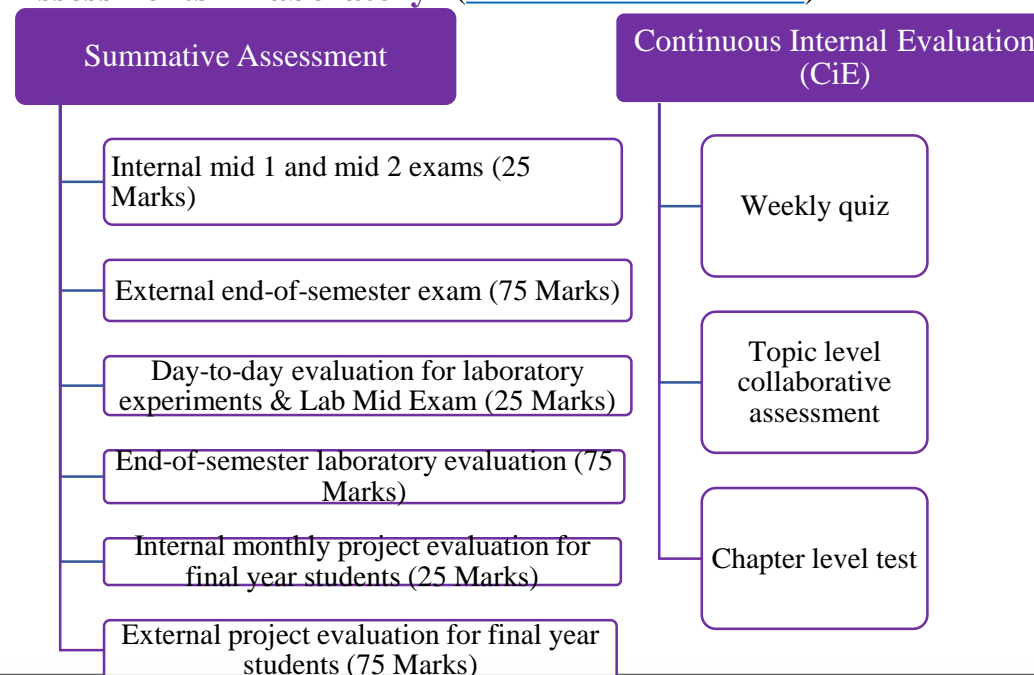
Strategies Adopted for Slow Learners

- Extra Remedial classes
- Collaborative Learning Practice (CLP)
- Counseling classes
- Extra Classes
- Home assignments.
- Parent-teacher meets

Strategies Adopted for Advance Learners

- Research based Projects
- Entrepreneurship Development Cell
- Institution Innovation Council Activities / Smart Hackathons / Innovation Contests
- Participation in MOOC Courses / Technical Competitions
- Participation in EPICS – Community Problems Based Projects
- Workshops and Professional development / Training Programs for enrolling in premier institutions of high repute for higher studies and for better placements.

Continuous Assessments in laboratory ([Continuous evaluation](#))



Student Feedback & Actions Taken / Quality of Student Projects

Parameters for Evaluation

- Learning
- Enthusiasm
- Extensiveness
- Assignments
- Overall

Internal Assessment Pattern

- **Total of 25 Marks**
- Subjective Question paper: 10M
- Objective Question paper: 10M
- Assignment: 05 M
- **Sample Question Paper**
- **Sample Assignment & its relevance to CO**

Evaluating Rubrics

Grade	A++	A+	A	B+	B	C	C+
Grade Point Range	>4.51	4.26 - 4.51	4.01 – 4.26	3.76 – 4.01	3.51 – 3.76	3.26 – 3.51	3.01 – 3.26

Process of Monitoring & Evaluation - Framework

- Problem Formulation
- Background Research
- Specify Requirements
- Brainstorm and identify the solution
- Develop Prototype
- Interpret the results
- Validate
- Conclude

Identification of Projects /Guide Allocation Process

Projects are identified from emerging technologies considering the following

- Societal relevance
- Innovative and product development
- Rural development
- Research oriented

Guide is allocated based on the area of research chosen by the student with mapping it to the guide's area of research / interest

Project Review Committee schedules the project evaluation and in those stipulated period the students are supposed to present the stage of their project

Feedback Analysis Report and Action Taken

Best Projects (2019-2020)							
Title of the Project	Problem Formation (4 M)	Problem Solving (6M)	Design / Coding (6/M)	Results (6/M)	Doct (3M)	Total Marks (25M)	PO's, PSO's Mapping
Dog Breed Identification Using CNN	4	6	6	6	3	25	PO1, PO2, PO3, PO5, PO12.PSO1, PSO3.
IOT Home Automation With Blu-Fi Technology Based On MQTT and Wi-Fi Sensor Nodes	4	6	5	6	3	24	PO1, PO2, PO3, PO5, PO9, PO10, PO12. PSO1, PSO3, PSO4
Movable Road Divider	4	6	6	5	3	24	PO1, PO2, PO3, PO5, PO9, PO10, PO12. PSO1, PSO3, PSO4.

Factors Considered for Best Projects

Application to Society
Idea and Innovation
Cost Factor
Type of The Project
Awareness of Standards
Awareness of Ethics
Safety Factor

Industry-Institute Interaction

S. No	Memorandum of Understanding
1	Data Point Info Solutions Pvt. Ltd
2	Sulakshana Circuits Pvt. Ltd
3	Uptec Idea Labs Pvt. Ltd
4	Technolexis Pvt Ltd
5	Armtrons Pvt. Ltd

Industry Oriented Lab	Details	Relevance to POs /PSOs
IoT Maker Space	3D Printer, Soldering/ De-soldering, PCs.	PO1, PO2, PO3, PO5, PO9, PO10, PO12.

Industrial Training /Tours for Students		
Academic Year	Industry Name	Number of Students
2019-2020	1. ECIL 2. Diesel loco shed 3. ELICO 4. Indian Metrological Department	249
2018-2019	1. Prasara Bharathi 2. Sulakshna Circuit ltd. 3. Advanced Training Institute for Electronics and Process Instrumentation 4. Carriage Workshop	164
2017-2018	1. ISRO Satish Dhawan Space Centre, 2. Indian Metrological Department	132

Academic Year	Internship Offers	Prominent Companies
2020-21	14	Bharat Heavy Electrical Ltd, Cisco Networking Academy, TCS iON Digital Learning Hub, Skyfi Labs
2019-20	39	Bharat Heavy Electrical Ltd, Electronics Corporation of India Ltd AVEGA Innovations, DRDO, BSNL, AVTES OPC Private Ltd
2018-19	8	Bharat Heavy Electrical Ltd, Electronics Corporation of India Ltd



Criterion – 3

Course Outcomes and Program Outcomes

Course Outcome and Program Outcomes

At the end of the Course, Students will be able to

Course: Digital Communications; Course Code: A60420; R 13

CO1	Describe basic components of Digital Communication Systems
CO2	Compare different error detecting and error correction codes like block codes, cyclic codes and convolution codes.
CO3	Design optimum receiver for Digital Modulation techniques
CO4	Analyze the error performance of Digital Modulation Techniques.
CO5	Define spread spectrum and its types

PROGRAM SPECIFIC OUTCOMES (PSOs)

PSO 1: Problem Solving Skills – Graduates will be able to apply their knowledge in emerging electronics and communication engineering techniques to design solutions and solve complex engineering problems.

PSO 2: Professional Skills – Graduate will be able to think critically, communicate effectively, and collaborate in teams through participation in co and extra-curricular activities.

