

|| Jai Sri Gurudev ||

Sri Adichunchanagiri Shikshana Trust (R)

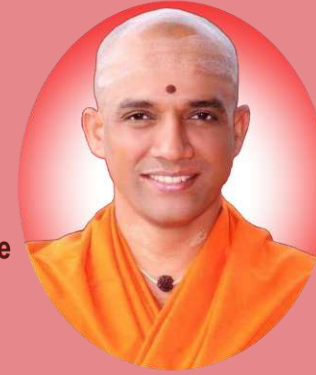
**SJC Institute of Technology**

**Chickballapur - 562 101, Karnataka**

VTU Affiliated, AICTE Approved, Accredited by NAAC & NBA (CSE, ECE, ME), Gold Rated by QS I-Guage



[www.sjcit.ac.in](http://www.sjcit.ac.in)



Estd : 1986

# Information Science and Engineering Department

## Hearty Welcome to NBA PEER Team



March 25-27, 2022

# Programme Offered

| Program            | Year of Start | Intake    | Increase in Intake | Year of Increase | Accreditation Status                    |
|--------------------|---------------|-----------|--------------------|------------------|---|
| <b>B.E. in ISE</b> | <b>2000</b>   | <b>60</b> | <b>120</b>         | <b>2009</b>      | <b>NAAC, 2018-22</b><br>Applied for NBA |

## In Retrospect (2000-2022)



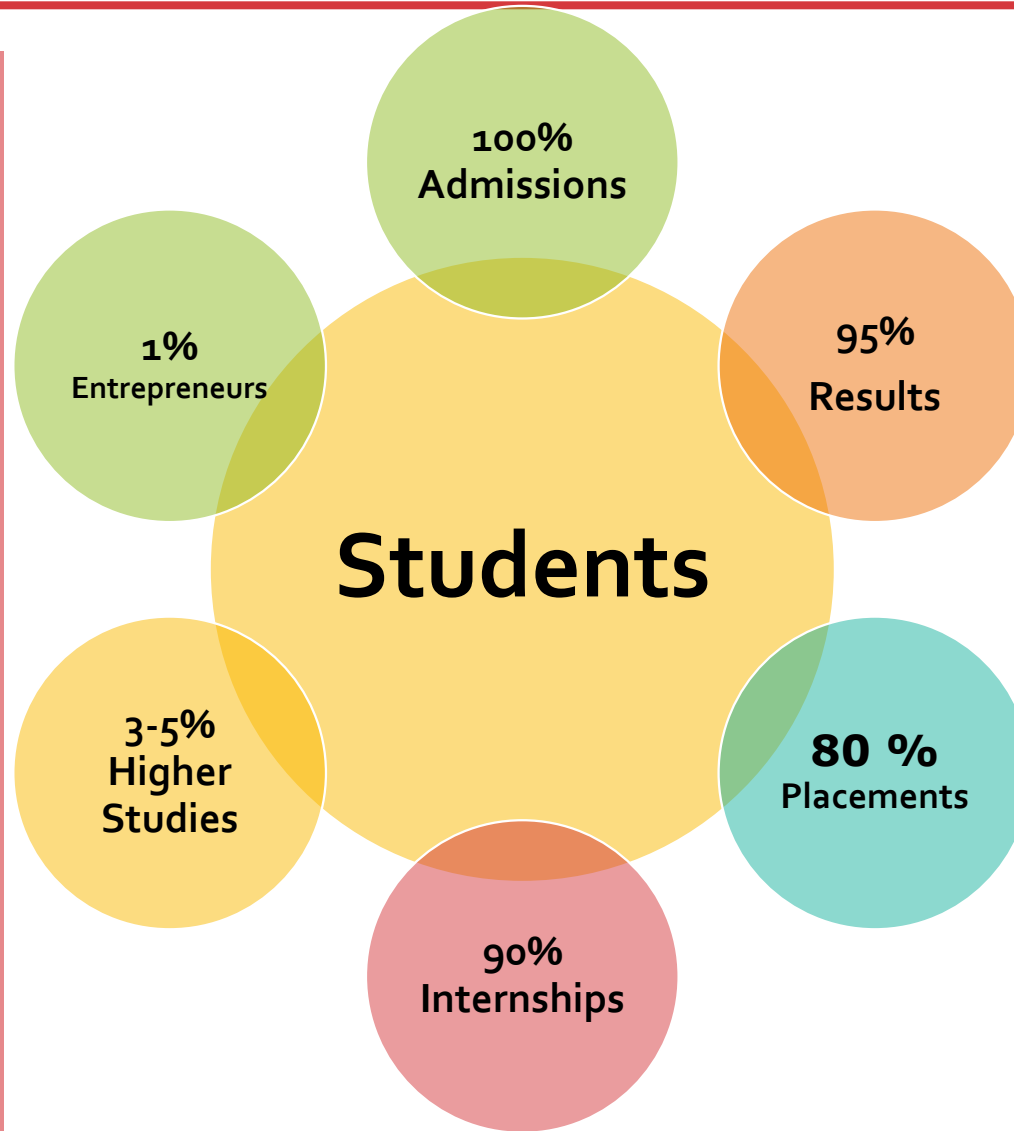
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# Achievements / Recognitions

## Students



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- Awards
  - ✓ Best Techie Award
  - ✓ Best Student Award
  - ✓ Best Paper Award

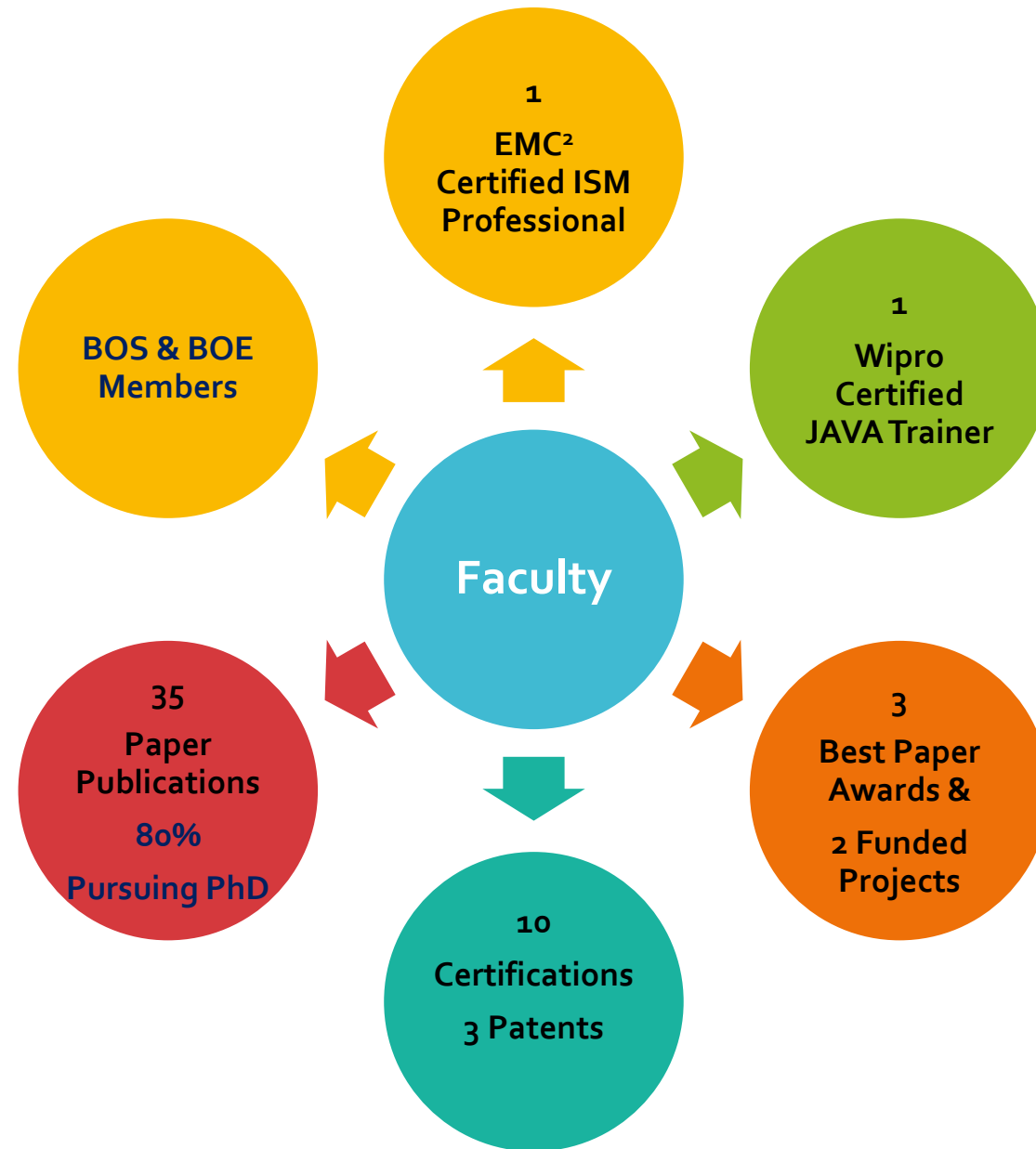


# Achievements / Recognitions

## Faculty



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# Department Achievements / Recognitions

