Department of Computer Science and Engineering

PG-NBA – M.Tech CSE

Hearty Welcome
To
NBA Expert Members

Presentation By:

Dr. Bhuvaneshwari C M
Professor & Head,
Dept. Of CSE

OUR VISIONARY LEADERS

Dharmaprakasha
Rajakarya Prasaktha

Late Sri B. M. Sreenivasaiah
Founder

Late Sri B. S. Narayan
Former Donor Trustee, BMSET

Department Vision and Mission

Vision

To develop technical professionals acquainted with recent trends and technologies of computer science to serve as valuable resource for the nation/society.

Mission

Facilitating and exposing the students to various learning opportunities through dedicated academic teaching, guidance and monitoring.

PEOs and POs of M. Tech. CSE Programme

PEOs	
PEO1	Apply analytical thinking to solve problems through research in the areas of Computer Science and Engineering.
PEO2	Adapt to changing technological trends through life-long learning by exhibiting professional ethics, integrity and career growth.
PEO3	Develop skills to facilitate in providing sustainable solutions by addressing the ever-growing challenges of the society.
POs	
PO1	Independently carry out research and development work to solve practical problems related to Computer Science and Engineering domain.
PO2	Write and present a substantial technical report/document.
PO3	Demonstrate a degree of mastery over the area as per the specialization of the program. The mastery should be at a level higher than the requirements in the appropriate bachelor program.
PO4	Analyze the acquired domain knowledge for providing feasible solution(s).
PO5	Relate the learning outcomes to build requisite competency in professional environment.
PO6	Appraise the need for engaging in lifelong learning.

Agenda

- Introduction
- Department Achievements at Glance
- Criteria - 1: Program Curriculum and TLP
- Criteria - 2: Program Outcomes
- Criteria - 3: Student Performance
- Criteria - 4: Faculty Contributions
- Criteria - 5: Laboratories & Research Facilities
- Criteria - 6: Continuous Improvement
- OBE Philosophy

Introduction

Department of CSE was established in the year 2002 with a sanctioned intake of 60, enhanced to 90 in 2009-10 and further enhanced to 180 in 2017-18.

UG

CSE UG program is Accredited by the National Board of Accreditation (NBA), New Delhi till June 2022.

PG

PG Program was started in the year 2014 with the intake of 18. Research Center was started in the year 2014. Currently 10 students are enrolled (Ph.D-09, M.Sc Engg-01)

Autonomous

The Institute is Autonomous under VTU from 2021-22

Department Achievements at Glance

Inputs

- Good Student Input Quality (between
- UG CET Rank - 1331 to 5083
- PG CET Rank -2433 to 10837)
- Dedicated faculty members
- Good Infrastructure
- Excellent and generous Management

Process

- Practicing OBE & effective TLP in place
- Skill Development Programs (SDP)
- Mentoring Systems
- ICT Usage
- Student Clubs
- Industry Institute Interaction
- Innovative & Case study- question paper pattern
- MOOCs
- Alumni Network
- DAB

Outcomes

- 92% Success Rate
- 109 research publications
- 90% Placement
- 5 entrepreneurs
- 466 internships
- 877 MOOCs certifications
- 2 KSCST funded projects
- 2 VTU funded Projects
- 2 IEEE Funded projects
- 2 university rank
- 5.8 lakhs through Consultancy
- 4 Executive Development Program
- 2 Patents Granted

Best Practices of the Department

- Open courses
- Faculty and Students Internship
- Expert Talks from Academia and Industry
- Case study & Innovative Questions in Internal Assessments
- Semaphore - Department Technical Event
- Project Based Learning
- Department Advisory Board
- Open Day
- Club Activity
- Proctoring System
- Departmental Town Hall Sessions
- Industry Visits
- MOOCs
- Alumni interaction
- 360 degree feedback
- Social outreach activities

Faculty Level

Research and Development Centre	**Research Scholar**		**Ph.D-09 M.Sc Engg-01**	
Human Resources	**Faculty With Ph.D :- 17 Faculty Pursing Ph.D :- 17 Not Registered :- 01**			
	Professors		**04**	
	Associate Professors		**08**	
	Assistant Professors		**23**	
	Technical Staff		**09**	
Student Faculty Ratio	**22.32**			
Funded Projects	**06**			
Patents	**Published - 17**		**Granted - 02**	
Books Published	**03**			
Department Library	**No of Books**	**236**	**No of Volumes**	**262**
No. of Publications last 3 years	**International Journals**	**International Conferences**	**Book Chapters**	
	22	**56**	08	
Department Faculty list	Faculty List			

PG Faculty – 2020-21

Sl. No	Name & Qualification	Designation	Date of Joining
1	Dr. Thippeswamy G B.E, ME, Ph.D	Professor	01/08/2013
2	Dr. Anjan Krishnamurthy BE, M.Tech, Ph.D	Associate Professor and PG Coordinator	14/08/2018
3	Dr. Radhika K R B.E, M.Tech, Ph.D	Assistant Professor	21/01/2013

Student Level - M. Tech CSE
(2018-19 to 2020-21)

Student Internships	28
Student Publications	23
Patent Applied	01
MOOCs	45
Student Placement	43%
Scholarship	01
Access to journals(IETE, Elsevier, Springer, Taylor & Francis, IEEE etc...)	24
Access to e-books	6 packages

Criterion-1

Program Curriculum and Teaching-Learning Processes

VTU Curriculum

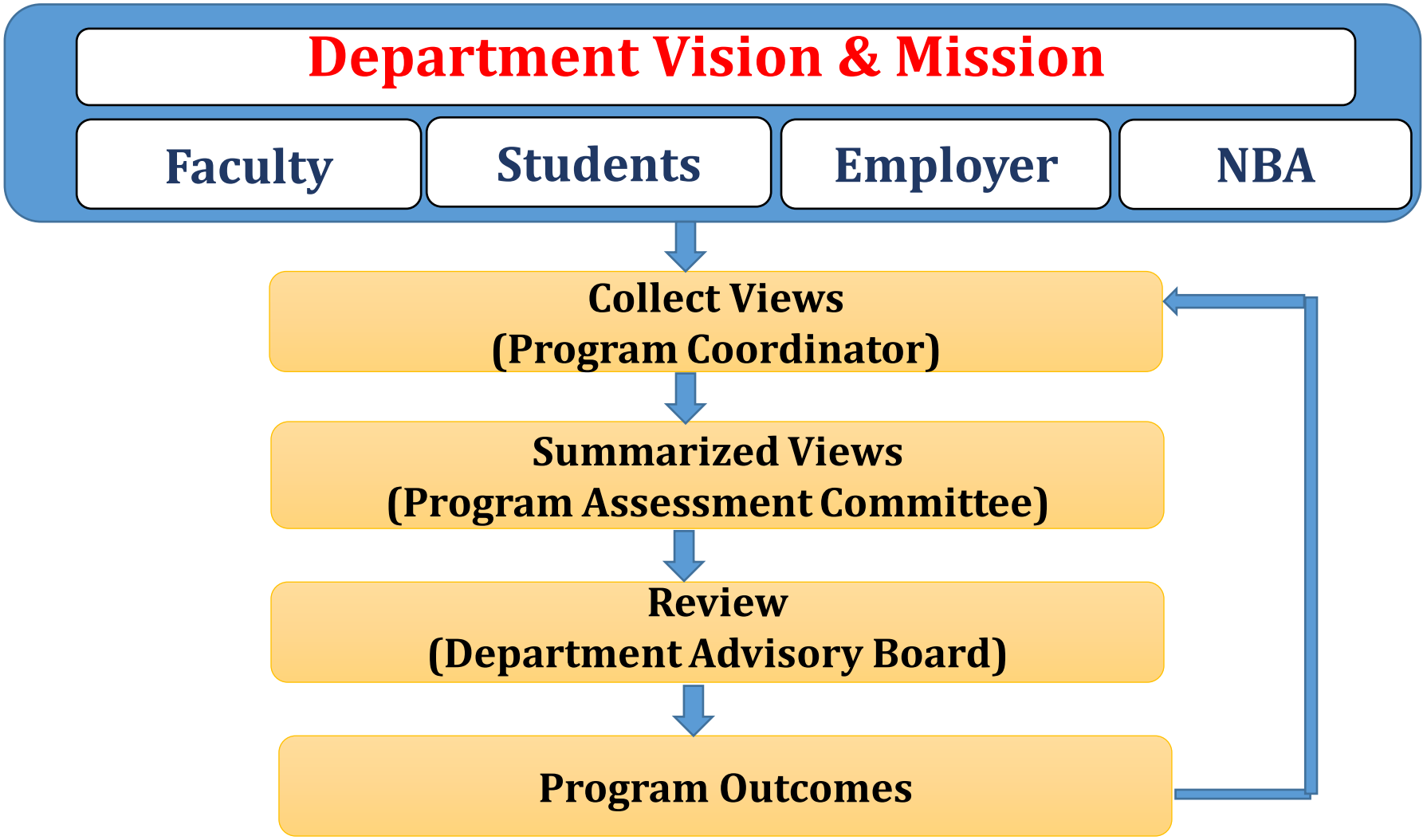
The 2018 scheme has been divided into 7 program curriculum components.

Sl. No.	Program Components	Number of Courses
1	Program Core Subjects	9
2	Program electives	4
3	Laboratory	1
4	Audit Courses	1
5	Project work	1
6	Industry Courses	1
7	Seminar	1

Curriculum Comparison of VTU and AICTE

Sl. No	Type of Course	AICTE Model Curriculum	VTU Curriculum 2020 scheme	VTU Curriculum 2018 Scheme
1.	Program Core I - Mathematics	1	1	1
2.	Program Core II- Domain Specific	8	8	8
3.	Audit Courses	2	1	1
4.	Program Electives	4	4	4
5.	Laboratory Courses	4	2	1
6.	Mini Projects	1	1	1
7.	Internships	1	1	1
8.	Technical Seminar	1	1	1
9.	Dissertation Work	1	1	1