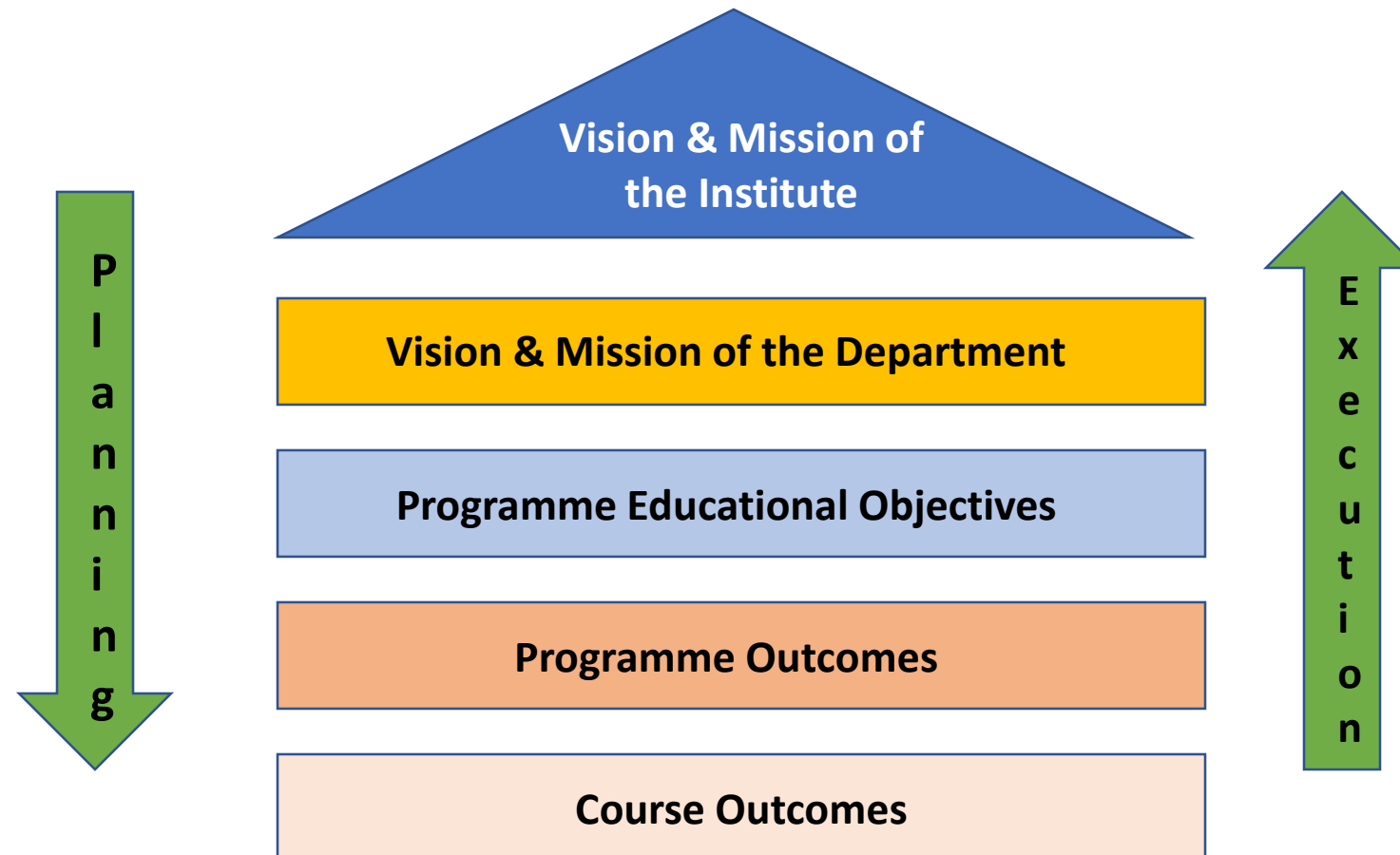
PSO 3: Successful Career – Graduates will possess a solid foundation in Electronics and Communications engineering that will enable them to grow in their profession and pursue lifelong learning through post-graduation and professional development.

PSO 4: Society Impact – Graduate will be able to work with the community and collaborate to develop technological solutions that would promote sustainable development in the society.

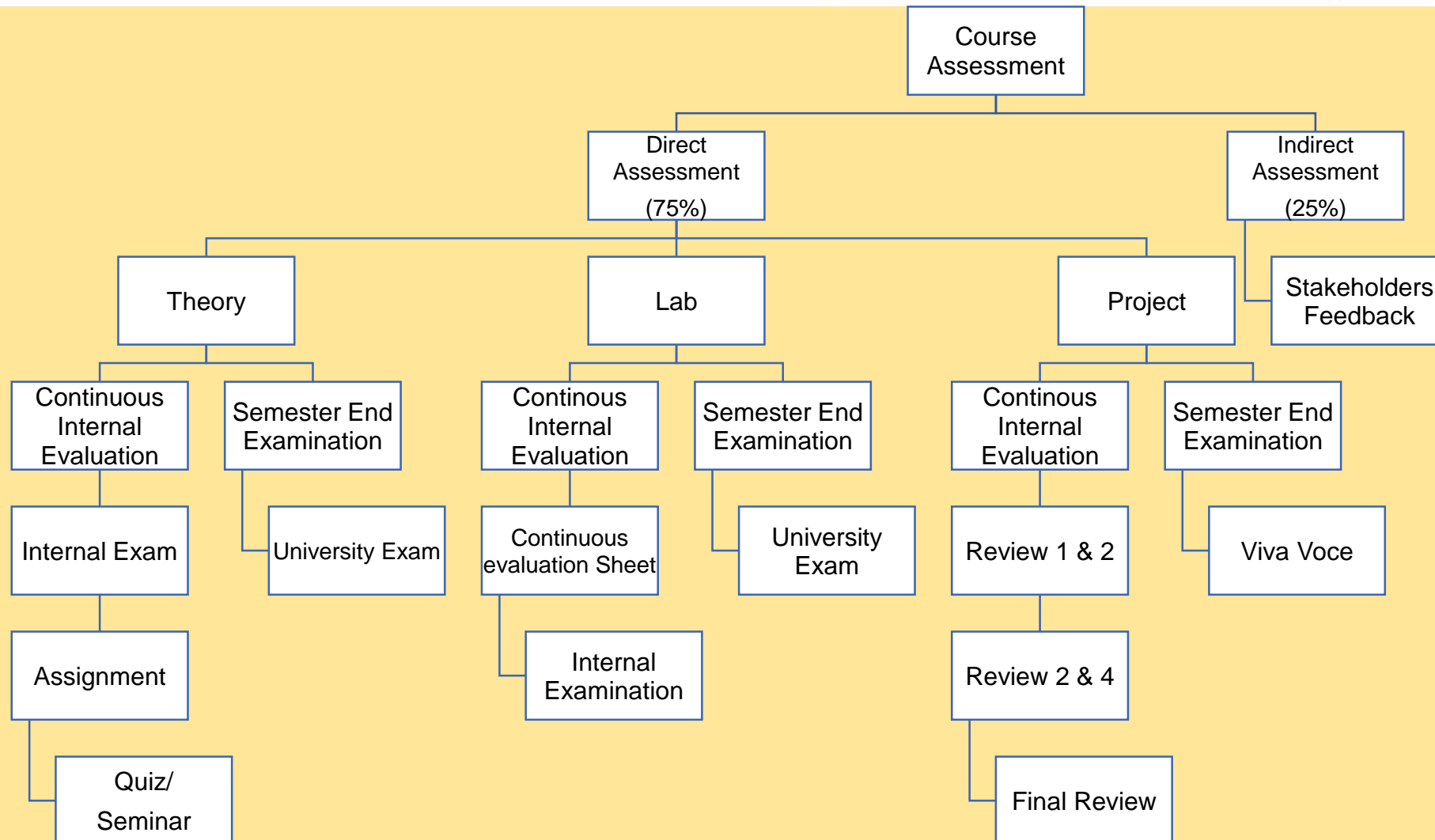
PROGRAM OUTCOMES (POs)

- **PO1:** Engineering Knowledge
- **PO2:** Problem Analysis
- **PO3:** Design/Development of Solutions
- **PO4:** Conduct investigations of complex problems
- **PO5:** Modern Tool usage
- **PO6:** Engineer & Society
- **PO7:** Environment & Sustainability
- **PO8:** Ethics
- **PO9:** Individual & Team work
- **PO10:** Communication
- **PO11:** Project Management & Finance
- **PO12:** Life long learning