- Successfully Completed **Certification Trainings** on
  - ✓ J2EE Wipro Certification,
  - ✓ Infosys InfyTQ Python certification,
  - ✓ Full Stack Development,
  - ✓ Angular.js and Node.js ,
  - ✓ DevOps
- MoUs with Industries
  - EMC<sup>2</sup>
  - Infosys
  - Wipro
  - HireCraft
  - UiPath
  - TequedLabs



Mr Shushit Patil  
1SJ14IS087



Yashaswini N  
1SJ14IS112

**6 Month Paid Internship @ Oxygen Pvt Ltd, USA**



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# Department Achievements / Recognitions

- **Mr. Anil** grabbed the **first runner up** place and also awarded as **Best Techie** of the year from M/s Mindtree Ltd with a scholarship of **Rs.2 lakhs** in an online contest Osmosis(Mindtree's Hackthon), 6<sup>th</sup> June 2022
- **Sumana S Saralaya** , USN:1SJ16ISog6, was awarded as "**BEST Student of the ISTE Student Chapter Award - 2019**", by ISTE on 16<sup>th</sup> Feb 2019 in State Level ISTE Student Convention
- **Roushan Kumar (1SJ17ISo70)**, developed a site to upload faculty notes @ <http://sjcnotes.github.io>
- **Navya (1SJ17ISo43)**, 6<sup>th</sup> Sem, Completed **Python** Course from **Internshala**
- **Amrutha M(1SJ17ISo04)**, and **Namitha (1SJ16ISo05)** Completed **Python, HTML , CSS, JAVA Script online Certificate Course** from **Progate**
- **Ms. Hemashree S** has secured **1<sup>st</sup> place** in **Symposium cum Project Exhibition** at SJC institute of technology in association with **Karnataka Science and Technology Academy**
- **Supriya G.M, Champion in Woman Kabaddi**, represented VTU in **South Zone Inter University Championship** held at Vel Tech RDS IT University, Chennai



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Students'  
Significant  
Achievements

Distinguished  
Alumni

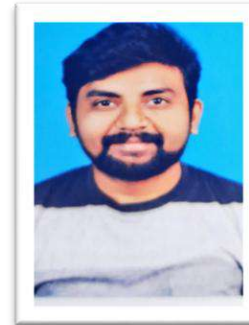


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**Entrepreneurs**



**Mr. Rakshith V Jhingade**  
Sukove Maruthi Authorised Service  
[www.sukove.com](http://www.sukove.com)



**Mr. Sanju B**  
Interone Technologies PVT LTD  
[www.Interone.io](http://www.Interone.io)



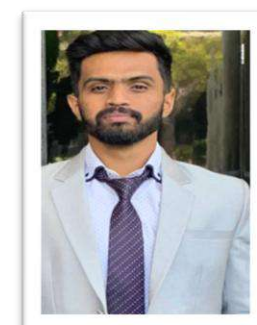
**Mr. Kamal Nayan Upadhyay**  
Kaimur Soft Tech Pvt Ltd  
[Kaimursoftech.com](http://Kaimursoftech.com)



**Mr. Shivakumar**  
Vice President - Lead (Global), Credit Suisse.  
MS in Advanced computer science, Univ. of  
Manchester 2006.  
MS in Management Information Systems, Stevens  
Institute of Technology 2010



**Mrs. Rekha S**  
Software Developer  
(Data Science, BI)  
Stanford University,  
Red wood, CA-USA



**Mr. Harsha D M**  
Analyst, Sattva Media and  
Consulting Pvt. Ltd.  
MS in Information Technology and  
Management, University of Sydney

# Students' Significant Achievements

## STAR Performers



**Supriya GM**  
**1SJ16IS098**

**Champion in Woman Kabaddi :**  
Represented VTU in South Zone Inter  
University Championship held at Vel Tech  
RDS IT University, Chennai



**Mr. Anil B G**  
**1SJ16IS010**

Placed through **InfyTQ**



**Mr Dhananjay S**  
**1SJ16IS027**



**Sumana S Saralaya**  
**1SJ16IS096**  
West Pharma, **7.0 LPA,**  
2020



**Harshitha DA**  
**1SJ17IS021**  
UNISYS, **7.15 LPA,**  
2021



**Chethan Kumar**  
**1SJ18IS021**  
TCS Digital, **7.2 LPA,**  
2022



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# Students' Significant Achievements

## STAR Performers – Academic and Research



**Shilpa K R**  
**1SJ15IS090**  
8.22 CGPA, 2019



**Chandra Reddygari Sravani**  
**1SJ16IS023**  
8.75 CGPA, 2020



**Sanghavi M N**  
**1SJ17IS072**  
8.90 CGPA, 2021

| Sl. No.                         | Project title        | Funding Agency                  | Year | Grant Amount | Principal Investigator | Duration | Status  |
|---------------------------------|----------------------|---------------------------------|------|--------------|------------------------|----------|---------|
| 1                               | Smart Traffic System | NAIN, IT& BT, Govt of Karnataka | 2019 | Rs.2,50,000  | Nagesh R               | 3 Years  | Ongoing |
| 2                               | Virtual SIM          | NAIN, IT& BT, Govt of Karnataka | 2019 | Rs.2,30,000  | Abdul Kadar            | 3 Years  | Ongoing |
| <b>Total Amount=Rs.4,80,000</b> |                      |                                 |      |              |                        |          |         |



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# Vision and Mission of the Institute



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## VISION

*Preparing Competent Engineering and Management Professional to Serve the Society*

## MISSION

1. Providing Students with a Sound Knowledge in Fundamentals of their branch of Study.
2. Promoting Excellence in Teaching, Training, Research and Consultancy.
3. Exposing Students to Emerging Frontiers in various domains enabling Continuous Learning.
4. Developing Entrepreneurial acumen to venture into Innovative areas.
5. Imparting Value based Professional Education with a sense of Social Responsibility.

# Vision and Mission of the Department



## VISION

*Educating Students to Engineer Information Science & Technology for Advancing the Knowledge as to Best Serve the Real World*