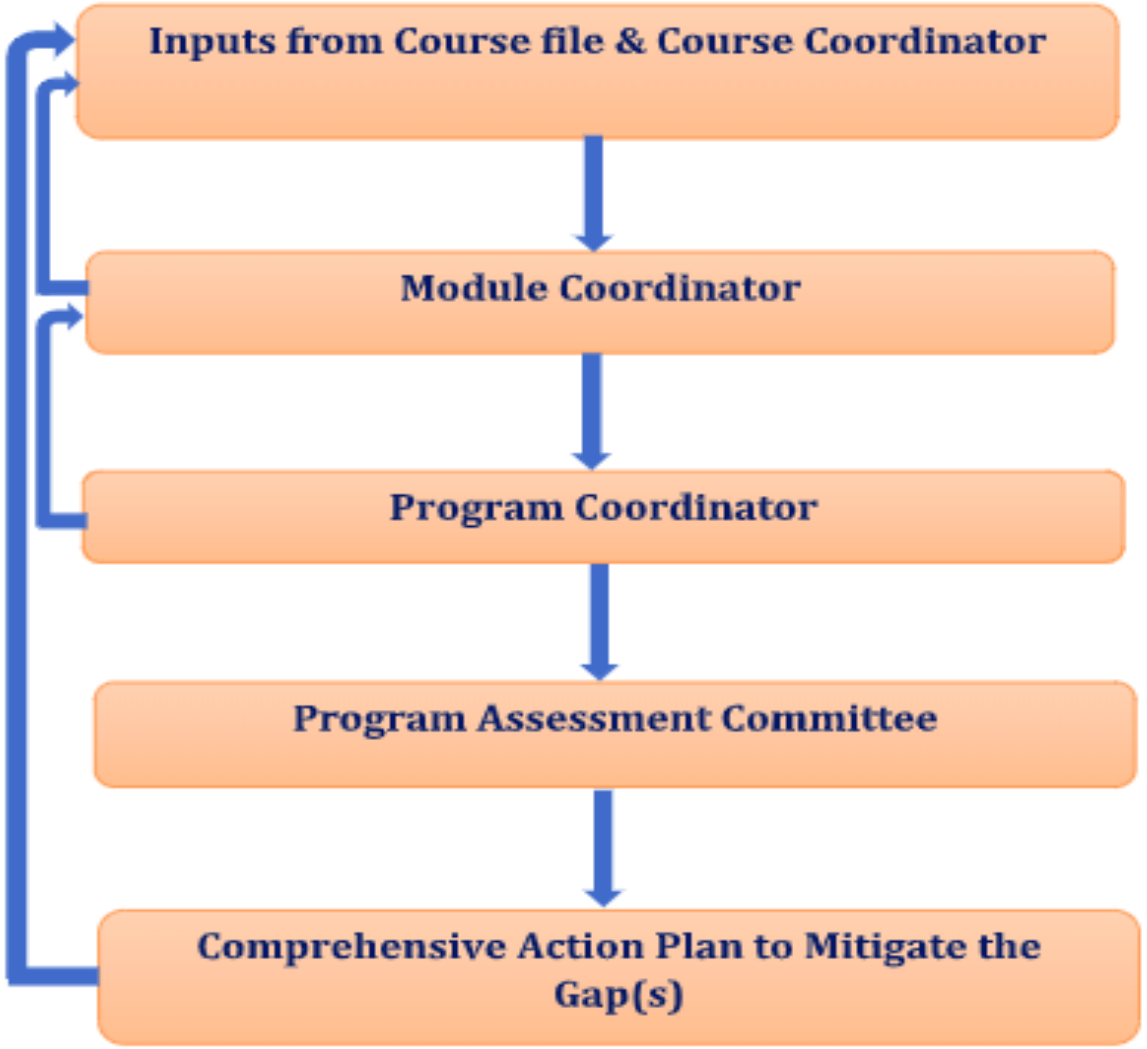
Defining the Program Outcomes



Mapping of Program Outcomes to Course - 2018 Scheme

Program Outcomes		No. of Courses
PO1	Independently carry out research and development work to solve Practical problems related to Computer Science and Engineering domain.	13
PO2	Write and present a substantial technical report/document.	11
PO3	Demonstrate a degree of mastery over the area as per the specialization of the program. The mastery should be at a level higher than the requirements in the appropriate bachelor program.	16
PO4	Analyze the acquired domain knowledge for providing feasible Solution(S).	19
PO5	Relate the learning outcomes to build requisite competency in Professional environment.	16
PO6	Appraise the need for engaging in lifelong learning.	18

Process to mitigate the gaps of Program Outcomes with Program Curriculum



Activities To Bridge the Gap

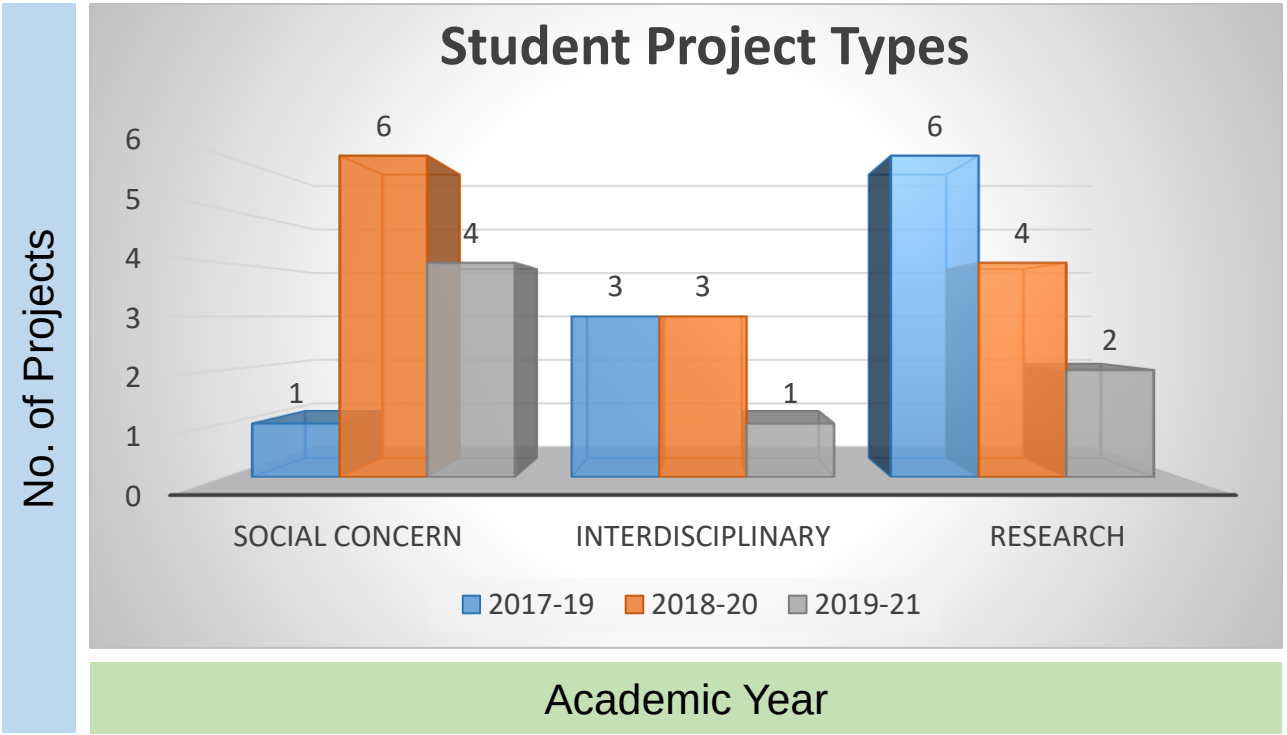
- **Professional Body Activities**
- **Innovative Teaching and Learning Process**
- **Interaction with External world and Internship**
- **Skill Development Program workshops/Conference**
- **Knowledge Sharing by Alumni**
- **Open Courses**
- **Technical talks/seminars**

Quality of Internal Question Papers

- Course Coordinators will set the **Question Paper** based on **Bloom`s Taxonomy**.
- Question Paper will have **60% of the questions with moderate** order of Blooms Level and rest **40% will be higher order (Case Study and Innovative)**
- The Module coordinators ensures whether the question paper is in **according to Bloom's Levels** and **CO to PO mapping** then it will be scrutinized by **Question Paper Scrutiny Committee comprising of Course Coordinator, Module Coordinator, Program Coordinator and HoD**.
- The Question Paper will have **Internal Choice in Part A**. Part B comprising of case study and innovative questions are **mandatory**.
- **Scheme of evaluation** is prepared with **marks break up for every question**.
- **Blue Books are evaluated** according to **scheme of evaluation** prepared.

Student Project Types

Academic Year	Social Concern	Interdisciplinary	Research
2017-19	1	3	6
2018-20	6	3	4
2019-21	4	1	2



Industry-Institute Interaction

SL. No.	Project Executed by students in collaboration with Qikpod
1	IoT based Indoor Plant Watering System
2	Smart Secure Login
3	Delivery Bot
4	Smart Street light operation
5	Water Quality Monitoring System
6	Book Your Seat
7	Mobile App: BMSIT & M

Industry Visit

Sl No	Date	Faculty In charge	Company Name	Semester
1	23rd February 2017	Dr Bharathi M A	QikPod	I Sem
2	4th March 2017	Dr Bharathi M A	QikPod	I Sem
3	6th February 2020	Mr Muneeswara M S	Aprameya Technologies Pvt Ltd	III Sem
4	8th February 2020	Mr Muneeswara M S	Netenzaa Innovations Pvt Ltd	III Sem

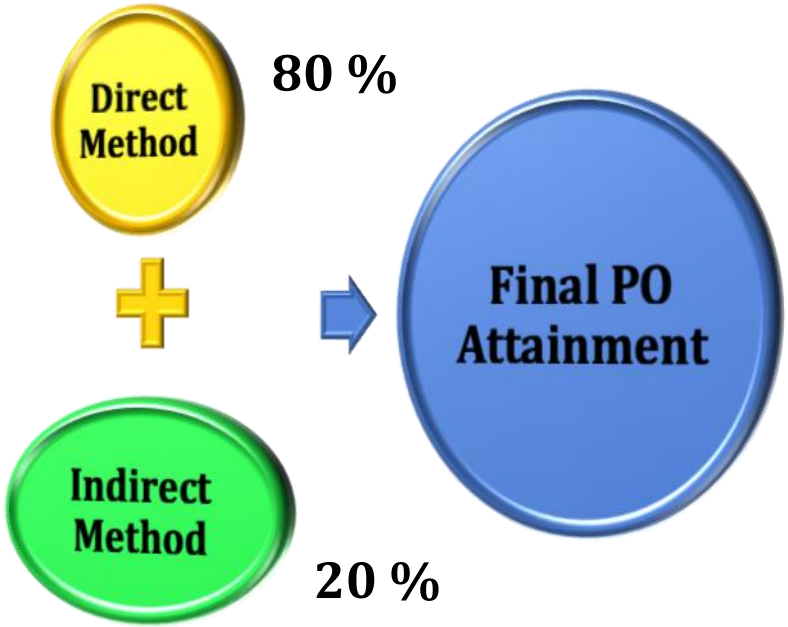
Criterion-2

Program Outcomes

CO-PO mapping Batch 2020-21

20SCS241: Advanced Cryptography						
Course Outcomes	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**
CO1:Apply the basic modular arithmetic concepts and set theory properties in cryptographic algorithms for encryption and decryption, hash functions, PRNGS			3			
CO2:Identify suitable firewall and authentication mechanism for real time protection against any attacks.				3		
CO3:Evaluate the strengths of cryptographic algorithms based on attack modelling and publish results.	2	2			3	
CO4:Develop exploratory study in analysing the potential impact on futuristic development of cryptographic system in the area of quantum cryptography, DNA cryptography.						**2**
Weighted Average	**2**	**2**	**3**	**3**	**3**	**2**