Procedure for Planning & Execution of PO & PEO



Course Assessment



Mapping with CO and PO

- Course Outcome [Mapping](#) and Attainment
- Overall PO [Attainment](#)

*[*Hyper linked](#)*

Direct Assessment - PO Attainment 2014-18 batch

S.No	Course	NBA Code	Course Code	Engineering India's Innovators																															
				PO1		PO2		PO3		PO4		PO5		PO6		PO7		PO8		PO9		PO10		PO11		PO12		PSO1		PSO2		PSO3		PSO4	
				P	A	P	A	P	A	P	A	P	A	P	A	P	A	P	A	P	A	P	A	P	A	P	A	P	A	P	A	P	A	P	A
1	EMTL	C210	A40411	1.80	1.54	1.80	1.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	1.20	1.03	0.00	0.00	0.80	0.01	0.40	0.01	
2	DDVHDL	C211	A40410	2.20	1.69	0.60	0.47	0.40	0.32	0.00	0.00	1.80	1.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	2.00	1.42	0.80	0.62	0.40	0.32	0.00	0.00	0.60	0.00	
3	ECA	C212	A40412	2.40	2.07	2.80	2.42	2.60	2.25	0.80	0.70	0.80	0.70	0.40	0.35	0.40	0.35	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	1.00	1.23	2.40	2.07	0.80	0.70	0.80	0.02	1.00	0.03
4	PDC	C213	A40415	0.36	0.31	0.36	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.24	0.21	0.00	0.00	0.16	0.00	0.08	0.00	
5	PEE	C214	A40415	2.80	2.32	2.40	2.03	2.00	1.69	0.00	0.00	1.60	1.35	0.00	0.00	0.40	0.34	0.40	0.34	0.00	0.00	0.00	0	0.00	0.00	1.40	0.68	2.80	2.32	0.60	0.51	0.00	0.00	0.00	0.00
6	ET LAB	C215	A40288	1.40	1.40	1.60	1.60	1.40	1.40	1.60	1.60	1.20	1.20	0.40	0.40	0.00	0.00	0.00	0.00	2.40	2.40	2.40	2.40	0.00	0.00	0.00	0.00	0.40	0.40	0.40	0.40	0.00	0.00	0.40	0.00
7	EC/PC LAB	C216	A40484	2.00	1.85	2.00	1.85	2.40	2.22	2.20	2.03	0.00	0.00	0.00	0.00	0.40	0.37	0.00	0.00	2.40	2.22	2.40	2.22	0.00	0.00	0.00	0.00	0.20	0.18	0.40	0.37	0.40	0.01	0.40	0.01
8	COOS	C301	A50516	2.40	2.25	2.40	2.21	1.80	1.76	0.00	0.00	1.60	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	2.80	2.55	2.00	1.76	2.60	2.26	0.80	0.69	0.80	0.69	
9	AC	C302	A50408	0.40	0.37	0.40	0.37	0.48	0.44	0.44	0.41	0.00	0.00	0.00	0.00	0.08	0.07	0.00	0.00	0.48	0.44	0.00	0	0.00	0.00	0.00	0.00	0.04	0.04	0.08	0.07	0.08	0.00	0.08	
10	AWP	C303	A50418	0.48	0.45	0.48	0.44	0.36	0.35	0.00	0.00	0.32	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.56	0.51	0.40	0.35	0.52	0.45	0.16	0.14	0.16	0.14	
11	EMI	C304	A50422	0.48	0.45	0.48	0.44	0.36	0.35	0.00	0.00	0.32	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.56	0.51	0.40	0.35	0.52	0.45	0.16	0.14	0.16	0.14	
12	LICA	C305	A50425	2.60	2.27	2.60	2.27	1.80	1.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	1.00	1.22	1.40	1.20	1.80	1.59	0.00		0.20	0.00	
13	CSE	C306	A50217	1.20	0.90	1.20	0.90	1.20	0.90	1.60	1.20	1.00	0.75	0.00	0.00	0.00	0.00	0.00	0.00	2.40	1.80	2.40	1.8	0.00	0.00	2.20	1.65	0.00	0.00	0.60	0.45	1.00	0.75	0.40	0.30
14	AC LAB	C307	A50487	0.10	0.09	0.10	0.09	0.07	0.07	0.00	0.00	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.10	0.08	0.07	0.10	0.09	0.03	0.03	0.03	0.03	
15	ICA LAB	C308	A50488	0.52	0.45	0.52	0.45	0.36	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.24	0.28	0.24	0.36	0.32	0.00	0.00	0.04	0.00	

P – Planned A - Attained

PO Attainment 2014-18

Indirect Assessment - PO Attainment

S.No	Parameters	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO2	PSO3	PSO4
1	Parent	1.75	1.75	1.75	1.75	1.75	1.50	2.50	2.21	2.00	2.25	2.83	2.25	1.63	2.00	1.50	2.30
2	Graduate Exit Survey	3.84	3.84	3.84	3.84	3.85	3.91	3.91	3.91	3.91	3.92	3.92	3.92	3.91	3.91	3.92	3.92
3	Allumni	4.24	4.30	4.33	4.33	4.27	4.33	3.92	3.92	4.28	4.00	4.28	4.33	4.24	4.27	4.14	4.05
	Average	3.28	3.30	3.31	3.31	3.29	3.25	3.44	3.35	3.40	3.39	3.68	3.50	3.26	3.39	3.19	3.42

Overall PO Attainment

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
Direct Attainment	0.77	0.78	0.48	0.36	0.38	0.29	0.11	0.19	0.56	0.55	0.17	0.45
Indirect Attainment	0.82	0.82	0.83	0.83	0.82	0.81	0.86	0.84	0.85	0.85	0.92	0.87
Overall Attainment	1.59	1.61	1.31	1.19	1.20	1.10	0.98	1.03	1.41	1.03	1.09	1.32

Course	PSO1	PSO2	PSO3	PSO4
Direct Attainment	0.49	0.36	0.22	0.14
Indirect Attainment	0.81	0.85	0.80	0.85
Overall Attainment	1.30	1.21	1.02	0.99

Actions taken based on the evaluation of POs

Academic Year	Workshops	Seminars	Guest/Expert Lectures	Value Added Courses	Certificate Courses
2020-2021	01	01	21	00	00
2019-2020	04	02	06	01	01
2018-2019	06	03	10	02	02
2017-2018	04	03	04	02	02



S. No	Gap/Add-On Courses	Action Taken	No of students	Relevance POs, PSOs
1	Design and develop solutions using modern tools	A Boot Camp on Python Programming	33	PO1, PO2, PO3, PO5, PO12. PSO1, PSO3.
2	Design and developing solutions using modern tools for effective professional skill development	IOT and Idea to Product	71	PO1, PO2, PO3, PO5, PO9, PO10, PO12. PSO1, PSO3, PSO4.
3	Design and develop solutions using modern tools	Java oracle fundamentals	33	PO1, PO2, PO3, PO5, PO12. PSO1, PSO3.
4	Design and develop solutions for effective communication and professional skills	VLSI	12	PO1, PO2, PO3, PO10, PO12. PSO1, PSO3, PSO4.