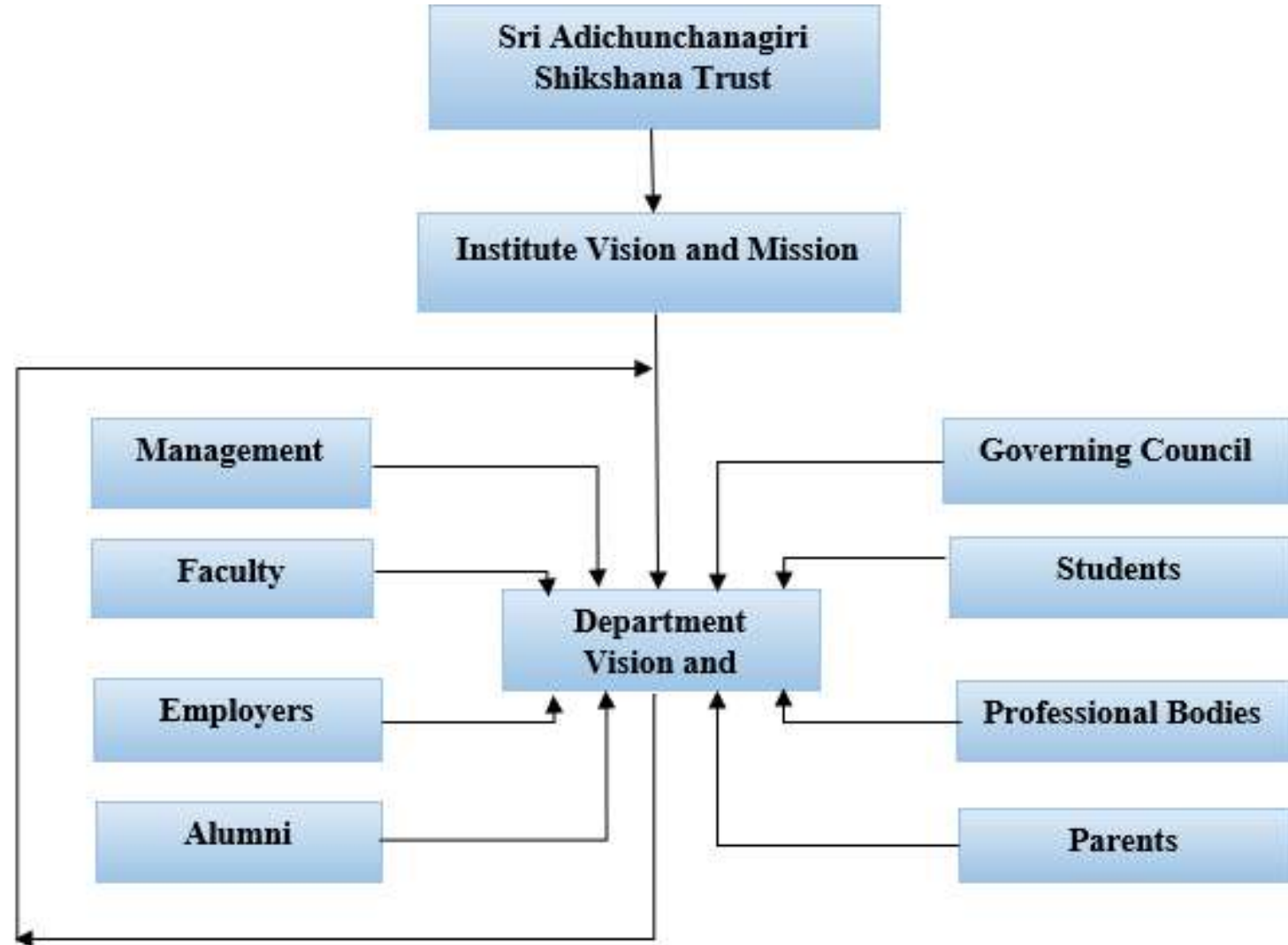
## MISSION

1. Focusing on Fundamentals and Applied aspects in both Information Science Theory and Programming practices.
2. Training comprehensively and encouraging R&D culture in trending areas of Information Technology.
3. Collaborating with premier Institutes and Industries to nurture Innovation and learning, in cutting edge Information Technology.
4. Preparing the students who are much Sought-after, Productive and Well-respected for their work culture having Lifelong Learning practice.
5. Promoting ethical and moral values among the students so as to enable them emerge as responsible professionals.

# Process of Defining Vision and Mission



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# PEOs

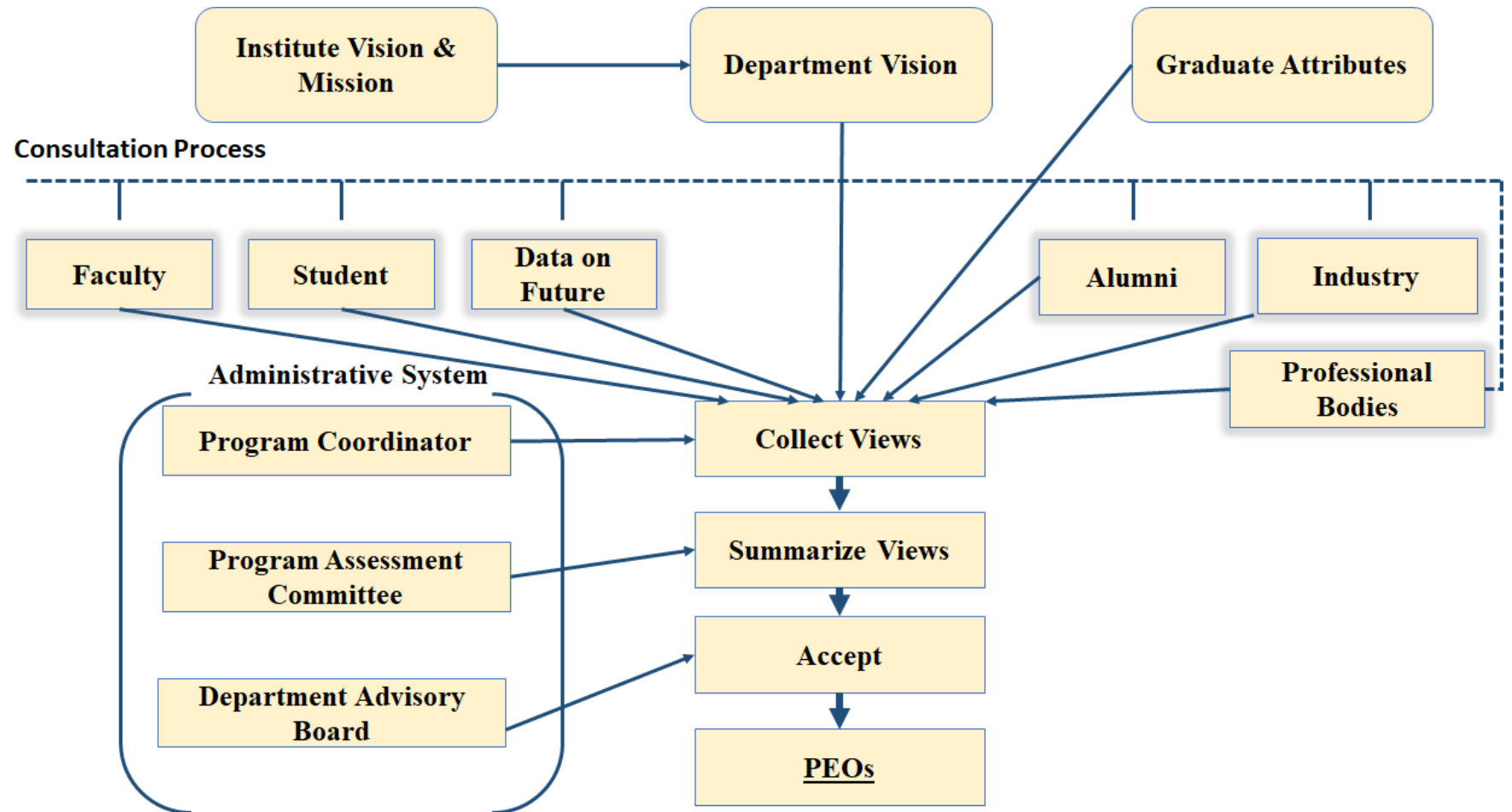


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ISE Graduates, within three-five years of graduation should:

- 1 Engage in Successful professional career in Information Science and Technology**
- 2 Pursue higher studies and research to advance the knowledge for Solving Contemporary Problems in IT industry**
- 3 Adapt to a constantly changing world through Professional Development and Sustained Learning**
- 4 Exhibit professionalism and team work with social concern**
- 5 Develop Leadership and Entrepreneurship Skills by incorporating organizational goals**

# Process of Defining PEOs



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# PEOs- Mission Correlation Matrix

| PEOs \ Mission   | <b>M1</b><br>Focusing on Fundamentals and Applied aspects in both Information Science Theory and Programming practices. | <b>M2</b><br>Training comprehensively and encouraging R&D culture in trending areas of Information Technology. | <b>M3</b><br>Collaborating with premier Institutes and Industries to nurture Innovation and learning, in cutting edge Information Technology. | <b>M4</b><br>Preparing the students who are much Sought-after, Productive and Well-respected for their work culture having Lifelong Learning practice. | <b>M5</b><br>Promoting ethical and moral values among the students so as to enable them emerge as responsible professionals. |
|--|---|--|---|--|--|
| <b>PEO1:</b> Engage in Successful professional career in Information Science and Technology.                               | 3   | 2  | -   | 3  | 2  |
| <b>PEO2:</b> Pursue higher studies and research to advance the knowledge for Solving Contemporary Problems in IT industry. | 3   | 3  | 2   | 2  | -  |
| <b>PEO3:</b> Adapt to a constantly changing world through Professional Development and Sustained Learning.                 | 3   | 2  | 2   | 3  | 1  |
| <b>PEO4:</b> Exhibit Professionalism and team work with social concern.  | 1   | 2  | 1   | 2  | 3  |
| <b>PEO5:</b> Develop Leadership and Entrepreneurship Skills by incorporating organizational goals.                         | 1   | 2  | 2   | 3  | 2  |



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# Criteria - 2

## Program Curriculum and Teaching – Learning Processes

### POs



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|      |  |
|------|--|
| PO1  | <b>Engineering Knowledge:</b> Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.  |
| PO2  | <b>Problem Analysis:</b> Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.  |
| PO3  | <b>Design/development of Solutions:</b> 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  | <b>Conduct Investigations of Complex Problems:</b> 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  | <b>Modern Tool Usage:</b> 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  | <b>The Engineer and Society:</b> 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  | <b>Environment and Sustainability:</b> Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.   |
| PO8  | <b>Ethics:</b> Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.  |
| PO9  | <b>Individual and Team Work:</b> Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.   |
| PO10 | <b>Communication:</b> 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 | <b>Project Management and Finance:</b> 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  |
| PO12 | <b>Life-long Learning:</b> 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)

PSO<sub>1</sub>

- Apply the knowledge of Data Structures, Database Systems, System Programming, Networking, Web development and AI & ML techniques in engineering the software

PSO<sub>2</sub>

- Exhibit solid foundations and advancements in Developing software / Hardware systems for Solving contemporary problems.