Attainment of POs



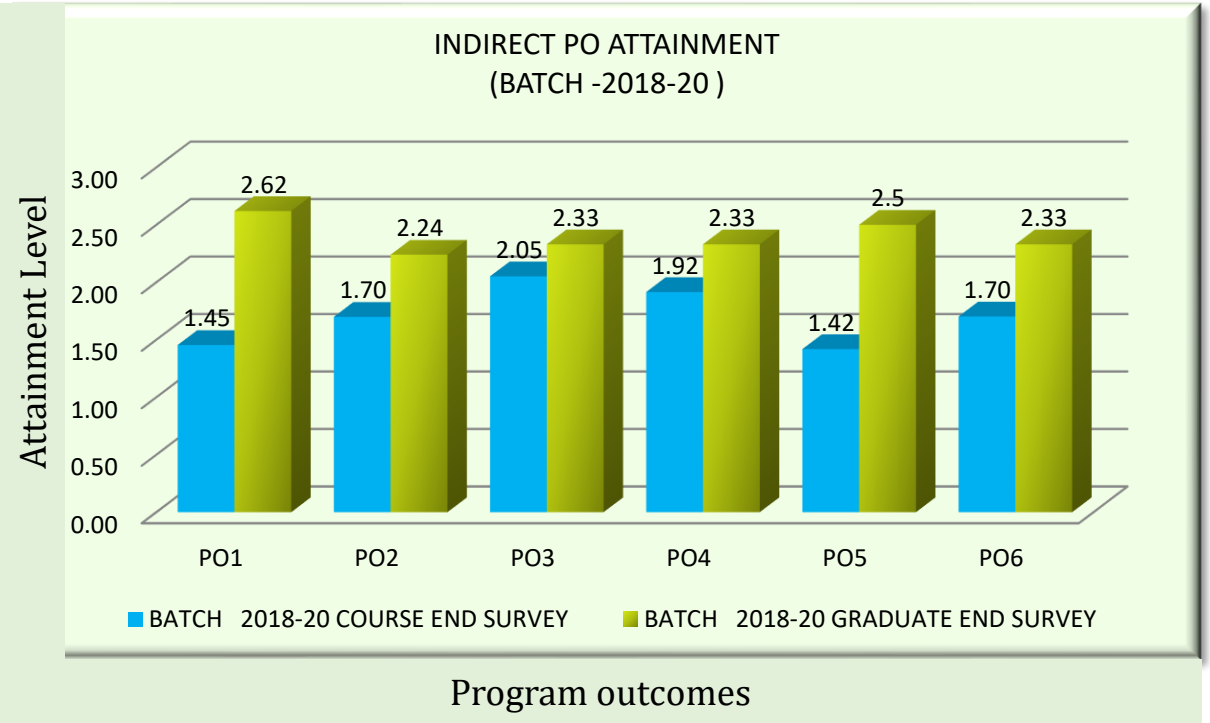
Direct Method

- Internal Assessment: 40%
- University Assessment :60%
- Other Activities

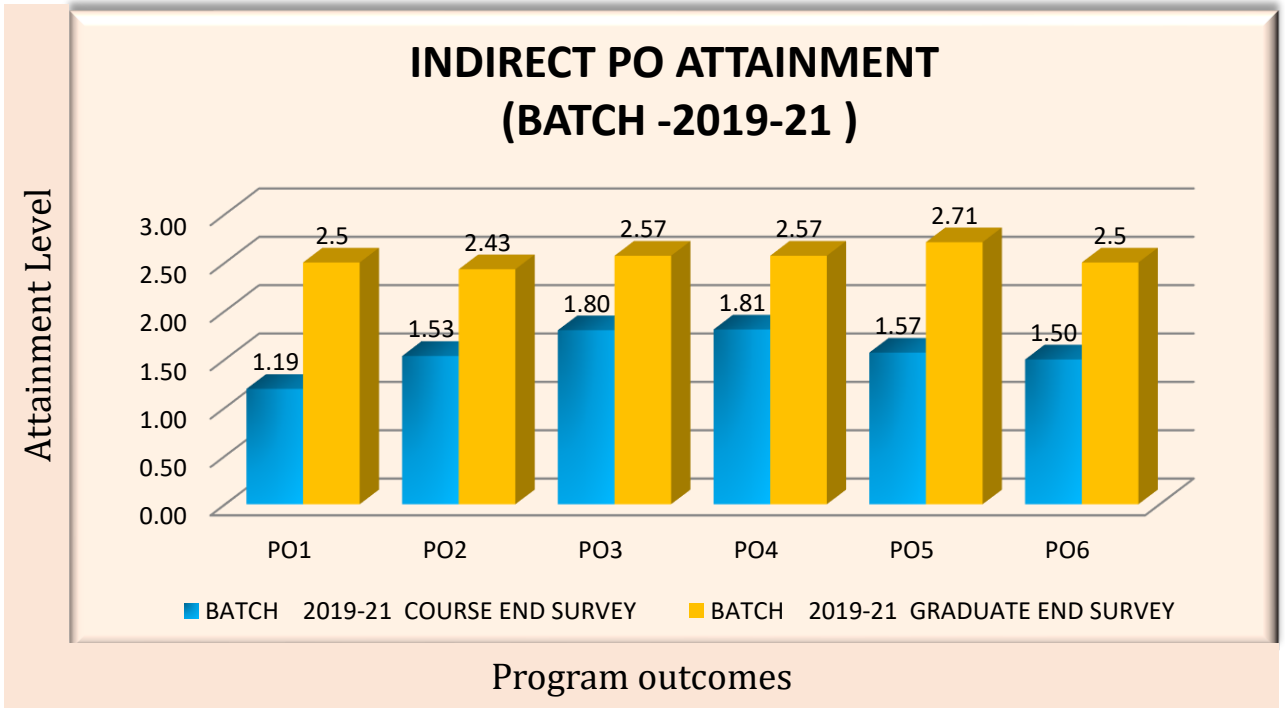
Indirect Method

- Graduate Exit Survey
- Course End Survey

Indirect PO Attainment



Indirect PO Attainment



ATTAINMENT LEVELS

Attainment Level 1	50% students scoring more than 60% marks
Attainment Level 2	55% students scoring more than 60% marks
Attainment Level 3	60% students scoring more than 60% marks

Final POs attainment values – 2018-20 Batch

PO Attainment	PO1	PO2	PO3	PO4	PO5	PO6
Direct Attainment (80%)	1.42	1.74	2.17	1.87	1.66	1.73
Indirect Attainment (20%)	2.04	1.97	2.19	2.12	1.96	2.02
Final Attainment	**1.54**	**1.79**	**2.18**	**1.92**	**1.72**	**1.78**
Target Set	**1.8**					

Final POs attainment values – 2019-21 Batch

PO Attainment	PO1	PO2	PO3	PO4	PO5	PO6
Direct Attainment (80%)	1.57	1.77	1.99	1.80	1.77	1.80
Indirect Attainment (20%)	2.01	2.37	2.29	2.14	2.15	2.03
Final Attainment	**1.66**	**1.89**	**2.05**	**1.87**	**1.84**	**1.84**
Target Set	**1.8**					

Criterion-3

Student Performance

Student's Admission Details

Item	2020-21 CAY	2019-20 CAYm1	2018-19 CAYm2
Sanctioned intake of the program (N)	**18**	**18**	**18**
Total number of students admitted through GATE (*N*1)	**0**	**0**	**0**
Total number of students admitted through PG Entrance and others(*N2)*	**09**	**7**	**14**
Total number of students admitted in the Program (N1 + N2)	**09**	**7**	**14**

Success Rate in Stipulated Period of the Program

Item	2018-19 LYG	2017-18 LYGm1	2016-17 LYGm2
Number of students admitted in first year	14	11	13
Number of students completing program in stipulated duration	13	10	12
Success Index (SI)	0.93	0.90	0.92
Average SI	**0.92**		

Success rate = 20 x Average SI = 20 × 0.92 = 18.41

Placement, Higher Studies and Entrepreneurship

Item	CAY 2020-21	CAYm1 2019-20	CAYm2 2018-19
No. of students placed in companies or Government Sector (X)	4	3	7
No. of students pursuing Higher studies (Y)	0	0	0
No. of students turned entrepreneur in engineering/technology (Z)	0	0	0
X + Y + Z	4	3	7
Placement Index :(x + y + z)/N	0.57	0.14	0.63
Average placement	0.43		

Student Publications - Indexed

Academic Year	2020-21	2019-20	2018-19
No. of International Journals	05	09	06
No. of International Conferences	02	01	-
No. of Publications	07	10	06

Professional Body Activities

Academic Year	CSI Activities	IEEE Activities
2020- 21	05	02
2019- 20	08	10
2018 -19	03	06
Professional Activities in Achieving POs: PO4,PO5,PO6		

Student Patent Applied

Sl. No	Name	Title	Date
1	Varshini	IOT enabled real-time Aquarium monitoring system	02/09/2021
2	Khushwinder Singh Likith S Nitya Dyuthi	Smart Ticketing System for Smart Cities	25/06/21

Induction Program

I year PG Inauguration **Dignitaries on the Dias**

Chief guest Mr Srinivasan Ramanujan from TCS addressed the students regarding human behavior, emotional intelligence and various technological trends.

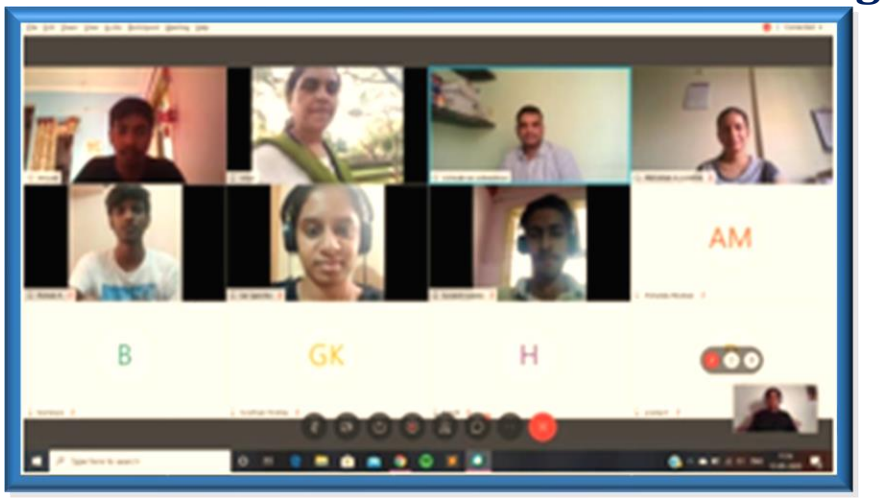
Alumni Interaction

HOD addressed about the PG NBA to Alumni. They were also informed about the Program Outcomes, Program Educational Objectives, Vision and Mission.

Events Conducted under CSI

Wonder words

Coding Wars

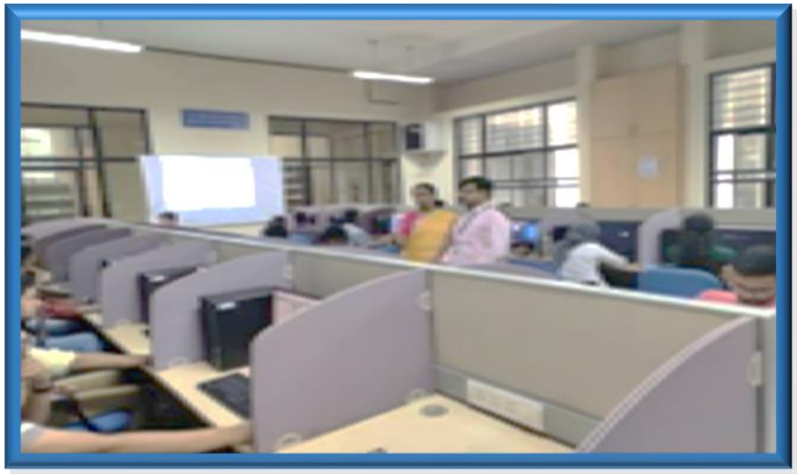


Battle of Programming Languages

Events Conducted under CSI

Who am I ??