Actions taken based on the evaluation of POs

- ✓ Continuous research oriented project works carried out
- ✓ Industrial visits can be enhanced
- ✓ Students are encouraged towards contemporary software to develop technical proficiency
- ✓ Practices and exposure towards environmental and sustainable technologies
- ✓ Interaction with the students to improve the placements
- ✓ Motivational sessions to encourage students to pursue higher studies

Criterion – 4

Student's Performance

Enrollment Ratio & Success Index

Item	2019-2020	2019-2020	2018-2019	2017-2018	2016-2017	2015-2016	2014-2015	2013-2014
Intake (N)	60	120	120	60	60	120	120	120
N1	40	69	103	54	44	85	43	76
N2	0	23	12	2	1	14	4	0
N1 + N2 + N3	41	92	115	56	45	99	47	76

N1: Total number of students admitted in first year minus number of Students migrated to other programs/ institutions plus no. of students migrated to this program

N2: Number of students admitted in 2nd year in the same batch via lateral entry

N3: Separate division students, if applicable

Success Rate without backlogs				
Item	2016-17	LYG (2015-16)	LYGm1 (2014-15)	LYGm2 (2013-14)
X	33	99	47	76
Y	14	42	14	24
SI (Y / X)	0.42	0.42	0.30	0.32

Success Rate				
Item	2016-17	LYG (2015-16)	LYGm1 (2014-15)	LYGm2 (2013-14)
X	33	99.00	47.00	76.00
Y	24	57.00	21.00	38.00
SI (Y / X)	0.72	0.58	0.45	0.50

X: Number of students admitted in the corresponding First year + admitted in 2nd year via lateral entry and separated division, if applicable

Y: Y Number of students who have graduated in the stipulated period

SI : Success Index

Academic Performance in 3rd & 2nd Year of B. Tech

B. Tech 3 rd Year			
Academic Performance	CAYm3 2016-17	LYG 2015-16	LYGm1 2014-15
X	6.89	6.67	6.78
Y	31	83	37
Z	31	84	37
API = X* (Y/Z)	6.89	6.59	6.78

B. Tech 2 nd Year			
Academic Performance	CAYm2 2017-18	CAYm3 2016-17	LYG 2015-16
X	6.91	6.53	6.66
Y	51.00	31.00	84.00
Z	51.00	38.00	89.00
API = X* (Y/Z)	6.91	5.33	6.29



X: Mean of CGPA or mean percentage of all successful students

Y: Total number of successful students

Z: Total number of students appeared in the examination

API: Academic Performance Index

Placement, Higher Studies and Entrepreneurship			
Item	LYG (2015-16)	LYGm1 (2014-15)	LYGm2 (2013-14)
N	83	37	53
X	37	16	25
Y	20	5	12
Z	00	00	01
X+Y+Z	57	21	38
PI	0.69	0.57	0.72

S.No	Professional Societies
1	IETE
2	IEEE

Academic Year	No of Professional Society Activities
2019-20	12
2018-19	26
2017-18	6

N: Total No of Final Year Students

X: No of students placed in the companies or government sector

Y: No of students admitted to higher studies with valid qualifying scores (GATE or equivalent State or National Level tests, GRE, GMAT etc.)

Z: No of students turned entrepreneur in engineering/technology

PI: Placement Index

Student Professional Development Activities

Activity	2017-18	2018-19	2019-20	2020-21
Workshops	04	06	04	--
Guest Lectures/ Expert Lectures	04	10	06	21
Seminars	03	03	02	--
Value Added Courses	02	02	01	--
Certificate Courses	02	02	01	--
Innovative Teaching Methods	61	131	95	--
Internships	--	47	10	--
Hackathons	--	06	--	--
Professional Bodies (IETE/ IEEE)	06	26	12	--
Placements	25	16	37	9
Higher Studies	12	05	20	1

Activity	Number of students
Online Courses	152
Student publications	02
Java fundamental Certification course	45
Oscad training	15
Microsoft technology associate	08
IBC Hackathon - 2018	06
IOT Maker Space	10
State level NSS camp	05
Course on VLSI design using verilog	04
Co curricular activities	09

Academic Year	Outside the state	Within the state	Prizes/awards received in Inter-Institute events
2019-20	33	35	36
2018-19	04	32	15
2017-18	06	10	06



Student Achievements



International Badminton Federation Recognizes

Konijeti Venkatesh
LINE JUDGE CERTIFICATION
FOR SERVICES RENDERED AT THE 2019 WORLD CHAMPIONSHIPS
15-January-2019
BY

Torsten Berg
TOURNAMENT REFEREE
TORSTEN BERG

Carol Bryan
LINE JUDGE COORDINATOR
CAROL BRYAN

Lily Lai
ASSISTANT LINE JUDGE COORDINATOR
LILY LAI



Mr./Ms. **KONIJETI VENKATESH**
of **Telangana**
has secured **U 19, Winner** place
In the event of **Singles**

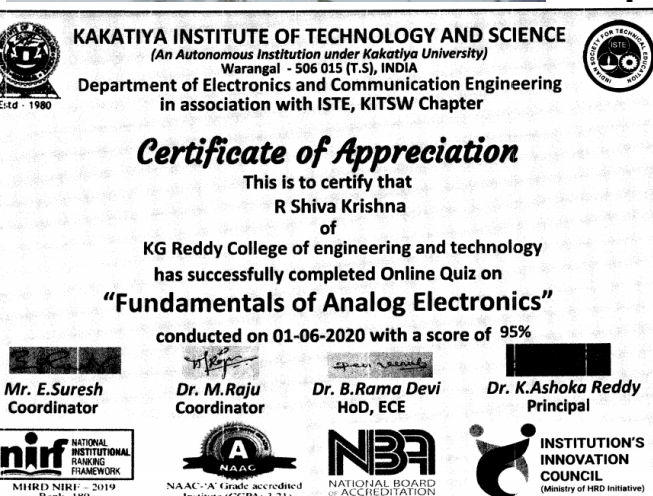
Recorded this on - 6th day of December 2017.

Dr. Akhilesh Das Gupta
Dr. Akhilesh Das Gupta
President, BAI

Dr. Vijai Sinha
Dr. Vijai Sinha
General Secretary, BAI

K. Ch. Punnalah Choudary
K. Ch. Punnalah Choudary
Secretary (E), BAI

Student Achievements



Mr. E.Suresh
Coordinator

Dr. M.Raju
Coordinator

Dr. B.Rama Devi
HoD, ECE

Dr. K.Ashoka Reddy
Principal



Student Achievements – Publications & Hackathon

S.No	A.Y	Student Name	Title of the Paper	Journal
1	2020-21	1. S. Sia Sri Srivatsav 2. Macha Bhavana 3. Rashmitha. G	Automatic Movable Road Divider using ARDUINO UNO with Node MCU	Materials Today- Scopus
2	2017-18	1. G. Vikram Reddy 2. B. Pavan Kumar Reddy 3. A. Bhagya Raj 4. D. Susheel	Implementation of safe heart for monitoring patient condition	IJRCET-UGC

S. No	Date	Event
1	25 th June, 2018	Orientation Program
2	10 th July, 2018	Boot camp on Block Chain Technology
3	12 th July, 2018	College level Hackathon (12 hours)
4	29 th -30 th June, 2018	Central Hackathon at JNTUH (36 hours)
5	3 rd -4 th Aug, 2018	IBC HACK 2018 at HICC (36 hours)

Criterion – 5

Faculty Information and Contributions

Faculty Information

Description	2020-21	2019-20	2018-19	2017-18
Total Number of Students	337	255	257	319
Total Number of Faculty	20	16	21	21
Student Faculty Ratio	16.85	15.94	12.24	15.19
Average Student Faculty Ratio of Assessment Years	14.46			

Faculty Strength		Year	Professors		Associate Professors		Assistant Professors	
Academic Year	Faculty		Required	Available	Required	Available	Required	Available
2020-21	20	2017-18	1	1	3	0	10	20
2019-20	16	2018-19	1	1	2	1	8	19
2018-19	21	2019-20	1	1	2	3	8	12
2017-18	21	2020-21	1	1	2	4	8	13
		Average Numbers	1	1	2.33	1.33	8.67	14.66
S No	Academic Year	Adjunct Faculty	Cadre Ratio: 26.58					
1	2020-21	1						

Faculty Qualification & Faculty Retention

Academic Year	Number of Faculty with Ph. D (X)	Number of Faculty with M. E /M. Tech (Y)	Number of regular Faculty required to comply 20:1 (F)	FQ = 2.5 x [(10X +4Y)/F]
2017-18	1	20	15	15.00
2018-19	2	19	12	20.00
2019-20	4	12	12	18.33
2020-21	5	15	12	22.91