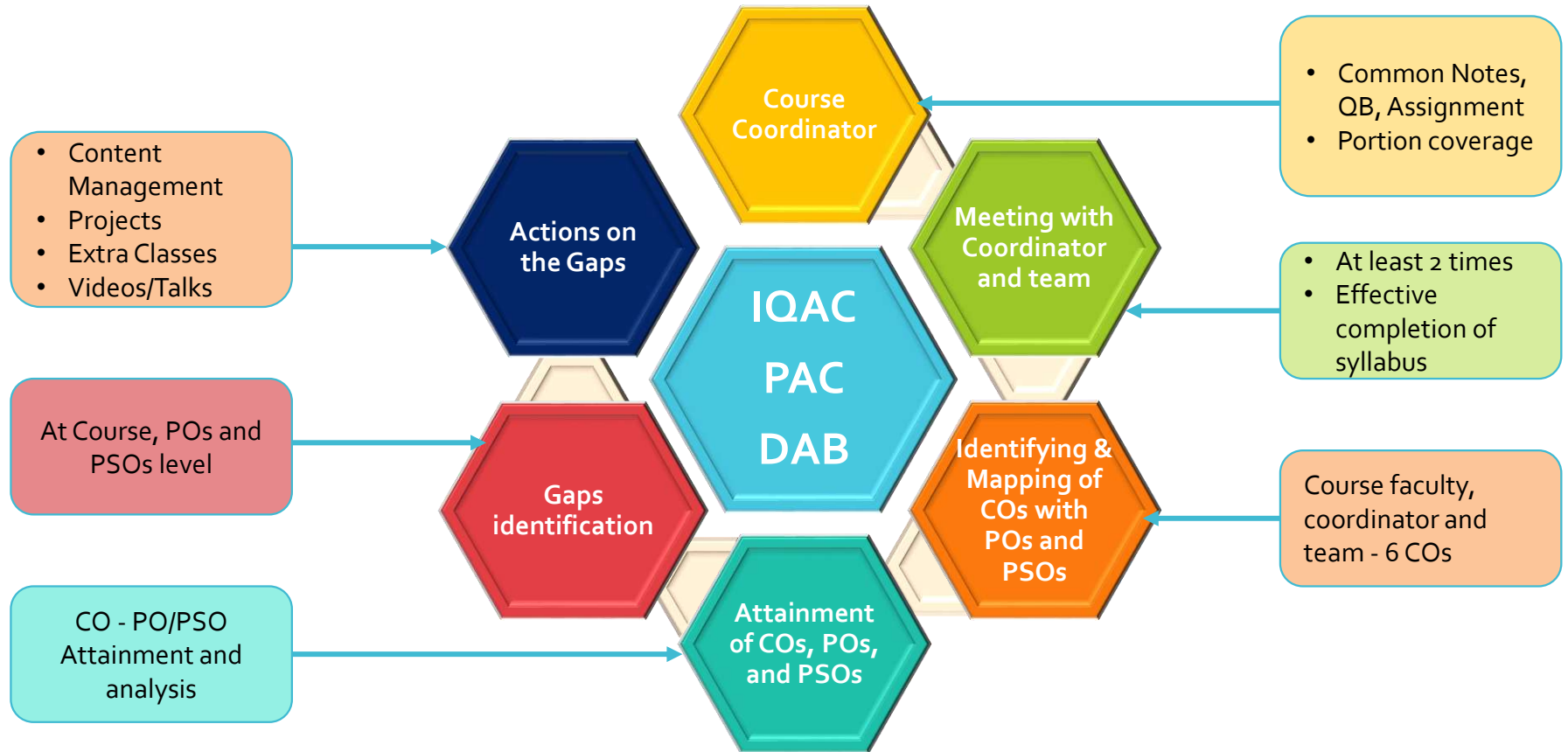


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# Compliance of University Curriculum

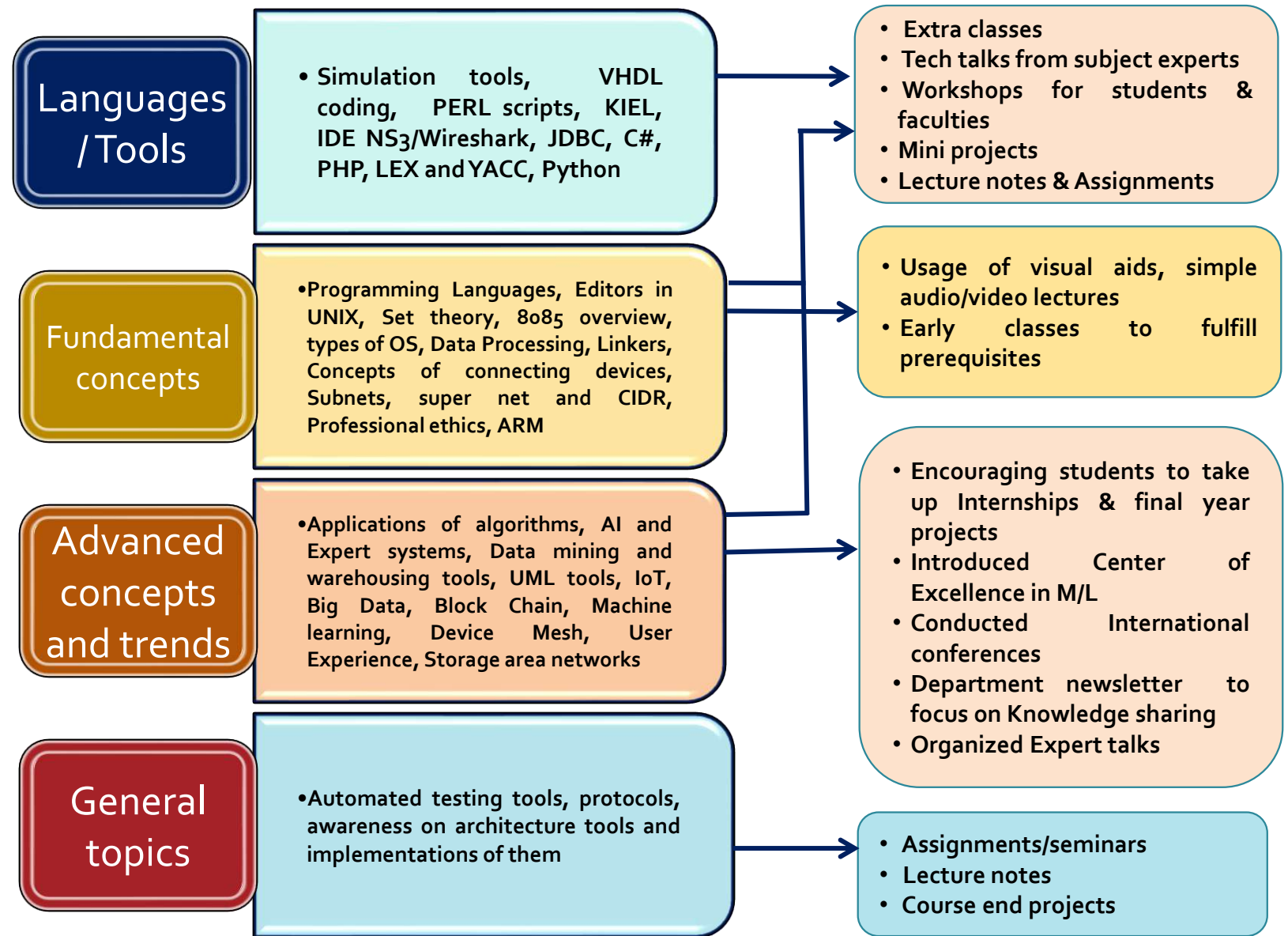


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## Compliance of the University Curriculum with POs and PSOs

# Consolidated Gaps in the Curriculum and the Actions



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# Extent of compliance of the University Curriculum for attaining the Program Outcomes