Code O Fiesta- Coding Competition

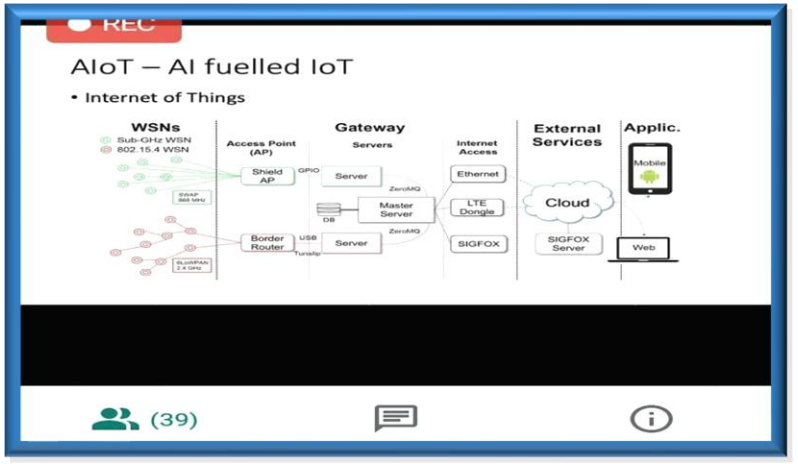


Open Course on Machine Learning

Problem Solving Analysis with basics of C

Events Conducted under IEEE

Expert Talk by Mr. Sandeep Jain, Founder, Geeks for Geeks



Expert Talk by Mr. Vishwas Lakkundi, Chair, IEEE CS Chapter, Bangalore Section

Expert Talk by Prof. William Lee, Research Engineer, National University Singapore

Girl Geeks Program

Student's Achievements

Akshatha T Secured 3rd Position in Student Innovator Award for the project titled "Agricultural Bot" , Alliance University, Karnataka

Akshatha T , Prajwala Secured 3rd Position in "ANVESHAN" South Zone Student Research Convention, VIGNAN'S Foundation for Science Technology and Research

Student's Achievements cond..

Mahbub Rehman participated in Makeathon IESA Vision Summit, Leela Palace, Bangalore

Sneha S received Meritorious Scholarship from BMSIT&M Alumni Association

Criterion-4

Faculty Contributions

Student Faculty Ratio (SFR)=S/F

S = Number of Students in the Department = UG1 + UG2 +UG3 + PG1+ PG2 = **648**
F = Total Number of Faculty Members in the Department **= 30**

Academic Year	No . of Faculty	No of Students (2^{nd} yr +3^{rd} yr+4^{th} yr+ PG)	SFR	Average
2020-21	30	198+198+216+36=648	648/27=24	22.32
2019-20	26	198+216+108+36=558	558/23= 24.26	
2018-19	28	216+108+108+36= 468	468/25= 18.72	

Faculty Development Program/Workshop Attended & Organized

Academic Year	FDP/Workshop Attended	FDP/Workshop Organized
2020- 21	76	2
2019- 20	59	1
2018 -19	38	1

Faculty Publications – Scopus Indexed

Academic Year	International Journals	International Conferences	Book Chapters	Total
2020-21	12	30	04	**46**
2019-20	06	15	03	**24**
2018-19	04	11	01	**16**
Total	**22**	**56**	**08**	**86**

List of Books Published

Sl. No.	Title	Year	Faculty
1	Characterization and Behavioral Analysis of Hybrid Covert Channel	2018	Dr. Anjan Krishnamurthy
2	Big Data Security and Hadoop: Principles and Programming	2020	Dr. Anjan Krishnamurthy
3	Fundamentals of Cryptography and Network Security	2021	Dr. Hemamalini B H

BMS Institute of Technology and Management

Faculty Profiles

A Library Initiative

Department of Computer Science Engineering

118 Journal Articles

108 Conference / In Proceedings

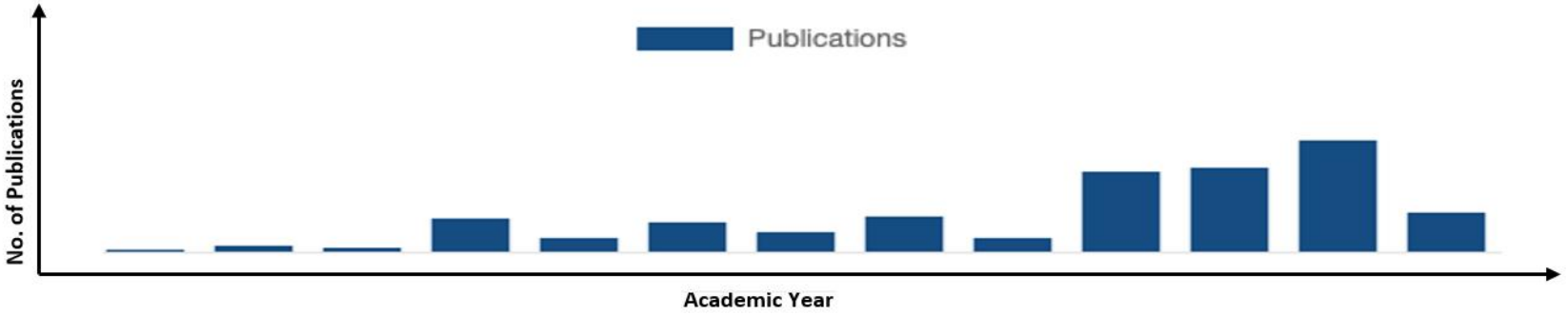
1 Books / Chapters

30 Other

63 Citations (CROSSREF)

114 Citations

5 h-index



https://bmsit.irins.org/faculty/index/Department+of+Computer+Science+Engineering

Patent Granted

Academic Year: 2020-21		
Title	**Date**	**Faculty**
Automated Location Identification system using Text and Image Data	31/03/2021	Dr. Sunanda Dixit
Ball Projecting Apparatus	24/08/2021	Dr. Satish Kumar T

List of Patent Published

Sl.No.	Title	Date	Faculty
1	Covid-19 Thermal Screening Using Smart Helmet	11-09-2020	Prof. Vishakha Yadav
2	Catastrophe Detection and Smart Rescue System Utilizing Android Smartphone with Real-Time Location Tracking	12-11-2020	
3	Scaling of tuberculosis Bacilli using computer vision aided discovery scheme for ZN strained images of bright field microscopy	30-10-2020	Prof. VishakhaYadav Dr .Thippeswamy
4	An Apparatus for Interactive Information Exchange Through Machine Learning	24-11-2020	Dr. Satish Kumar T
5	Effective Feedback System of Managements of Educational Institutions Using Artificial Intelligence and Methods Thereof	01-11-2020	
6	Animal treatment kit using artificial Intelligence & Method thereof	06-11-2020	
7	Design and method for automatic pet watering and food feeding system using IOT	20-12-2019	

List of Patent Published

Sl.No.	Title	Date	Faculty
8	Shabdkosh Device for Women Safety in Public Inventors	09-10-2020	Dr. Usha B A
9	Student Posture and gesture detection system using artificial intelligence and methods there of	9-10-2020	
10	Interpersonal skill score card for students using artificial intelligence and method	16-10-2021	
11	Occupational stress model and coping strategies thereof	25-09-2020	Dr. Sunanda Dixit Dr. Manoj H M
12	Fruit Classification and Identification Using Advanced Machine Learning Techniques	12-08-2021	Dr. Bhuvaneshwari C Dr. Arunakumari B N
13	IOT enabled real-time aquarium monitoring system	02-09-2021	Dr. Radhika K R Prof. Vidya R Pai Dr. Aruna kumari B N

List of Patent Published

Sl.No.	Title	Date	Faculty
14	Smart Ticketing System for Smart Cities	14-06-2021	Dr. Hema Malini B H
15	Design and Fabrication of Low Cost Breath Monitoring System Using Arduino Uno in IOT Platform	01-03-2021	Prof. R Bharathi
16	A Novel System for Controlling Employees Attrition Rate	27-05-2021	Dr. Manoj H M
17	Trespassers Detection System Fort Agriculture Fields Using Artificial Intelligence & Methods Thereof	30-10-2020	Dr. Anjan Krishnamurthy

Innovations by the Faculty in Teaching and Learning

Type	Method
Active Learning Methods in Delivery	• Co-Operative Learning • Blended Learning • Quizzes
Study Material will be Shared with Students.	Google Classrooms, D-Space(Repository) .
Research Papers	Indexed in Google Scholar, IEEE, Scopus, Springer, Thomson Reuters etc
Case Study and Innovative Question	D-Space and Discussion in the Google Class Room

http://dspace.bmsit.ac.in/xmlui/handle/123456789/7
https://classroom.google.com/u/1/c/MzM5NDQwODYwMjU0

https://classroom.google.com/u/1/c/MjU5ODg3NTQ5MTk4

PG Faculty Achievements
Dr. Thippeswamy G

1	Publications	50
2	Scopus	14
3	H Index	5
4	Citations	103

- NBA Expert Team Member
- Co-Investigator for DST-RFBR,Russia
- Member of BOS and BOE in VTU-LIC
- Professional Member FIE,ISTE
- Reviewer for IEEE,IET,CSI and ACM Journal

https://bmsit.ac.in/faculty/resume/5382

PG Faculty Achievements
Dr. Anjan K

1	Publications	65
2	Scopus	19
3	H Index	6
4	Book	02
5	Google Scholar Citation	190
6	Web of Science / SCI	06

- Best Ph.D Thesis award for academic year 2016-17 by Bites
- 1st Rank Mtech CSE 2010
- IEEE Research Award 2020 by IEEE Bangalore Section
- Reviewer for IEEE,IET,CSI and ACM

https://bmsit.ac.in/faculty/resume/6928

PG Faculty Achievements

Dr. Radhika K R

1	Publications	08
2	H Index	01
3	Book Chapter	01

https://bmsit.ac.in/faculty/resume/4922

Faculty Achievements

Dr. Bhuvaneshwari C M

Honoured by former Prime Minister Shri Devegowda at 83rd Kannada Sahitya Sammelana

Women of the Year Award from Chief Minister of Karnataka Hon'ble Shri H.D. Kumarswamy

Kittur Rani Chennamma Award from Government of Karnataka by Hon'ble Chief Minister Siddaramaiah Bangalore

Hugar Smaraka Madyama Award from Kannada mattu Sanskruti ilake , Karnataka Government for contribution to Kannada

Karnataka Rajyostava Award 2016, on November 1

Award from Kannada Pustak Pradikar Bangalore along with Hyderabad –Karnataka Nagarika Vedike Yadagiri District Administration

Faculty Achievements

Dr. Thippeswamy G

- Member Boards of Studies CSE/ISE/AIML : VTU
- Member, Research Review Committee – VTU
- Evaluator-NBA, Observer-NAAC, Advisor- mLAC, BMSSA
- Adjudicator of PhD thesis for SRM University, University of Mysore, Mangalore University
- Research Collaboration / Projects with Mocow State University, Russia.
- VTU Nominee : BoS CSE/ISE/AIML for NHC and GAT
- Research interaction with many International Universities including National University of Singapore

Dr. Anil G N

- Former Chairman/Member, Board of Examinations for PG at Bangalore University.
- Former Member, Board of Examination for UG, at Bangalore University.