	2017-18	2018-19	2019-20	2020-21
No of Retained Faculty	N A	16	11	11
Total Number of faculty	21	21	21	21
Faculty Retention Ratio	N A	76	52	52.38
Average Retention Ratio	64.28			

S. No	Name of Faculty	Student Centric Methods/ICT Tools 2020-21										
		Quiz	JAM	Think Pair Share	Brain Storming	Unit Test	CLP	Student Seminars	Video Lectures	NPTEL Videos	Others	Total
1	Dr D Chandra Prakash	2	2	--	--	--	--	--	--	--	1	5
2	Dr B Vandana	--	--	--	--	--	--	--	--	--	--	--
3	Mr. M N Narsaiah	--	--	--	--	--	--	--	--	--	--	--
4	Ms. Gayatri Tangirala	5	--	--	--	--	--	--	2	--	3	10
5	Mr. Angotu Saida	1	3	2	2	--	2	--	2	--	3	10
6	Mr. Vijaya Bhasker Reddy	4	--	--	2	--	--	1	--	--	2	9
7	Ms. Deepika Ainapur	2	--	--	2	--	1	--	1	--	10	16
8	Mr. M Tejeswara Kumar	--	--	--	--	--	--	--	--	--	4	4

ICT Tools & Student Centric Methods 2019-20

S. No	Name of Faculty	Student Centric Methods/ICT Tools										
		Quiz	JAM	Think Pair Share	Brain Storming	Unit Test	CLP	Student Seminars	Video Lectures	NPTEL Videos	Others	Total
1	Dr. Anil Rakhonde	--	1	1	--	--	1	1	1	1	2	8
2	Mr. M N Narsaiah	--	1	1	2	--		4	1	1		10
3	Dr. B Vandana Rao	1	1	1	1	--	--	1	--	1	1	7
4	Mr. D. Chandra Prakash		1	1	1	1	1	--	1	1	1	8
5	Mrs P. Usha		1	1				1	1	1	5	10
6	Mr. Arpit Yadav	1	1	1	1	1	1	--	--	--	1	7
7	Mr. Angotu Saida	1	3	--	--	1		--	--	--	4	9
8	Mrs. Gayatri T	4	--	--	--	--		--	--	--	6	10
9	Mrs. Deepika Ainapur	--	--	2	--	--	1		--	--	1	4
10	Mr. A Vijaya Bhasker Reddy	1	--	--	5	--		2	--	--	5	13
11	Mr. Bavusaheb B K	1	1	1	1		1	1	1	1	2	10
12	Mr. Vikram S Kamadal	1	1	1	1	1		1	1	1	1	9

ICT Tools & Student Centric Methods 2018-19

S. No	Name of Faculty	Student Centric Methods/ICT Tools										
		Quiz	JAM/Minute a Paper	Think Pair Share	Brain Storming	Unit Test	CLP	Student Seminars	Video Lectures	NPTEL Videos	Others	Total
1	Dr. Manish Kumar Jain		1	1	1		1	1	1	1	1	8
2	Mr. M N Narsaiah			2								2
3	Mr. A Vijaya Bhasker Reddy	9	2	6	4		1	2	5		7	36
4	Mrs. A Deepika	1		1				5			1	8
5	Mrs. Gayathri T	6	5									11
6	Mr. Angotu Saida		1	2	2				2		4	11
7	Mrs. P Usha		2	1							2	5
8	Mr. Bavusaheb B K		2	4							3	9
9	Mrs. P Spandana		1					5			4	10
10	Mr. Md ASIF	1	1	1							1	4
11	Ms. Poonam Ganesh Swami		1	1							4	6
12	Ms. M A Sohana Parveen	1	1								3	5
13	Mrs. C Deepika	1		1							2	4
14	Mr. D Chandra Prakash		1							3		4
15	Mr. Aleti Ravichandra	2	2									4
16	Dr. B Vandana	3						1				4

ICT Tools & Student Centric Methods 2017-18

S. No	Name of Faculty	Student Centric Methods/ICT Tools										
		Quiz	JAM/Minute a Paper	Think Pair Share	Brain Storming	Unit Test	CLP	Student Seminars	Video Lectures	NPTEL Videos	Others	Total
1	Mr. M N Narsaiah	--	1	1	--	--	--	--	--		1	3
2	Mrs. P Usha	1	1	1	1	1	1	1		1		7
3	Mr. Angotu Saida						1				2	2
4	Mrs. T Gayatri		1								2	3
5	Mrs. A Deepika	1	1	1	1	1	1	1	1	1	1	10
6	Mr. A Vijaya Bhasker Reddy			2				3			11	16
7	Mrs. P Spandana		1	1	1		1		1	1		6
8	Mr. Bavusaheb B K		2	1				1			3	7
9	Mrs. K Usha			4							1	5
10	Mr. D Chandra Prakash	1	1	1	1		1	1	1	1	1	9
11	Ms. M A Sohana Parveen		1								2	3

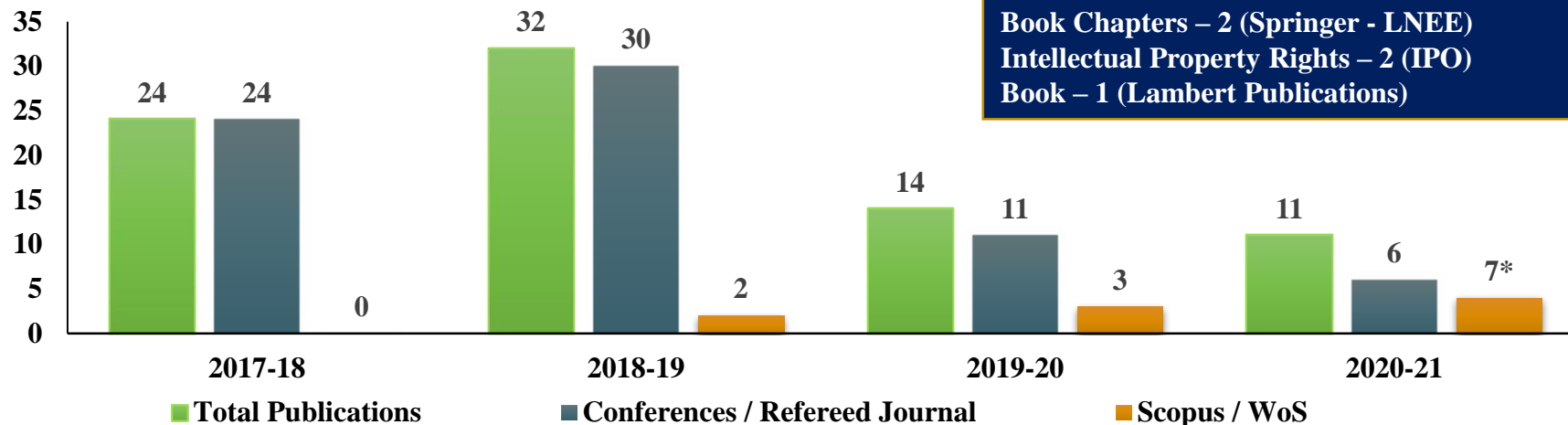


Participation in Professional Development Program

Academic Year	Short Term Training Programs	FDP/ Refresher Courses	Seminar/ Workshops	Conference Attended	Online Courses
2020-2021	8	19	01	02	5*
2019-2020	6	54	08	03	42
2018-2019	9	15	03	01	5
2017-2018	--	39	03	13	2
Total	23	126	15	19	49