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| SUBJECT CODE   | SUBJECT                              | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 | PSO1 | PSO2 |
|--|--------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|
| <b>Fundamental Courses-Knowledge of Mathematics</b>                          |                                      |     |     |     |     |     |     |     |     |     |      |      |      |      |      |
| 17MAT31  | Engineering Mathematics-III          | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |     |     |     |      |      | ✓    |      |      |
| 17CS36   | Discrete Mathematical Structures     | ✓   | ✓   | ✓   | ✓   | ✓   |     |     |     |     |      |      | ✓    | ✓    | ✓    |
| 17MAT41  | Engineering Mathematics IV           | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |     |     |     |      |      | ✓    |      |      |
| 17CS653  | Operation Research                   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |     |     |     |      |      | ✓    | ✓    |      |
| <b>Fundamental Courses-Problem analysis, Design/Development of solutions</b> |                                      |     |     |     |     |     |     |     |     |     |      |      |      |      |      |
| 17PCD23  | Programming in C and Data structures | ✓   | ✓   | ✓   | ✓   | ✓   |     |     |     |     |      |      | ✓    | ✓    | ✓    |
| 17CPL26  | Computer Programming Lab             | ✓   | ✓   | ✓   | ✓   | ✓   |     |     |     |     |      |      | ✓    |      | ✓    |
| 17CS33   | Data Structures and Applications     | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |     | ✓   | ✓   |      |      | ✓    | ✓    | ✓    |
| 17CS35   | Unix And Shell Programming           | ✓   | ✓   |     | ✓   | ✓   |     |     |     |     |      |      | ✓    | ✓    |      |
| 17CSL38  | Data Structures Laboratory           | ✓   | ✓   | ✓   | ✓   |     | ✓   |     |     | ✓   |      |      | ✓    | ✓    | ✓    |
| 17CS42   | Object Oriented Concepts             | ✓   | ✓   | ✓   | ✓   | ✓   |     |     |     |     |      |      | ✓    | ✓    | ✓    |

# BEST Practices for Effective Teaching-Learning



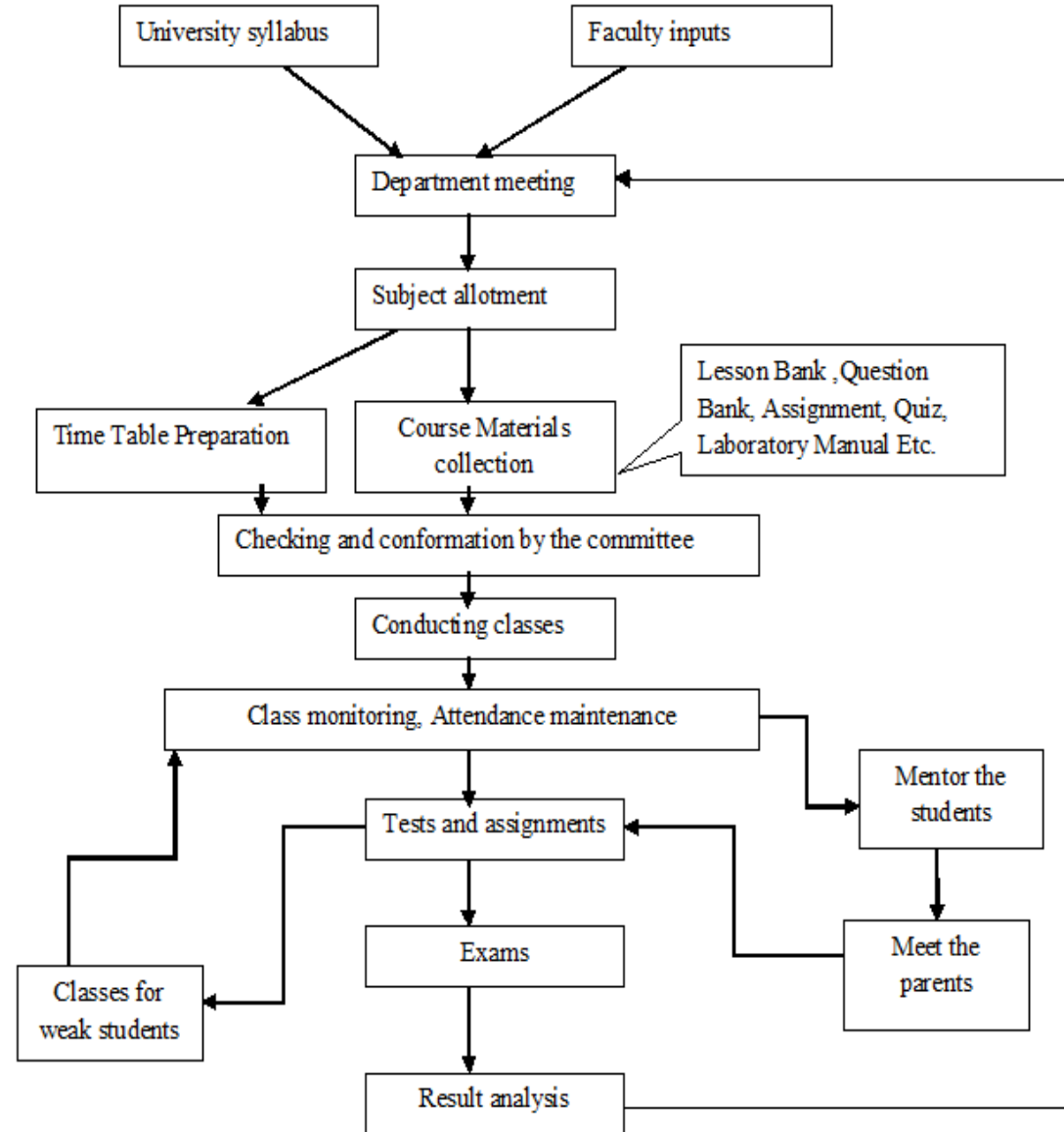
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| Year of Study        | Activities   |
|----------------------|--|
| 2 <sup>nd</sup> Year | <ul style="list-style-type: none"><li>•HR Training – Aptitude, Soft Skill, Verbal, Technical</li><li>•Logic Building Course</li><li>•Programming Contest</li><li>•Jnana Vijnana Tantragnana Mela (JVTM)</li><li>•Paper Presentation</li></ul>  |
| 3 <sup>rd</sup> Year | <ul style="list-style-type: none"><li>•HR Training – Aptitude, Soft Skill, Verbal, Technical</li><li>•Industry Visits</li><li>•Paper Presentation</li><li>•Line of Career (LOC)<ul style="list-style-type: none"><li>• InfyTQ - Python</li><li>• Wipro Talent Next</li></ul></li></ul> |
| 4 <sup>th</sup> Year | <ul style="list-style-type: none"><li>•Internship</li><li>•Projects</li><li>•Paper Presentation</li><li>•Line of Career (LOC)<ul style="list-style-type: none"><li>•DevOps</li><li>•Full Stack Development</li></ul></li></ul>   |

# Teaching Learning Process



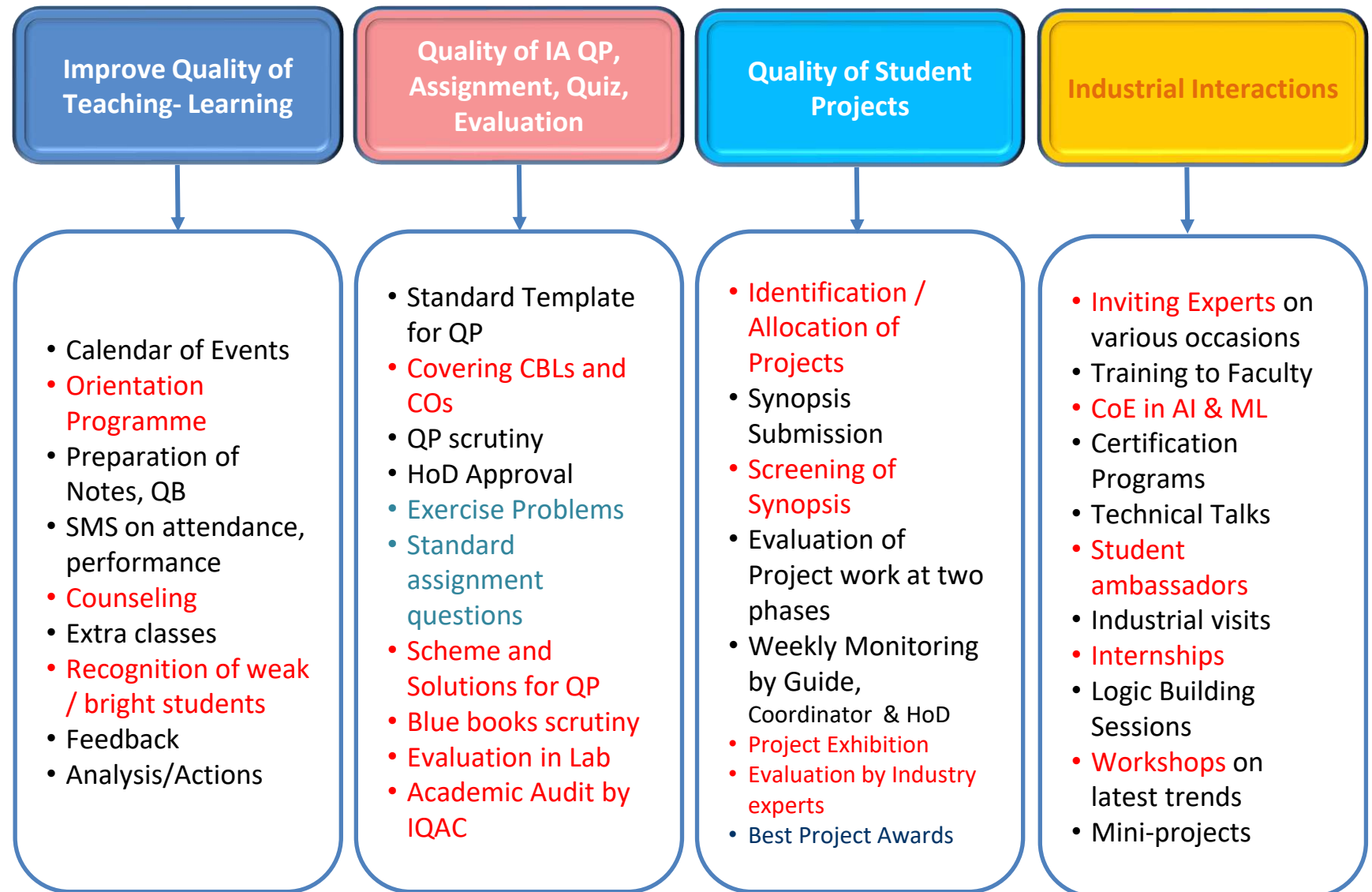
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# Quality of Teaching-Learning