Dr. Arun Kumar B R

- Chairman, BOS, VTU MCA Programme
- VTU Nominee for MCA, NMIT
- DAB member, MCA, BIT

Faculty Achievements

Dr. Mahesh G

- "Best Faculty Award" from Cognizant Technology Solutions
- 2nd Rank in M.Tech – VTU

Dr. Sunanda Dixit

- Outstanding Researcher and Scholar Icon '2017", Jupiter Scholar Awards for Excellence in Research
- Senior Woman Educator and Scholar Award", National Foundation for Entrepreneurship Development(NFED)
- "Best Faculty Award" from Cognizant Technology Solutions

Dr. Anjan K

- First Rank holder in M.Tech CSE, MSRIT
- Best Research Award from R&D Project in Kleptography
- Best Employee Award "Go Getter" from M/s. Celstream Technologies Pvt. Ltd
- Best Ph.D Thesis Award for the academic year 2016-17 by BITES

Dr. Usha B A

- Top Mentor for the month of Jan 2020 from ATAL innovation mission an initiative of NITI Aayog and MHRD

Faculty Achievements

Prof. Ashwini N

Prof. Chetana C

Wipro Certified Faculty

Prof. Shankar

Consultant, Trainer for Police Personnel, Government of Karnataka.

Dr. Dhanalakshmi B K

Young Researcher Award

Faculty Achievements

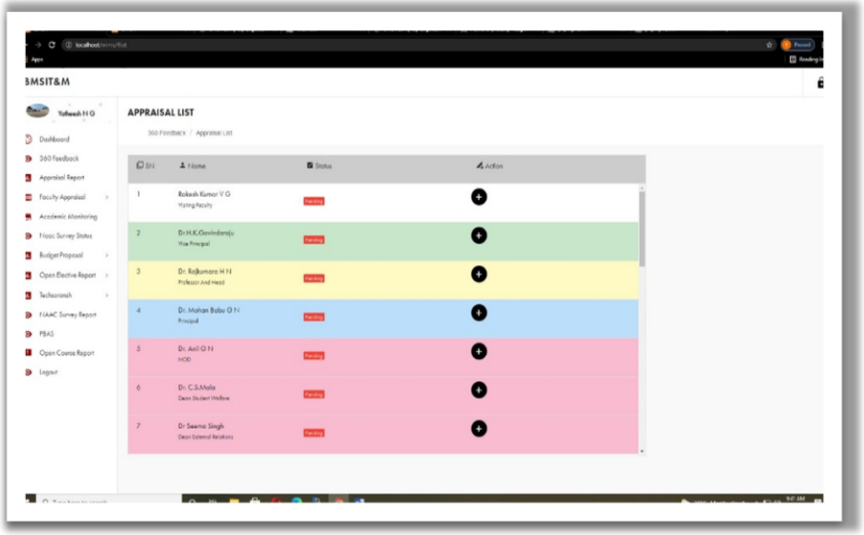
Dr. Arunakumari B. N

- **All India Gold Medal in 44th All India Design Competition for Engineering Students from National Design and Research Forum (NDRF) in Computer Science & Engineering Discipline.**
- **Faculty Selected for Leadership in Teaching Excellence Scheme by AICTE**

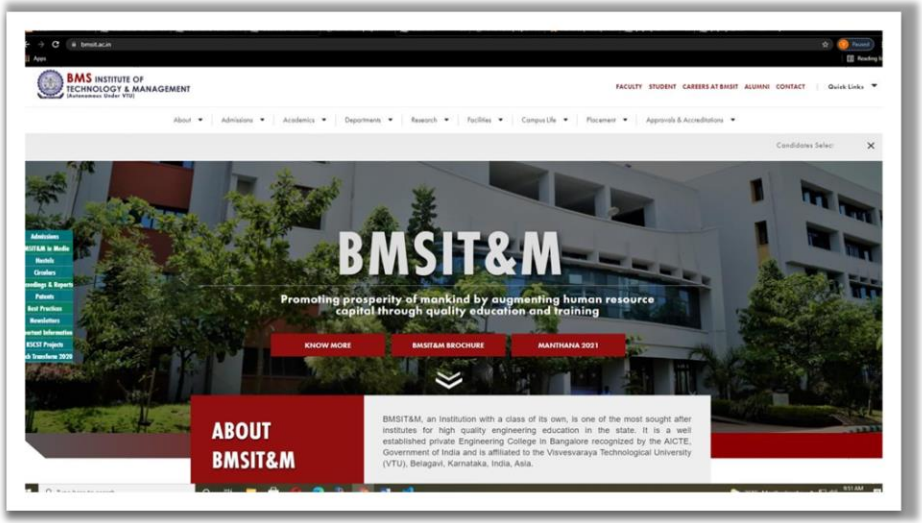
In-House Software Developed

Sl. No.	Software	Sl. No.	Software
1	360 Degree Feedback	11	Company Information Sheet for Campus Recruitment
2	Faculty Appraisal	12	Grievance Cell
3	Academic Monitoring	13	Student Fee Challan Generation
4	NAAC Survey	14	ID Card Generation
5	Budget Proposal	15	PBAS for Technical Staff
6	Open Elective Registration	16	VTU Revaluation Application Form
7	TechSaransh	17	Faculty Workload Management System
8	PBAS for Teaching Staff	18	Faculty Recruitment Portal
9	Open Course Registration	19	Hostel Management System
10	College Website	20	Student Attendance Management

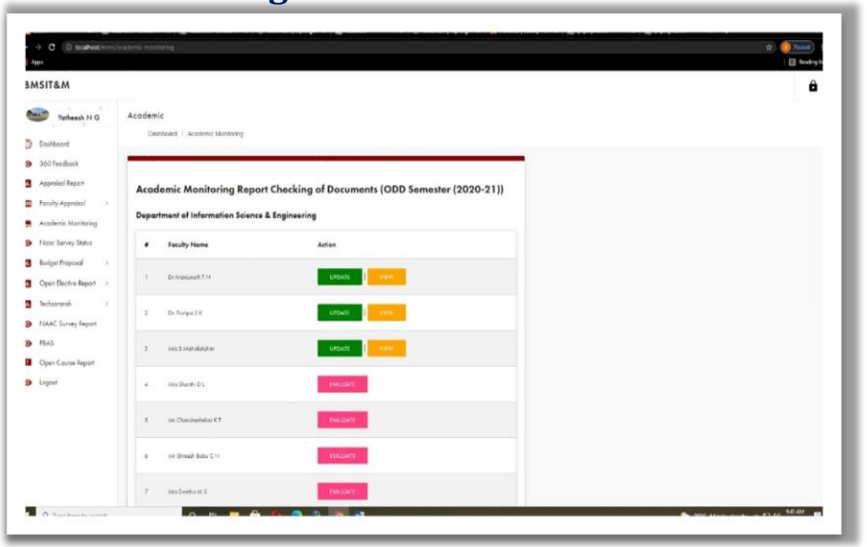
Sample In-House Software



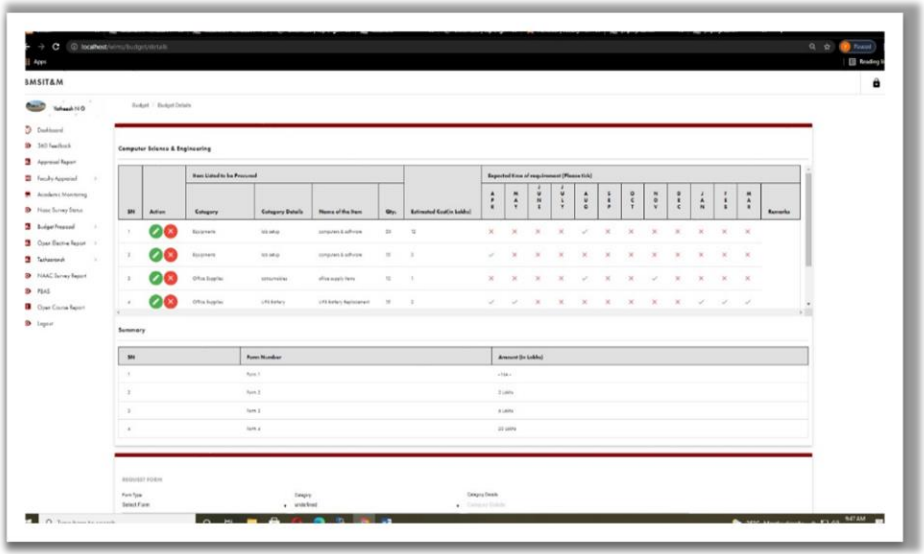
360 Degree Feedback



College Website



9 December 2021



Budget Proposal

Revenue generated - Consultancy

Sl. No.	Academic Year	Organization	Total Amount
1	2019-20	Siemens, Western Digital, MRIIRS, TECSOK, Volvo	Rs.2,91,000/-
2	2018-19	L&T, Volvo, Western Digital, CISCO, DevX	Rs.1,94,000/-
3	2017-18	DevX, QikPod	Rs.99,480/-
		Total:-	**Rs.5,84,480/-**

List of MoU Signed

SL No.	Academic Year	Name Of The Company
1	2021-22	Walk in software Technologies
2	2020-21	PVH Software solutions Pvt. Ltd
3		Supraja Technologies
4		Gamut Analytics India Pvt.Ltd
5		Pushakala Technologies Pvt. Ltd,
6		Nihon Communications Solutions Pvt .Ltd
7		Grads Key
8	2019-20	Indian Tech – Keys

Grants Received

Sl. No.	Academic Year	Title	Principal Investigator	Funding Agency	Amount
1.	2018-19	Establishment of Centre for design and research of health care applications Using artificial intelligence.	Dr.Bharathi Malaka Reddy	VGST (K- FIST L1)	20 Lakhs
2.	2020-21	Margadarshan Scheme	Dr.Thippeswamy G	AICTE	15 Lakhs
3.	2021-22	"Diversified Applications of Machine Learning Algorithms"	Dr. Bhuvaneshwari C M	Indian Academy of Science	0.35 Lakhs
4.	2020-21	Study and Analysis of Hybrid Covert Channels Using Entropy Analytics for Detection (Shortlisted)	Dr. Anjan Krishnamurthy Dr. Sunanda Dixit	CySecK	11 Lakhs