** Progressing*

Research Publications



Scopus



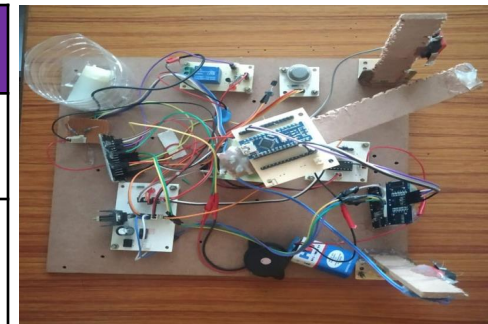
**UGC
APPROVED
JOURNAL**



Top High Impact Factor Publications change

S.NO	Authors	Title	Year	Source title	Vol	Issue	Page start	Page end	IF	DOI
1	Vandana, B. , Mohapatra, S.K., Das, J.K., Pradhan, K.P., Kundu, A., Kaushik, B.K.	Memoryless nonlinearity in IT JL FinFET with spacer technology: Investigation towards reliability	2021	Microelectronics Reliability	119				1.589	10.1016/j.microrel.2021.114072
2	Syed, K., Kandakatla, R. , Madhulita, Yadav, R., Himasagarika, R.	Responding to COVID-19 and transitioning to online learning: Evaluation of an institution wide capacity building efforts on technology-enhanced learning	2021	Journal of Engineering Education Transformations	34	Special Issue	620	627	0.3	10.16920/jeet/2021/v34i0/157232
3	Sagarika, R.H., Kandakatla, R. , Gulhane, A.	Role of learning analytics to evaluate formative assessments: Using a data driven approach to inform changes in teaching practices	2021	Journal of Engineering Education Transformations	34	Special Issue	550	556	0.3	10.16920/jeet/2021/v34i0/157212
5	Syedkhamruddin, Kandakatla, R.	Improving teaching process through technology-enhanced instruction for electrical machines course	2020	Journal of Engineering Education Transformations	33	Special Issue	305	311	0.3	10.16920/jeet/2020/v33i0/150172
6	Kandakatla, R. , Berger, E., Rhoads, J.F., Deboer, J.	The development of social capital in an active, blended, and collaborative engineering class	2020	International Journal of Engineering Education	36	3	1034	1048	0.3	
7	Kandakatla, R. , Berger, E.J., Rhoads, J.F., DeBoer, J.	Student perspectives on the learning resources in an Active, Blended and Collaborative (ABC) pedagogical environment	2020	International Journal of Engineering Pedagogy	10	2	7	31		10.3991/ijep.v10i2.11606
8	Narsaiah, M.N. , Vathsar, S., Venkat Reddy, D.	Dual filter based images fusion algorithm for CT and MRI medical images	2019	International Journal of Innovative Technology and Exploring Engineering	8	9	2673	2678		10.35940/ijitee.i8988.078919

Products Developed



S No	Project to Prototype Development	Guide Name	Academic year	Status
1	UVC-Dis Infected Robot for COVID-19 Applications	Mr. D.L Narayana	2020-2021	Developed
2	Foot Step Power Generation Using Piezoelectric Sensor	Ms. A. Deepika		
3	IoT Home Automation With Blu-Fi Technology Based On MQTT and Wi-Fi Sensor Nodes	Dr. D C Prakash	2019-2020	Developed
4	Movable Road Divider	Dr. B Vandana		
5	Border Security Smart Robot Using IOT	Mr. A Saida		
6	Smart Helmet	Mr. Bavusaheb B K	2018-2019	Developed
7	M-BOT	Mrs. T Gayatri		
8	Intelligent system for COAL MINES Using GSM.	Mr. A Vijaya B Reddy		
9	Voice controlled electronic wheel chair with patient monitoring system	Mrs. Gayatri T	2017-2018	Developed
10	Speaking System For Blind People Using Hand Gestures	Mr. A Vijaya B Reddy		
11	Accident detection and ambulance rescue system	Mr. Bavusaheb B K		

Project Title – Industrial Consultancy	Funding Agency	Duration	Amount (Rs. In Lakhs)
Implementation of Automatic Mechanism for Loading and Unloading of PCBs	Sulakshana Citcuits Ltd	12 Months	2.2
Annual maintenance of Servo Stabilizer, power Control, SCADA System and Furnace(VHF & VTF)	Cheetan Sai Engineering Enterprises	12 Months	0.18

Faculty Performance Appraisal System

1. Teaching,
 2. Research,
 3. Service to the institution
 4. Professional development/self-improvement
- Sample [Faculty](#) Performance Appraisal

List of Faculty with Designation

Sl. No	Name of the faculty	Designation	Qualification
1	Dr Manisha Guduri	HoD & Associate Professor	Ph. D
2	Dr Anil N Rakhonde	Professor	Ph. D
3	Dr B Vandana	Associate Professor	Ph. D
4	Dr Rohit Reddy	Associate Professor	Ph. D
5	Dr D Chandra Prakash	Associate Professor	Ph. D
6	Mr M N Narsaiah	Assistant Professor	M-Tech, (Ph. D)
7	Mrs. T Gayatri	Assistant Professor	M-Tech, (Ph. D)
8	Mr Angotu Saida	Assistant Professor	M-Tech, (Ph. D)
9	Mr Vijaya Bhasker Reddy	Assistant Professor	M-Tech, (Ph. D)
10	Mrs. Deepika Ainapur	Assistant Professor	M-Tech
11	Mr. Md Asif	Assistant Professor	M-Tech, (Ph. D)
12	Ms. Poonam Ganesh	Assistant Professor	M-Tech
13	Mr M Tejeshwara Kumar	Assistant Professor	M-Tech
14	Mr. D Lakshmi Narayana	Assistant Professor	M-Tech, (Ph. D)
15	Mrs. V Deepika	Assistant Professor	M-Tech
16	Mr Anil Kumar Bhupati	Assistant Professor	M-Tech
17	Mrs. M Suma	Assistant Professor	M-Tech
18	Mr. S Rahul	Assistant Professor	M-Tech
19	Mrs. A Kalpana	Assistant Professor	M-Tech
20	Mr. A Sai Chander	Assistant Professor	M-Tech

Faculty Performance Appraisal System

1. Teaching,
2. Research,
3. Service to the institution
4. Professional development/self-improvement

Sample [Faculty](#) Performance Appraisal

S No	Academic Year	Adjunct Faculty
1	2020-21	Dr. Dhinesh RadhaKrishnan

Criterion – 6

Facilities and Technical Support

Infrastructure Facilities

Class Rooms: 04 (**T405 to T408**)

Tutorial Rooms: 01

Meeting Room: 01

Seminar Hall: 01 (**B310**)

Conference Hall: 01

Faculty Room: 01

Laboratories: 09 (2 Additional Labs + 7 Regular)

MoUs: 4 (Idea labs, Sulakshana, technolexis, data point solutions)

HoD Cabin: 01

Academic Laboratories

1. Electronics Device Circuits/ Electronic Circuit Analysis (EDC/ECA) Lab
2. Advance Digital Communications (ADC) Lab
3. Linear Integrated Circuits (LIC) Lab
4. Microwave Engineering (MWE) Lab
5. Digital Electronics Lab
6. Computer Lab 1
7. Computer Lab 2

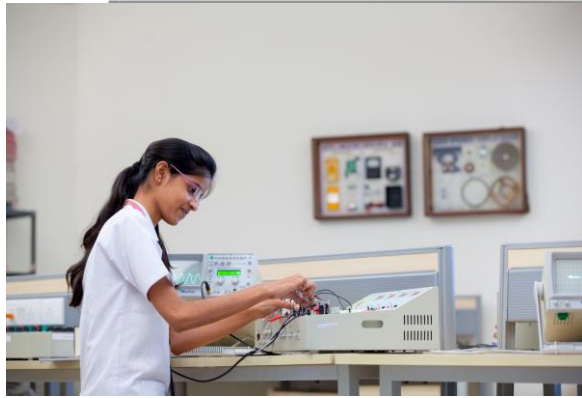
Industry Supporting Laboratories

1. IoT Maker Space
2. Research Lab

Non-Teaching Staff - 4

1. Mr. Chandu
2. Mr. Raju
3. Mr. Praveen
4. Mr. Shiva

Infrastructure Facilities - Laboratories



EDC/ ECA/ BEE Laboratory
ADC/ AC/ DC & LICA/ ICA Laboratory
MWE & MPMC Laboratory

Outcome of Additional Facilities

Research Laboratory		
S. No	Name of the Faculty	Paper Publications
1	Dr. Manisha G	03
2	Dr. Vandana	02
3	Mr. M. N. Narsaiah	03
4	Mrs. T Gayatri	01

Training to Non-Teaching Faculty		
S. No	Name of the Non-Teaching Faculty	Trainings Attended
1	Mr. K Praveen Reddy	03
2	Mr. P Chandu	03
3	Mr. D Raju	03
4	Mr. V Shiva Kumar	03

Internet of Things (IoT) Maker Space		
S.No	Name of the Activity	Duration
1	One week workshop on IoT	23-28 th March 2019
2	Two-day local Hackathon on IOT maker space	17-18 th June 2019
3	A second workshop in IoT maker space	24-25 th June 2019
4	Foundational Course	On Going
5	Advance Course	On Going



Criterion – 7

Continuous Improvement

Actions taken based on the results of evaluation of each of the POs and PSOs



Academic Audit and actions taken during the period of Assessment.