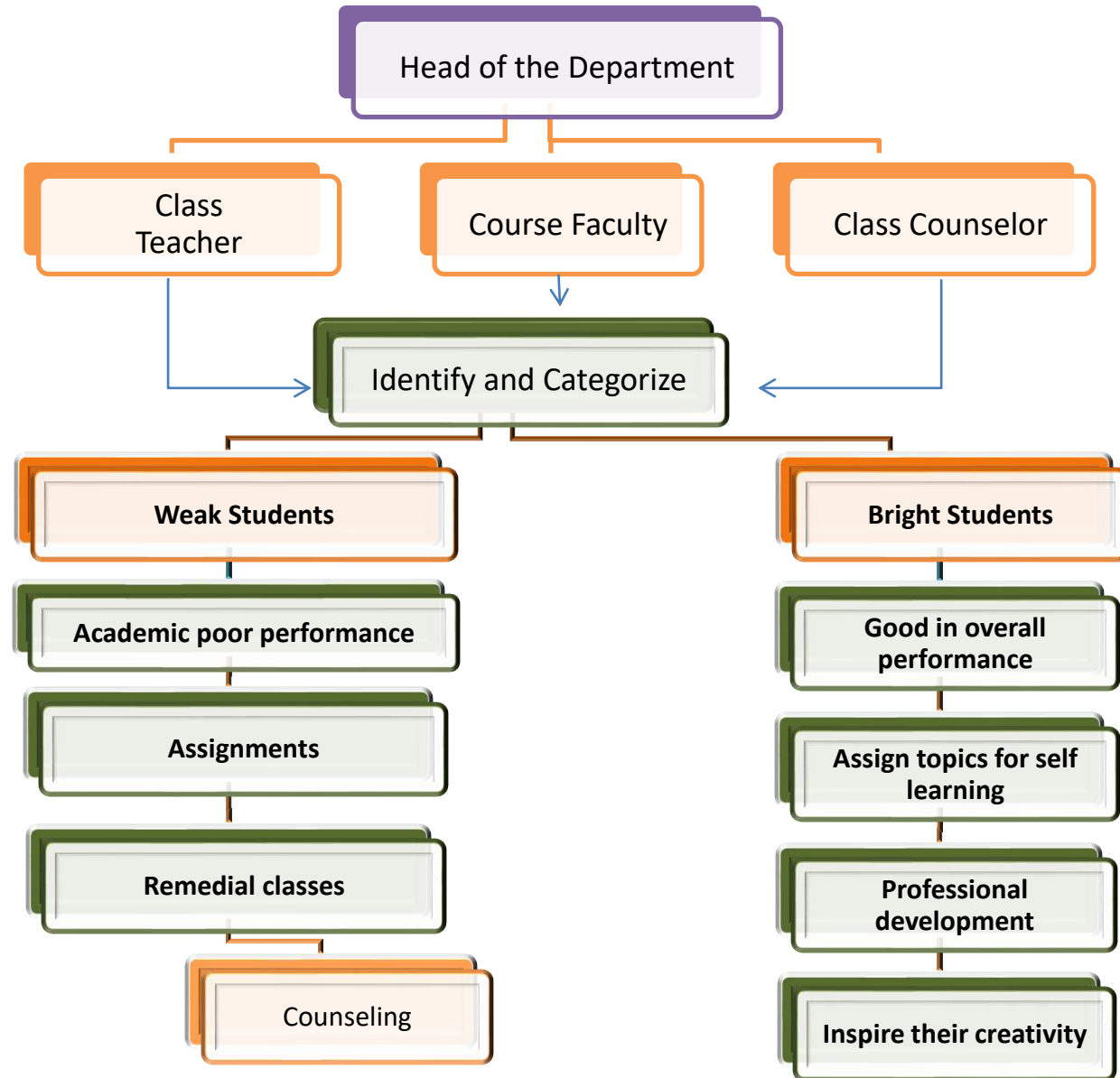
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# Process of identifying and monitoring the weak and bright students



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# Actions on Bright Students and Slow Learners



## Encouraging Bright Students

- Academic Flexibility
- Encouraging the students to work in research and skill development centers
- MOOC/ Add-on courses
- Technical/ Cultural clubs
- Counseling on career choice/higher studies/competitive Exams/ skill development
- Encouraging/Handholding/Guiding the students with financial support to:
  - Attend Conferences/workshops, Publish research article, Work for Funded Research Projects
  - Applying for patents
  - Participating in National Level Hackathons, Ideathons, Project Based Exhibitions etc.

## Supporting Slow Learners

- Mentoring system
- Individual attention even after college hours
- During the **Tutorial Classes**, fast and slow learners are grouped together
- Remedial Classes
- Additional Coding Classes
- Bridge courses
- Regular progress report to parents

# Sample Weak Students with Actions and Impact



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| USN        | Name            | Grievances  | Action and Impact   | Counselor/<br>Class Teacher       |
|------------|-----------------|---|---|-----------------------------------|
| 1SJ16IS068 | Prajwal Gowda R | Irregular to classes  | Advised to take the academics seriously and was given assignments and extra tests to cope up  | Nandini S<br>Yogaraja G S R       |
| 1SJ16IS102 | Thanuja R Yadav | Irresponsible and rash  | Made him to feel that we care and understand what he was going through. Has raised his morale, and helped him open up about his challenges  | Susheelamma K H<br>Yogaraja G S R |
| 1SJ16IS105 | Uday M N        | Irregular to classes and had inferiority complex                | Meeting arranged with parents, gave multiple examples and with a close follow up, the issue has been addressed  | Susheelamma K H<br>Yogaraja G S R |
| 1SJ16IS109 | Vedha Gowda     | Not confident, introvert  | Counseled in presence of his mother multiple times to address this issue. Made him to feel comfortable talking about his concern. He is regular to classes and gained little confidence | Susheelamma K H<br>Yogaraja G S R |
| 1SJ16IS113 | Vinay Gowda     | Weak in class, irregular to the classes, unprofessional conduct | Counseled along with her father, strictly monitored her presence in class, and assigned tasks to help her improve academically. Shown the right way to do things. Slowly improved.      | Susheelamma K H<br>Yogaraja G S R |
| 1SJ16IS114 | Vishnu M S      | Introvert, sensitive, non-troublesome                           | Counseled along with his father, monitored his presence in class, and helped him learn the value of self-awareness and self-reliance  | Susheelamma K H<br>Yogaraja G S R |

# Innovations by the Faculty in Teaching and Learning



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## **Pratibhodhitam :**

A Learner Centric One-To-One Teaching-Learning Practice



## **PratiDhwani:**

5-10 minutes Voice Summary, Short restatement reflecting the important points of a lecture.



## **Peer to Peer Learning:**

An educational practice in which students interact with other students to attain learning outcomes.