Criterion-5

Laboratories and Research Facilities

Laboratory Infrastructure

Sl. No.	Name of the Laboratory	No. of Computers	Configuration	Area in Sqm.
1	CHARLES BABBAGE LAB	36	Intel® Core™ i7-CPU@ 3.10 GHz, 4 GB, RAM, 1-TB HDD, DVD Writer	93
2	ALAN TURING LAB	36	Intel® Core™ i7-CPU@ 3.10 GHz, 4 GB, RAM, 1-TB HDD, DVD Writer	93
3	VON NEUMANN LAB	36	Intel® Core™ 2 CPU 2.83 GHz, 2 GB, RAM, 320 GB HDD, DVD Writer	93
4	Dennis Ritchie LAB	40	Intel® Core™ i7-CPU@ 3.20 GHz, 8 GB, RAM, 1-TB HDD, DVD Writer	93
5	Aryabhatta center of Computation (Honeywell center of Excellence)	92	Intel® Core™ i7-CPU@ 3.20 GHz, 8 GB, RAM, 1-TB HDD, DVD Writer	125
6	P G Lab	14	Intel® Core™ i7-CPU@ 3.10 GHz/I-5/ Quad Core/Intel P4, 2 GB, RAM, 320 GB HDD, DVD Writer	66
7	Research Centre / Incubation centre	10	Provision for 14 Work stations with internet facility	66

Infrastructure

DETAILS OF INSTRUCTIONAL AREA:

Sl. No.	Class Room no.	Class / Semester	Area in Sqm.	Seating Capacity
1	BSN-CR-101	III/IV	100	70 students
2	BSN-CR-102	III/IV	100	70 students
3	BSN-CR-103	III/IV	100	70 students
4	BSN-CR-104	V/VI	100	70 students
5	BSN-CR-204	V/VI	100	70 students
6	BSN-CR-213	V/VI	126	110 students
7	BSN-TR-301	I/II M.Tech	65	30 students
8	BSN-TR-401	III/IV M.Tech	65	30 students
9	BSN-CR-402	I/II	100	70 students
10	BSN-CR-403	I/II	100	70 students
12	BSN-CR-404	I/II	100	70 students
13	BSN-TR-402	VII/VIII	90	60 students
14	BSN-TR-502	VII/VIII	90	60 students
15	BSN –CR-409	Seminar Hall	126	110 students

TOTAL BUILT UP AREA: 2500 sqmts

Research Facility

Sl. No.	Name of the Facility	Specialized Equipment Name	Equipment details
1	Arayabhatta Center of Computation	92	Intel® Core™ i7-CPU@3.20 GHz, 8 GB, RAM, 1-TB HDD, DVD Writer
2	Innovation Center	10	HP 280G2 MT, RaspberryPi, Arduino, Sensors, Motors and other components to carry out IoT-based projects
3	Plagiarism check S/W	Turnitin	30 Licenses for 100 students
4	MAT LAB	MAT LAB with 46 tool boxes	30 Licenses of MAT LAB and 10 Licenses of Simulink with 46 toolboxes
5	Indian TechKeys	PCBs & fabrication	IR Sensor, Temperature, Sensor (DHT11), 4-Channel Relay, 2-Channel Relay, Motion Sensor (PIR), 16X2 LCD Display RPI Camera, RFID Reader
6	E-Yantra Robotics Lab	Embeded Systems, IOT, Microcontroller	2- firebird, Spark V Robot, Servo motor based gripper kit, ATmega 2560 Development Board, LPC2148 Development Board, Raspberry – Pi3

List of Software

Sl. no.	License Product Family	Sl. No	Free Software
1	Microsoft CASA Agreement	1	UBUNTU 14
2	Oracle	2	XAMP Server
3	AWS	3	Ardino IDE
4	Unity 3D	4	Android Studio
5	Adobe Animate CC 2017	5	C , C++
6	Adobe Media Encoder CC 2017	6	JAVA, eclipse, netbeans
7	MATLAB	7	Jet Brains products
8	Turnitin	8	Anaconda

Industry Supported Lab

Indian TechKeys Lab

E-yantra Lab

CITY READ

BSN BLOCK

YOUTH EMPOWERMENT

CENTER OF EXCELLENCE FOR YOUTH EMPOWERMENT

Youth empowerment centre inaugurated at city-based education institution

Honeywell Center of Excellence for Youth Empowerment was inaugurated in BMS Institute of Technology and Management Yelahanka recently. The centre aims to empower the students of the institution with digital skills such as big data analytics, artificial intelligence, robotic process automation and much more. The center will also train 138 students on advanced technologies, provide global certification from tech giants and facilitate placements for certified students.

Inauguration of Honeywell Centre of Excellence in association with ICT Academy

Criterion-6

Continous Improvement

Continuous Improvement

Sl No.	Item	2018-19	2019-20	2020-21
1.	Faculty Strength	28	26	30
2.	Student Faculty Ratio	18.72	24.26	24
3.	No. of PhD.	08	12	14
4.	Faculty Publications	16	24	46
5.	Student Publications	06	10	07
6.	Faculty Internship	25	28	31
7.	FDP/Workshop Attended	38	59	76
8.	FDP/Workshop Organized	1	1	2
9.	No. of MoU's	-	01	06
10.	Research Proposals submitted (AICTE/VGST/others)	02	08	04
11.	Consultancy revenue generated	1,94,000	2,91,000	-

Additional Laboratories

Peter Naur Data Science Lab

Kevin Ashton IoT Lab

Jack Kilby Embedded Computing System Lab

PO observation and action taken for 2019-21

PO	Target Level	Attainment Level	Observations
PO1	1.8	1.66	It was observed that the students were able to analyze and formulate problems.
	Independently carry out research and development work to solve practical problems related to Computer Science and Engineering domain.		
Action 1	Encouraged students to present research ideas in conferences and journals.		
Action 2	Students were encouraged to conduct exclusive literature survey to have better understanding of current research issues.		
PO2	1.8	1.89	It was observed that presentation and documentation skill was strengthened.
	Write and present a substantial technical report/document.		
Action1	Inclusion of Technical seminar, mini project improved the ability to present and document report.		
Action 2	Introduction of Subject based assignments improved the reporting skills.		
PO3	1.8	2.05	It was noticed that mastery level over the subjects was Consistent.
	Demonstrate a degree of mastery over the area as per the specialization of the program. The mastery should be at a level higher than the requirements in the appropriate bachelor program.		

PO4	***1.8***	***1-87***	Exposure to domain knowledge through various activities improved the analytical thinking.
	Analyze the acquired domain knowledge for providing feasible solution(s).		
Action 1	Technical quiz and poster presented were conducted to improve the domain knowledge.		
Action 2	Assignments on various topics related to their course improved their exposure beyond the curriculum.		
PO5	***1.8***	***1.84***	More opportunities are required for industrial exposure.
	Relate the learning outcomes to build requisite competency in professional environment.		
Action 1	Students were provided opportunity to present their work in open platform.		
Action 2	Industry interactions was improved.		
PO6	***1.8***	***1.84***	Significant improvement is seen in learning outcomes.
	Appraise the need for engaging in lifelong learning.		

Academic Audit and Actions Taken

Initiatives:

❖**Assessment Criteria:** Assesses **Course Delivery Plan, Completeness of Academic Documents,** Student Monitoring, Co-curricular and Extra-curricular Activities of Students.

❖Frequency:

- ❖ **Internal Audit** is done before **every internal assessment**
- ❖ **Final Academic Audit** is carried out at the **end of every semester at Institute Level**

❖Action plan Implementation and Effectiveness:

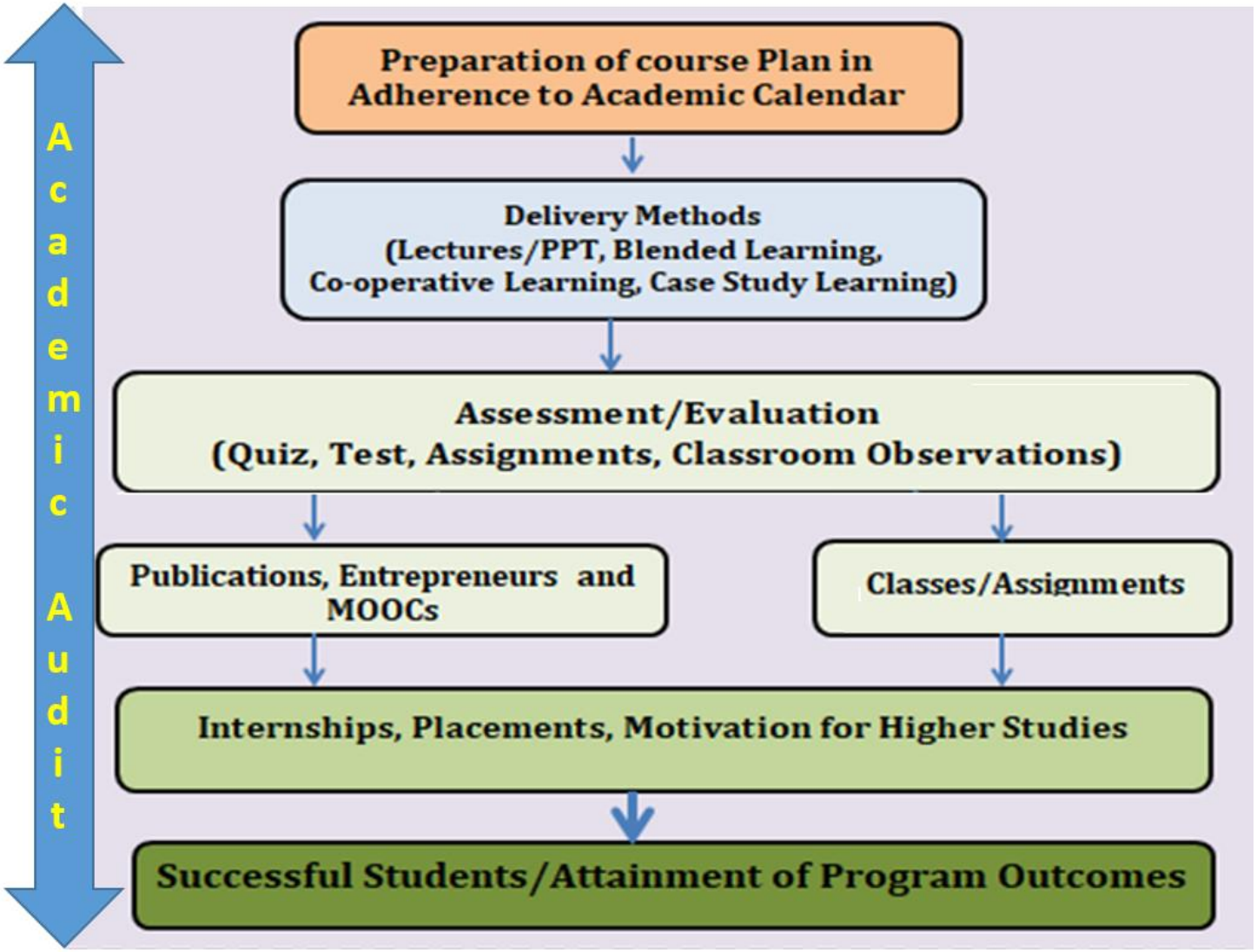
Parent-Teacher Meeting, Remedial & Tutorial Classes, FDPs etc.