Improvement in Placement, Higher Studies and Entrepreneurship



Improvement in the quality of students admitted to the program

Continuous Improvement

IQAC conducts Pre, Mid and Post semester audits per each semester in each of the departments where the team reviews the various documents filed.

Pre-semester audit check list

- Academic Calendar and Timetable
- Orientation Program / Induction Program
- Student enrollment ratio
- Student-Faculty Ratio (SFR)
- Faculty Qualification
- Faculty Cadre Proportion
- Visiting /Adjunct/Emeritus Faculty
- Faculty retention
- Laboratory Information (Name Equipment Utilization Technical Staff)
- Additional Laboratories Facilities
- Mentor Mentee Circulars
- Faculty Workload
- Course files
- Elective subject selection process



Mid-semester audit check list

- Adherence to academic calendar and timetable
- Technical Seminars
- Guest lectures
- Technical Workshops
- Implementation of innovative teaching learning methods
- Continuous Internal Evaluation (CIE)
- Course outcome attainment through internal examination
- Internal laboratory evaluations
- Evaluation of student projects
- Student feedback and action taken reports

Mentor Mentee Meeting Report
Student Self Learning
Library Utilization
Minutes of meeting – Department Development Committee, Project Review committee.

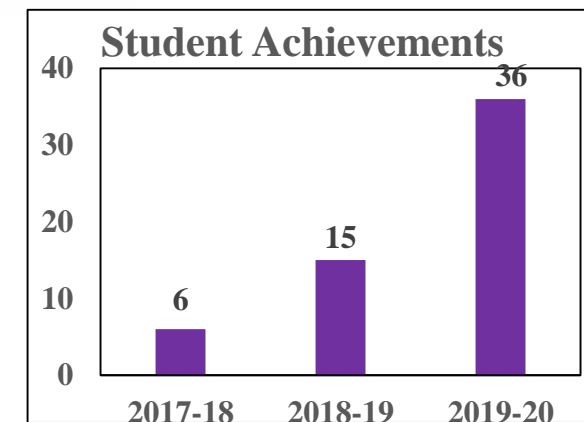
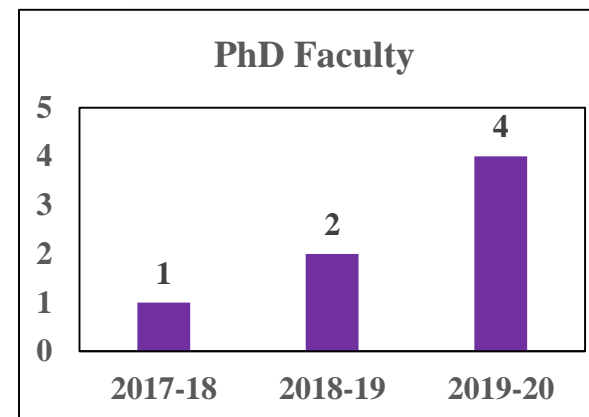
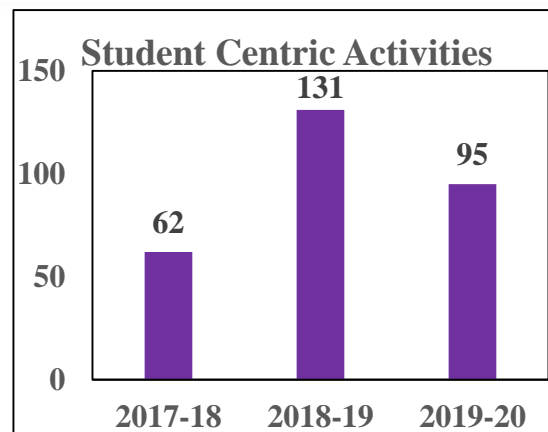
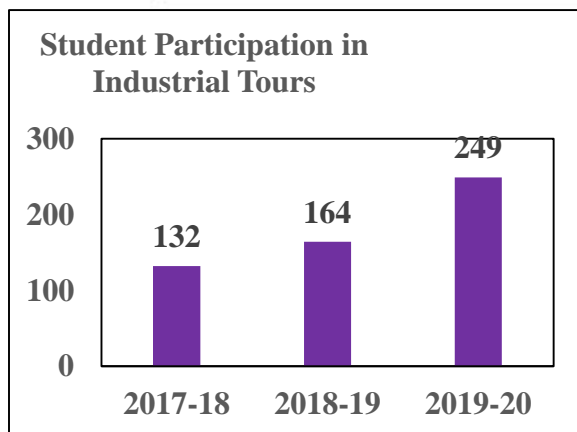
Post-semester audit check list

- Adherence to Academic Calendar and Timetable
- Internal Examination & Evaluation
- Implementation of innovative teaching learning methods
- Internal examinations and evaluation
- Course outcome attainment through internal examination
- Course outcome attainment through external examination
- Course outcomes-program outcomes attainment
- Placement, Higher Studies and Entrepreneurship
- Faculty Paper publications
- Student feedback and action taken reports
- Student Self Learning
- CRT Training Schedule
- CRT Training Report & Syllabus
- Student Internship
- Professional Activities

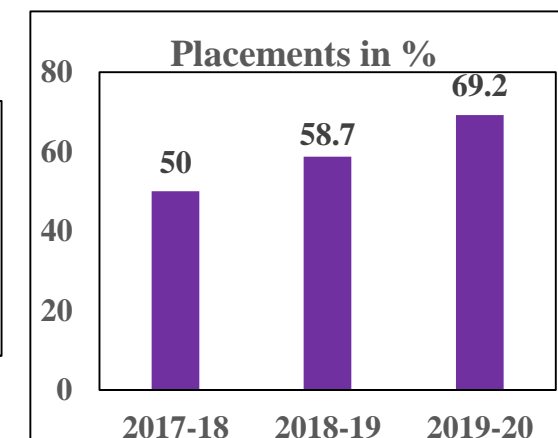
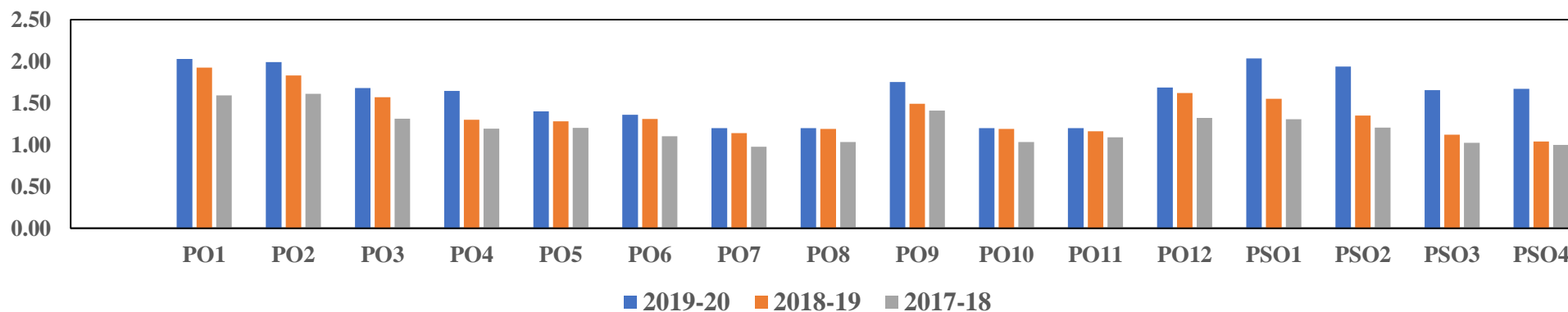
Student Performance & Placement Record