# Innovations by the Faculty in Teaching and Learning



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## Teaching Methods

- Video-Based Learning
- Flipped Classroom
- Role Play
- Hands-on Training
- Demonstration Based Learning
- Partial Delivery of few Course by Industry Expert
- Tutorial
- Lecture interspersed with discussion

## Learning Activity

- Case Study
- Literature Reviewing/ Presentation
- Simulation
- Project Based Learning
- MOOC based learning
- GATE oriented aptitude test
- Programming Assignment
- Seminars on Contemporary Issues

# Project work Review Schedule



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| Description   | Schedule                               |
|---|--|
| Submission of Synopsis                                | Beginning of VII semester              |
| Allocation of Guide and Preliminary Screening Seminar | 3 <sup>rd</sup> Week of VII Semester   |
| Project Phase 1 – Review 1                            | 6 <sup>th</sup> Week of VII Semester   |
| Project Phase 1 – Review 2                            | 12 <sup>th</sup> Week of VII Semester  |
| Project Phase 1 Report Submission                     | 14 <sup>th</sup> Week of VII Semester  |
| Project Phase 2 – Review 1                            | 2 <sup>nd</sup> Week of VIII Semester  |
| Project Phase 2 – Review 2                            | 12 <sup>th</sup> Week of VIII Semester |
| Final Presentation and Demonstration                  | End of VIII semester                   |
| Submission of the Draft report to the guide           | End of VIII semester                   |
| Submission of the final project report                | One Week Before SEE                    |
| External Viva-voce                                    | As per VTU Schedule                    |

# Types and Relevance of Projects in various Domains



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| Academic Year            | CAY m2 2018-19 | CAY m2 2019-20 | CAY m2 2020-21 | Attainment of POs and PSOs |
|--------------------------|----------------|----------------|----------------|----------------------------|
| Total number of projects | 28             | 24             | 24             | PO1, PO12, PSO1, PSO2      |
| In-house projects        | 28 (100%)      | 24(100%)       | 24(100%)       | PO1, PO12, PSO1, PSO2      |
| Industry projects        | -              | -              | -              | PO1, PO12, PSO1, PSO2      |

| Number of Projects |                                |         |         |          |
|--------------------|--------------------------------|---------|---------|----------|
| Sl. No             | Domain                         | 2020-21 | 2019-20 | 2018- 19 |
| 1.                 | AI/Machine Learning            | 11      | 10      | 01       |
| 2.                 | IOT                            | 07      | 02      | 03       |
| 3.                 | Cloud Computing                |         | -       | 07       |
| 4.                 | Big Data /DM                   | 01      | -       | 01       |
| 5.                 | Network Security               | 03      | 06      | 03       |
| 6                  | Web Technology                 | -       | 04      | 06       |
| 7.                 | Computer Networks / Mobile App | -       | -       | 03       |
| 8                  | Image Processing               | 02      | 04      | 04       |

# Industry Interactions/ Internships



Infosys



Wipro



TCS

## MoUs

- Infosys
- Wipro
- Hire Craft
- Tequed Labs



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# Rubrics for Project work - Internal Evaluation



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| Rubric            | Agenda                                | Marks                                       |
|-------------------|---------------------------------------|---|
| Rubric #R1        | Problem Identification and definition | 10  |
| Rubric #R2        | Literature Review                     | 10  |
| Rubric #R3        | Significance and relevance work       | 05  |
| Rubric #R4        | Review1 Presentation                  | 15  |
| Rubric #R5        | Objectives and Methodology of project | 10  |
| Rubric #R6        | Plan of execution                     | 05  |
| Rubric #R7        | Review2 Project Seminar               | 20  |
| Rubric #R8        | Phase1 Project Synopsis Report        | 25  |
| Overall Weightage |                                       | (Sum of R1, R2, R2, R4, R5, R6, R7, R8)=100 |

| Rubric            | Agenda   | Marks  |
|-------------------|--|--|
| Rubric #R1        | Plan of Execution  | 05   |
| Rubric #R2        | Progress of work   | 10   |
| Rubric #R3        | Interaction with Guide, Coordinators and HOD while carrying over Project | 05   |
| Rubric #R4        | Design   | 20   |
| Rubric #R5        | Implementation and Testing   | 10   |
| Rubric #R6        | Presentation and Questionnaire's   | 10   |
| Rubric #R7        | Report Preparation   | 15   |
| Rubric #R8        | Final Project Demonstration  | 25   |
| Overall Weightage |  | (Sum of R1, R2, R2, R4, R5, R6, R7, R8) =100 |

# Criteria – 3

# Course Outcomes



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| Course/COs | Course Outcomes of Analog & Digital Electronic - 17CS32 ( 3 <sup>rd</sup> Sem)   |
|------------|--|
| C202.1     | <b>Interpret</b> the construction and characteristics of JFETs and Operational Amplifier circuits and their applications                 |
| C202.2     | <b>Analyze</b> Combinational Logic circuits, Simplification of Algebraic Equations using Karnaugh Maps and Quine McClusky Techniques.    |
| C202.3     | <b>Design</b> Decoders, Encoders, Digital multiplexers, Adders and Subtractors, Binary comparators, Latches and Master-Slave Flip-Flops. |
| C202.4     | <b>Design</b> Synchronous and Asynchronous Sequential Circuits   |
| C202.5     | <b>Design</b> registers and Counters, A/D and D/A converters   |
| C202.6     | <b>Implement</b> logic circuits using HDL models   |

| Course/COs | Course Outcomes of Advanced Java & J2EE - 17CS553 (Fifth Semester) |
|------------|--|
| C305.1     | <b>Interpret</b> enumerations and collections in java              |
| C305.2     | <b>Build</b> programs using collection framework.                  |
| C305.3     | <b>Illustrate</b> and develop string handling methods in java      |
| C305.4     | <b>Apply</b> servlets to develop web application                   |
| C305.5     | <b>Demonstrate</b> database access using JDBC API                  |
| C305.6     | <b>Design</b> reusable software components using JSP               |

| Course/COs | Course Outcomes of Machine Learning - 17CS73 (Seventh Semester)   |
|------------|---|
| C403.1     | <b>Apply</b> the knowledge of supervised, unsupervised and Reinforcement Learning Strategies for Machine Learning.                  |
| C403.2     | <b>Apply</b> Probability and Statistical approaches related to machine learning.  |
| C403.3     | <b>Investigate</b> and interpret data with valid conclusions for supervised and unsupervised Models for machine learning Techniques |
| C403.4     | <b>Design</b> a model using machine learning to solve a problem.  |
| C403.5     | <b>Develop</b> and implement a ML model on real time applications   |
| C403.6     | <b>Evaluate</b> various models of Machine Learning  |

# CO-PO-PSO Matrices



**SJCIT-ISE**

| 17CS32 | Analog & Digital Electronics (Third Semester) |      |      |      |      |   |   |   |   |      |      |      |      |   |
|--------|---|------|------|------|------|---|---|---|---|------|------|------|------|---|
|        | Program Outcomes (POs)                        |      |      |      |      |   |   |   |   |      |      |      | PSOs |   |
| COs    | 1   | 2    | 3    | 4    | 5    | 6 | 7 | 8 | 9 | 10   | 11   | 12   | 1    | 2 |
| C202.1 | 3   | 3    | 3    | 2    | 3    |   |   |   |   | 3    | 2    | 3    | 2    | 3 |
| C202.2 | 2   | 3    | 3    | 3    | 3    |   |   |   |   | 2    | 3    | 3    | 1    | 3 |
| C202.3 | 2   | 3    | 3    | 3    | 2    |   |   |   |   | 3    | 2    | 3    | 2    | 3 |
| C202.4 | 3   | 3    | 3    | 3    | 3    |   |   |   |   | 2    | 3    | 3    | 1    | 3 |
| C202.5 | 3   | 3    | 3    | 3    | 3    |   |   |   |   | 3    | 2    | 3    | 2    | 3 |
| C202.6 | 2   | 3    | 2    | 2    | 3    |   |   |   |   | 2    | 3    | 2    | 2    | 3 |
| Avg.   | 2.50  | 3.00 | 2.83 | 2.67 | 2.83 |   |   |   |   | 2.50 | 2.50 | 2.83 | 1.67 | 3 |

| 17CS553 | Advanced Java & J2EE (Fifth Semester) |      |      |      |      |   |   |   |   |    |    |    |      |   |
|---------|---------------------------------------|------|------|------|------|---|---|---|---|----|----|----|------|---|
|         | Program Outcomes (POs)                |      |      |      |      |   |   |   |   |    |    |    | PSOs |   |
| COs     | 1                                     | 2    | 3    | 4    | 5    | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1    | 2 |
| C305.1  | 3                                     | 2    | 2    | 2    | 2    |   |   |   |   |    |    | 2  | 2    | 2 |
| C305.2  | 3                                     | 2    | 2    | 2    | 2    |   |   |   |   |    |    | 2  | 2    | 2 |
| C305.3  | 2                                     | 3    | 2    | 2    | 2    |   |   |   |   |    |    | 2  | 2    | 3 |
| C305.4  | 3                                     | 3    | 2    | 2    | 2    |   |   |   | 1 |    | 1  | 2  | 2    | 2 |
| C305.5  | 2                                     | 2    | 2    | 1    | 1    | 1 |   | 1 | 1 |    | 1  | 2  | 2    | 1 |
| C305.6  | 3                                     | 2    | 3    | 2    | 2    | 1 |   |   | 1 |    | 1  | 2  | 3    | 2 |
| Avg.    | 2.67                                  | 2.33 | 2.17 | 1.83 | 1.83 | 1 |   | 1 | 1 |    | 1  | 2  | 2.16 | 2 |