Ranking Details of PGCET

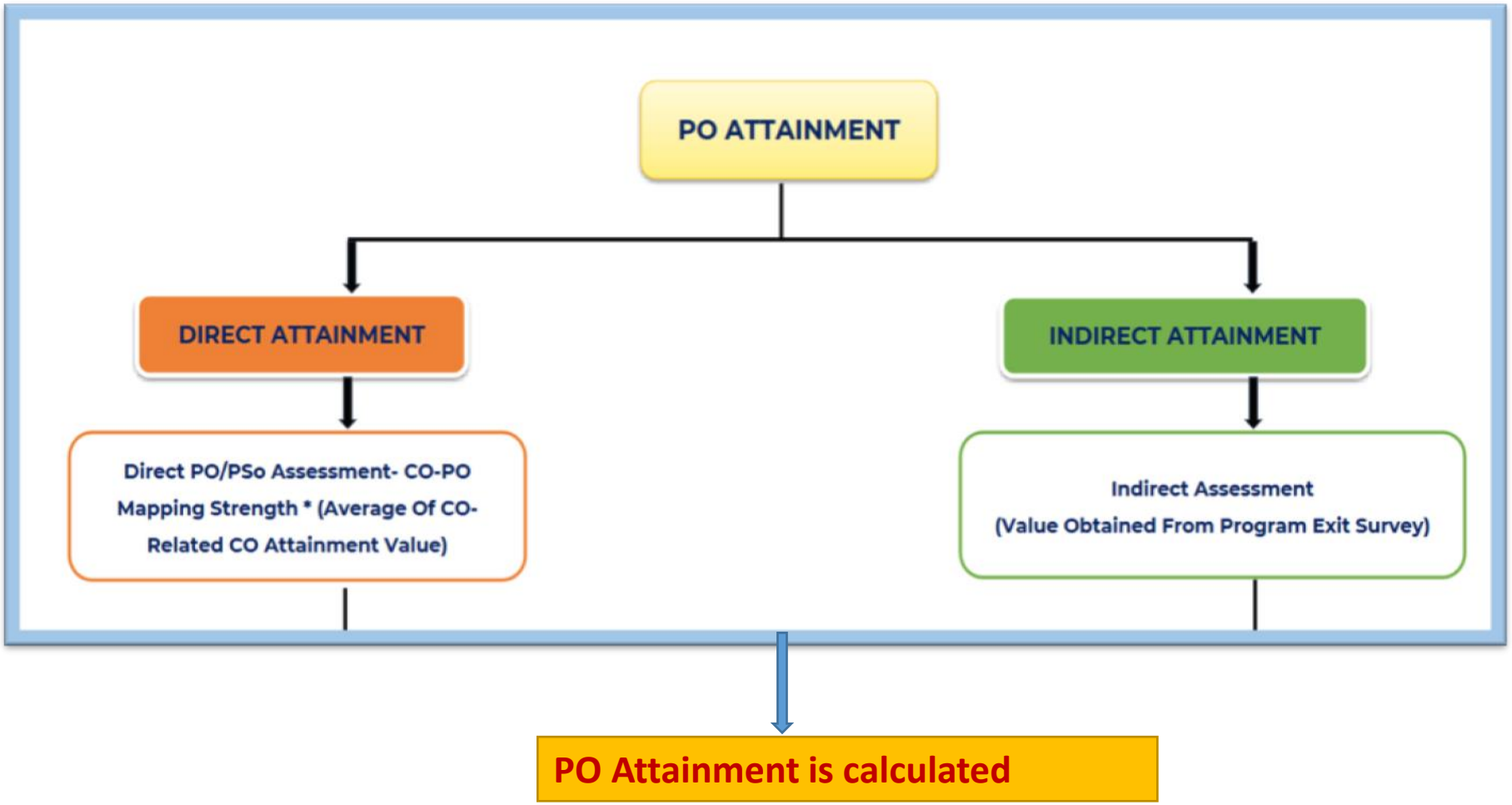
CET Ranking	2020-2021 CAY	2019-2020 CAYm1	2018-19 CAYm2
Opening rank	2433	2603	2686
Closing Rank	10837	7644	7730

OBE Philosophy

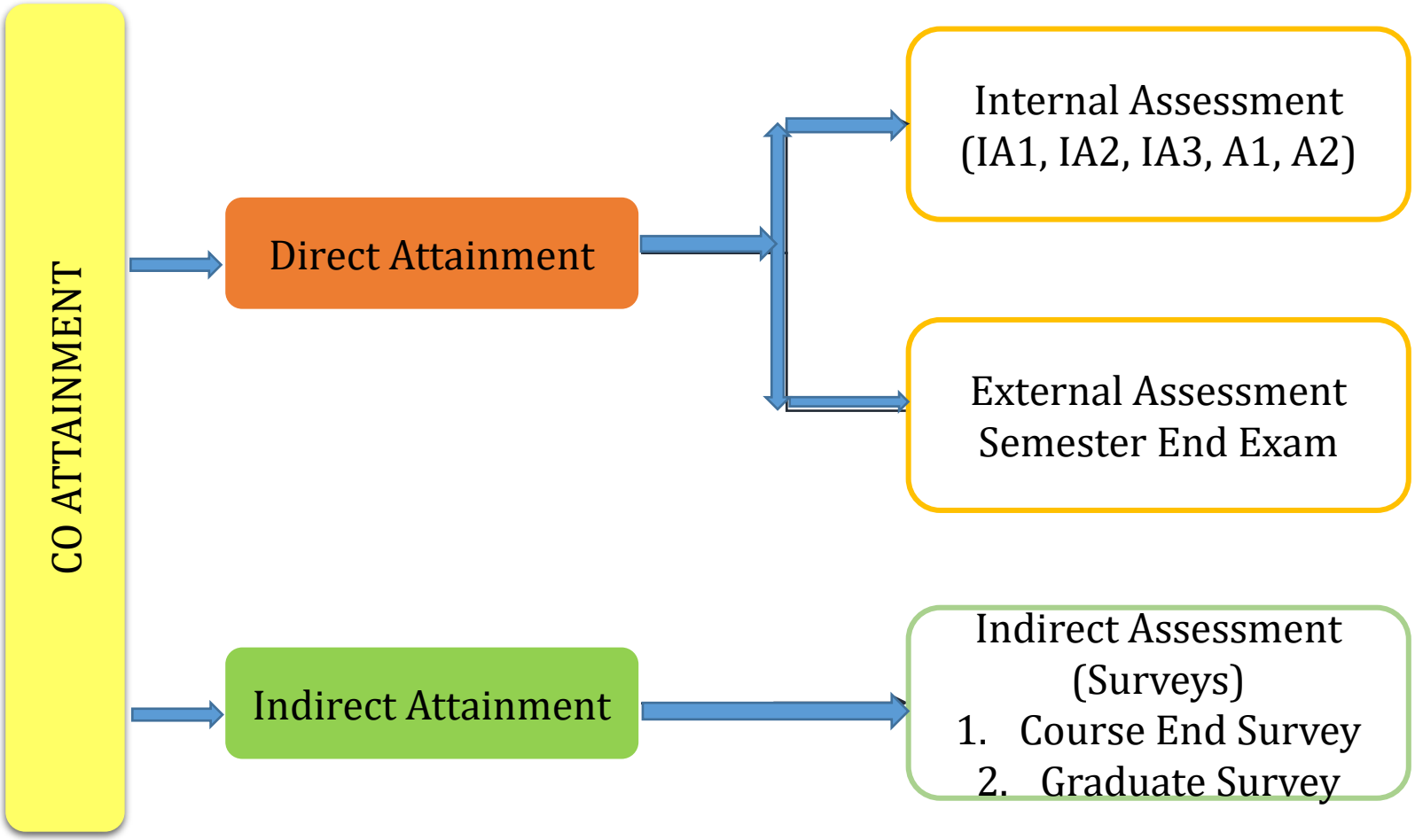
Process followed to Improve Teaching Learning Process.