Academic Year	Total No of Final year students	Total Number of Students Graduated	Total No of Students went for higher education	No. of Students Placed	Percentage of Placements
2019-20	31	19	5	18	69.20%
2018-19	83	57	20	37	58.70%
2017-18	37	21	5	16	50.09%

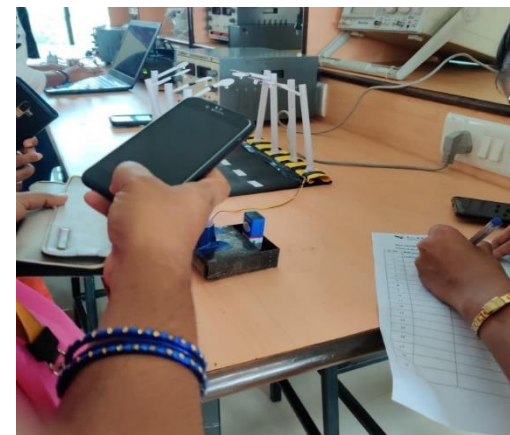
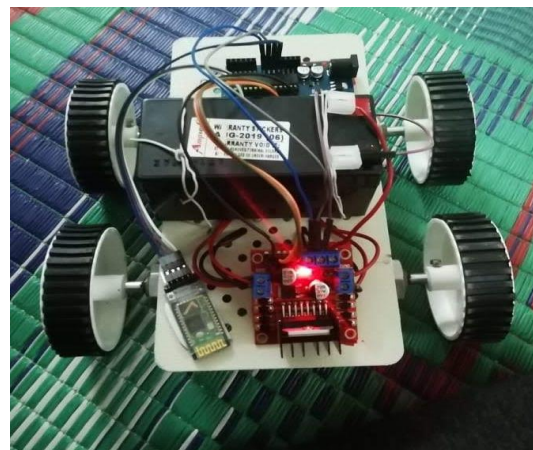
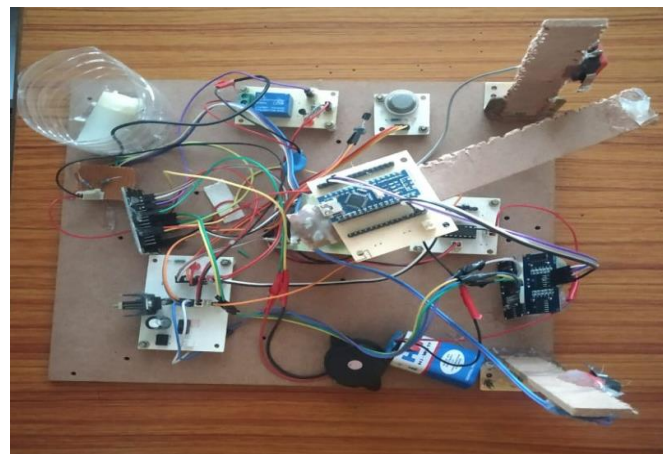
Continuous Improvement



Program Outcome Attainment



Glimpses of Products Developed

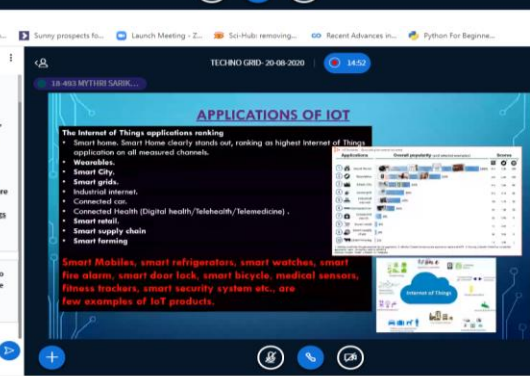
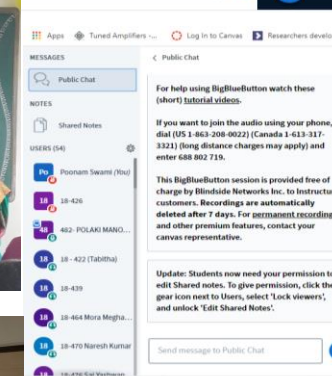
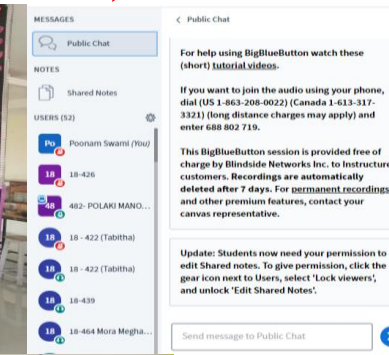


Best Practice

Expressive League of Inspiring Telecommunication Engineers (ELITE) Student Forum

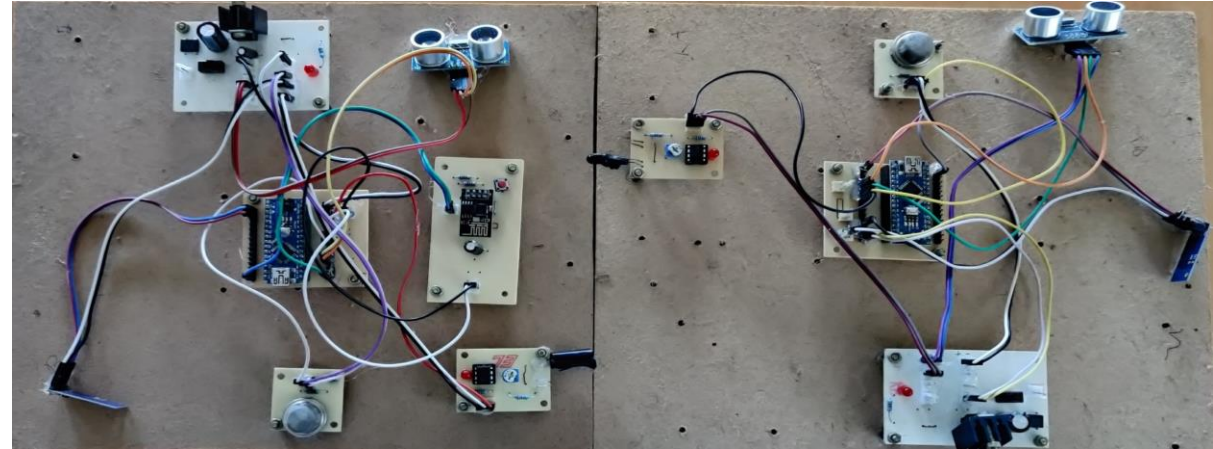
Highlights

- Project EXPO
- Talent Hunt
- Techno grid
- Poster presentation
- Drawing competition etc



Interdisciplinary Projects

- Interdisciplinary Projects Developed
 1. Smart Garbage Monitoring
 2. IoT based Drone
 3. Electric bike



Conclusion



The Institute is constantly striving for “**Excellence**”, the evidences of which are furnished in the presentation; and put forth before the NBA team for perusal and Evaluation.

Management supports and derives pride in all our **success plans**.

We are

Progressive, Forward-Looking, Positive
Enthusiastic, Vibrant Community at KG Reddy College of
Engineering & Technology

*We seek your advise and guidance to further
Enhance the quality of all our services.*