PO ATTAINMENT PROCESS



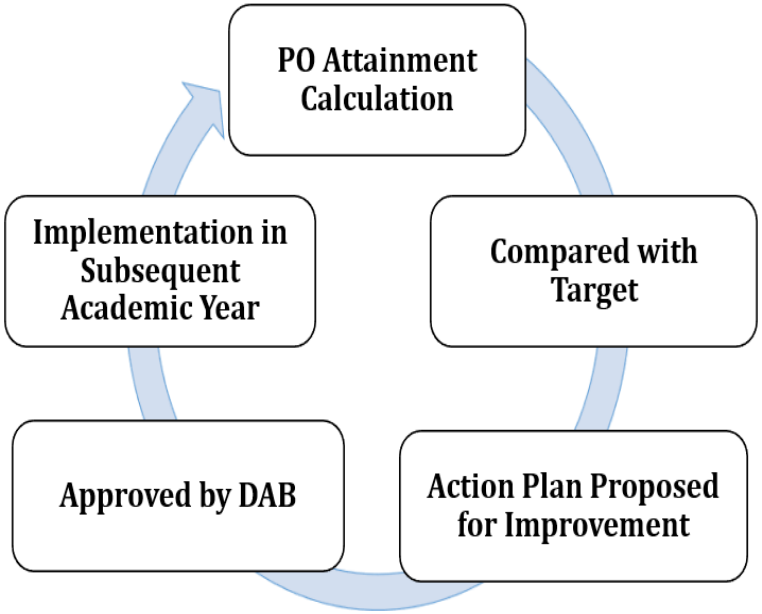
CO ATTAINMENT PROCESS

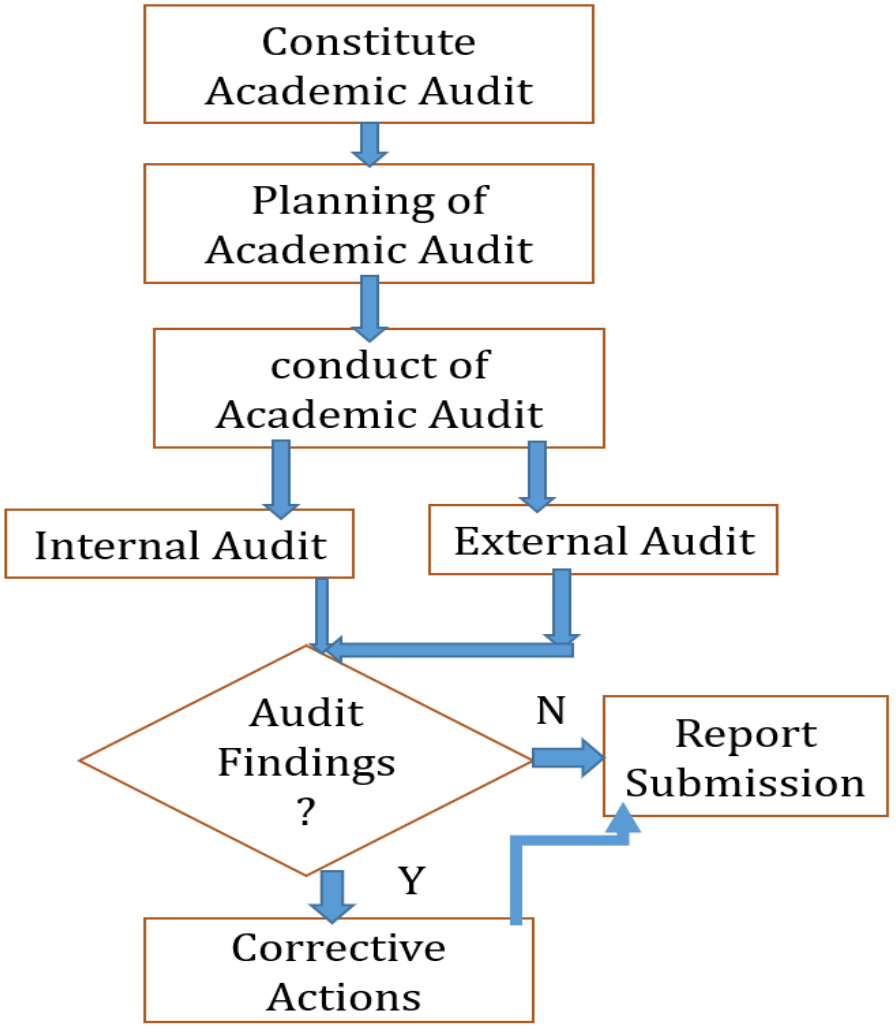


Activities To Bridge The Gap

- Partial Delivery
- Industry-Institute Interactions
- Professional Body Activities
- Skill Development Program workshops/Conference
- Knowledge Sharing by Alumni
- Open Courses
- Technical talks/seminars
- MOOCs
- Interdisciplinary projects

ACTION PLAN FOR CONTINUOUS IMPROVEMENT





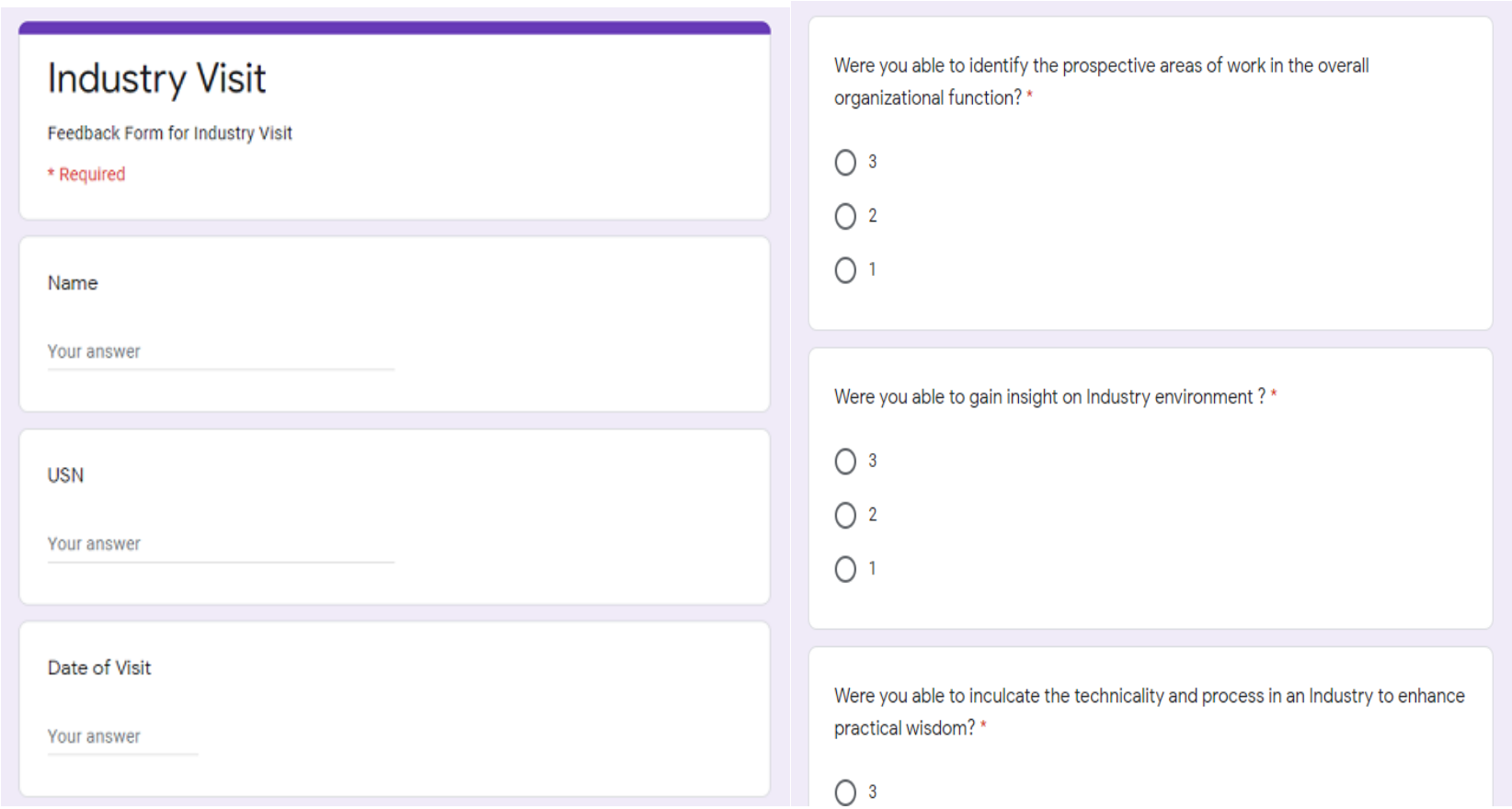
Industrial tours

Name	PO1	PO2	PO3	PO4	PO5	PO6
CO1: Relate the learning outcomes to outlook and build competency in professional environment					3	
CO2: Improve and engage in active learning experience						3

Industry Visit Photographs

Sample Evaluation Process of OBE

1. Feedback form for Industrial Visit



Industry Visit

Feedback Form for Industry Visit

* Required

Name

Your answer

USN

Your answer

Date of Visit

Your answer

Were you able to identify the prospective areas of work in the overall organizational function? *

- 3
- 2
- 1

Were you able to gain insight on Industry environment ? *

- 3
- 2
- 1

Were you able to inculcate the technicality and process in an Industry to enhance practical wisdom? *

- 3

Sample Evaluation Process of OBE

2. Evaluation rubrics for Internship (Internal)

Name	Marks (50)
Domain Knowledge: Engineering Knowledge/ Problem Analysis	10
Analysis, Design, Development and Optimization (Modern Tool Usage)	10
Soft Skills (Communication, Project & Resource Management)	5
Report Writing	25

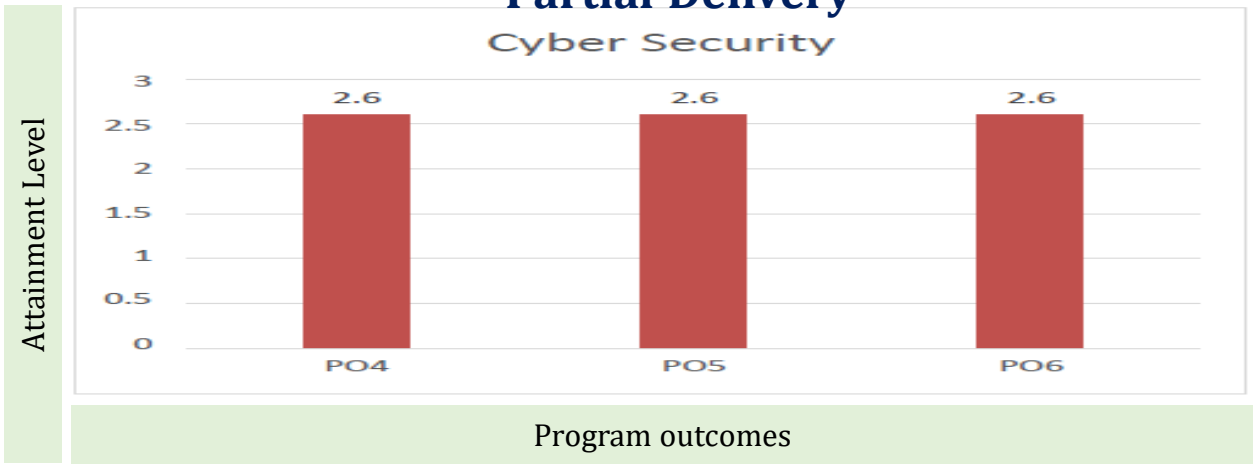
Industrial tours

Name	PO1	PO2	PO3	PO4	PO5	PO6
CO1: Relate the learning outcomes to outlook and build competency in professional environment					3	
CO2: Improve and engage in active learning experience						3

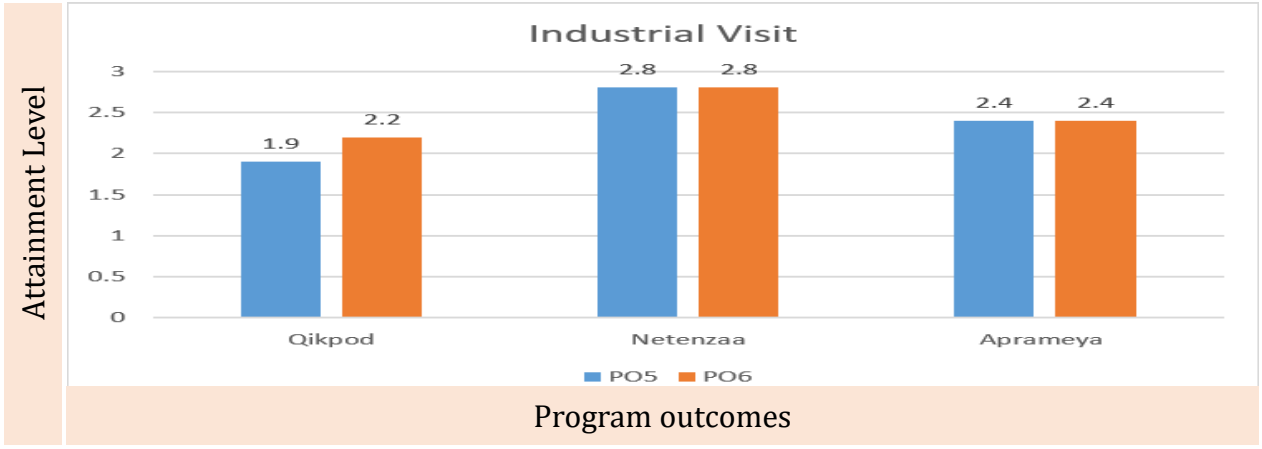
Industry Visit Photographs

Impact analysis of Industry Institute Interaction and actions taken

Partial Delivery



Industrial Visit



OBE Gallery

OBE Gallery

Conclusion

1. Practicing OBE through Active Learning Methods.
2. Usage of ICT in Effective Learning.
3. Focussing student Outcomes through Employability.
4. Focussing on Industry Institute Interaction.
5. Focussing on producing Distinguished Alumni by attaining POs with the set target.


Thank
you!