| 17CS73 | Machine Learning (Seventh Semester) |     |     |     |     |   |   |   |   |    |    |     |      |   |
|--------|-------------------------------------|-----|-----|-----|-----|---|---|---|---|----|----|-----|------|---|
|        | Program Outcomes (POs)              |     |     |     |     |   |   |   |   |    |    |     | PSOs |   |
| COs    | 1                                   | 2   | 3   | 4   | 5   | 6 | 7 | 8 | 9 | 10 | 11 | 12  | 1    | 2 |
| C403.1 | 2                                   | 3   | 3   | 2   | 3   |   |   |   |   |    |    | 3   | 3    |   |
| C403.2 | 2                                   | 2   | 2   | 3   | 2   |   |   |   |   |    |    | 2   | 3    |   |
| C403.3 | 2                                   | 2   | 3   | 2   | 2   |   |   |   |   |    |    | 2   | 2    |   |
| C403.4 | 2                                   | 1   | 2   | 2   | 2   |   |   |   |   |    |    | 2   | 3    |   |
| C403.5 | 2                                   | 1   | 3   | 1   | 2   |   |   |   |   | 2  |    | 3   | 2    |   |
| C403.6 | 2                                   | 1   | 3   | 1   | 2   |   |   |   |   | 2  |    | 2   | 2    |   |
| Avg.   | 2.0                                 | 1.7 | 2.7 | 1.8 | 2.2 |   |   |   |   | 2  |    | 2.3 | 2.5  |   |

# CO-PO/PSO Matrix

| V SEMESTER    |      |      |      |      |      |      |      |      |      |      |      |      |
|---------------|------|------|------|------|------|------|------|------|------|------|------|------|
| C301          | 1.17 |      |      |      |      | 1.00 |      | 2.00 | 1.50 | 1.75 | 2.00 | 1.00 |
| C302          | 2.40 | 2.25 | 1.67 | 1.80 | 3.00 | 1.00 | 1.00 |      |      |      |      | 2.00 |
| C303          | 1.83 | 1.67 | 2.00 | 1.60 | 2.67 |      | 1.00 | 1.00 | 1.40 |      |      | 2.00 |
| C304          | 2.17 | 2.00 | 2.00 | 2.00 |      |      | 1.00 |      |      |      |      | 1.67 |
| C305          | 2.67 | 2.33 | 2.17 | 1.83 | 1.83 | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 2.00 |
| C306          | 2.00 | 2.33 | 1.67 | 2.00 | 2.50 | 1.50 |      |      |      |      | 2.00 | 2.00 |
| C307          | 2.33 | 1.67 | 2.00 | 2.50 | 1.50 |      |      |      |      | 2.00 | 2.00 |      |
| C308          | 2.00 | 1.80 | 1.60 | 1.25 | 1.80 |      |      |      |      |      |      | 2.00 |
| C309          | 2.67 | 1.67 | 2.67 | 2.00 | 2.67 |      |      |      |      | 3.00 | 3.00 | 2.67 |
| VI SEMESTER   |      |      |      |      |      |      |      |      |      |      |      |      |
| C311          | 1.67 | 2.50 | 2.25 | 1.50 | 1.50 | 1.80 |      | 1.20 |      |      |      | 2.17 |
| C312          | 2.00 | 2.33 | 2.17 | 1.50 | 2.50 |      |      | 1.00 | 1.00 |      |      | 1.67 |
| C313          | 2.33 | 1.33 | 1.40 | 1.00 | 2.00 |      |      |      |      |      |      | 1.33 |
| C314          | 1.00 | 1.00 |      |      |      |      |      |      |      |      |      | 2.00 |
| C315          | 3.00 | 2.00 | 1.83 | 1.67 |      |      |      |      |      |      |      | 2.00 |
| C316          | 2.20 | 2.20 | 1.80 | 1.50 | 1.00 | 1.00 |      |      |      |      |      | 2.00 |
| C317          | 1.67 | 1.83 | 2.80 | 2.00 | 3.00 |      |      |      |      |      | 3.00 | 1.67 |
| C318          | 3.00 | 2.17 | 3.00 | 2.00 | 1.67 |      |      |      | 1.00 |      | 1.00 | 2.33 |
| C319          | 2.17 | 2.17 | 2.33 | 1.40 | 2.00 | 1.00 | 1.00 |      | 3.00 | 3.00 | 2.33 | 2.00 |
| VII SEMESTER  |      |      |      |      |      |      |      |      |      |      |      |      |
| C401          | 3.00 | 2.33 | 2.00 |      |      |      |      |      |      |      |      |      |
| C402          | 2.67 | 1.83 | 2.00 |      |      |      |      |      |      |      |      |      |
| C403          | 2.00 | 1.67 | 2.67 | 1.83 | 2.17 |      |      |      |      | 2.00 |      | 2.33 |
| C404          | 3.00 | 3.00 | 3.00 | 3.00 | 2.00 |      |      |      |      |      |      | 3.00 |
| C405          | 2.33 | 2.00 | 2.33 | 1.25 | 3.00 |      |      | 1.17 |      |      | 1.50 | 2.50 |
| C406          | 2.00 | 1.33 | 2.00 | 1.50 |      |      |      |      |      |      |      | 1.50 |
| C407          | 2.17 | 2.00 | 1.67 | 1.75 | 2.50 |      |      |      |      |      |      | 2.00 |
| C408          | 2.50 | 2.50 | 1.83 |      | 2.33 |      |      |      |      |      |      |      |
| VIII SEMESTER |      |      |      |      |      |      |      |      |      |      |      |      |
| C411          | 2.17 | 2.20 | 1.75 | 2.40 | 1.33 |      |      |      |      |      | 2.00 | 1.67 |
| C412          | 2.17 | 1.83 | 1.33 | 1.00 |      |      |      |      |      |      |      | 1.00 |
| C413          | 3.00 | 1.00 | 1.00 |      |      |      |      |      |      |      |      | 1.00 |
| C414          | 1.33 | 1.83 | 2.25 | 2.00 | 2.00 | 2.00 |      |      |      |      |      |      |
| C415          | 2.33 | 2.33 | 3.00 | 2.20 | 3.00 | 2.20 |      | 2.00 | 2.67 | 3.00 | 2.83 | 2.83 |
| C416          | 2.17 | 2.33 | 1.83 | 2.17 | 2.40 | 2.33 |      | 2.17 |      | 2.00 | 2.33 | 2.33 |
| C417          |      | 2.00 | 1.75 | 2.00 | 1.67 |      |      | 1.50 | 2.33 | 2.00 | 2.33 | 2.33 |

| Courses       | PSO1 | PSO2 |
|---------------|------|------|
| Semester V    |      |      |
| C301          |      |      |
| C302          |      | 2.70 |
| C303          | 2.00 | 1.80 |
| C304          | 2.00 | 2.00 |
| C305          | 1.70 | 2.70 |
| C306          | 2.30 | 2.00 |
| C307          | 1.80 | 1.50 |
| C308          | 2.00 | 2.00 |
| C309          | 2.70 | 2.00 |
| Semester VI   |      |      |
| C311          | 1.20 |      |
| C312          | 1.80 | 2.00 |
| C313          | 2.33 | 2.00 |
| C314          |      | 2.00 |
| C315          | 1.00 | 1.00 |
| C316          | 1.00 |      |
| C317          | 2.67 |      |
| C318          | 2.67 | 2.33 |
| C319          | 1.83 | 2.50 |
| Semester VII  |      |      |
| C401          | 3.00 | 2.00 |
| C402          | 1.00 | 1.30 |
| C403          | 2.50 |      |
| C404          | 3.00 | 3.00 |
| C405          | 1.80 |      |
| C406          | 1.00 |      |
| C407          | 2.30 |      |
| C408          | 3.00 | 2.00 |
| Semester VIII |      |      |
| C411          | 1.20 | 1.00 |
| C412          | 2.00 | 1.50 |
| C413          | 1.00 | 1.00 |
| C414          | 1.80 | 1.20 |
| C415          | 2.70 | 2.80 |
| C416          | 2.70 |      |
| C417          | 1.30 | 1.00 |

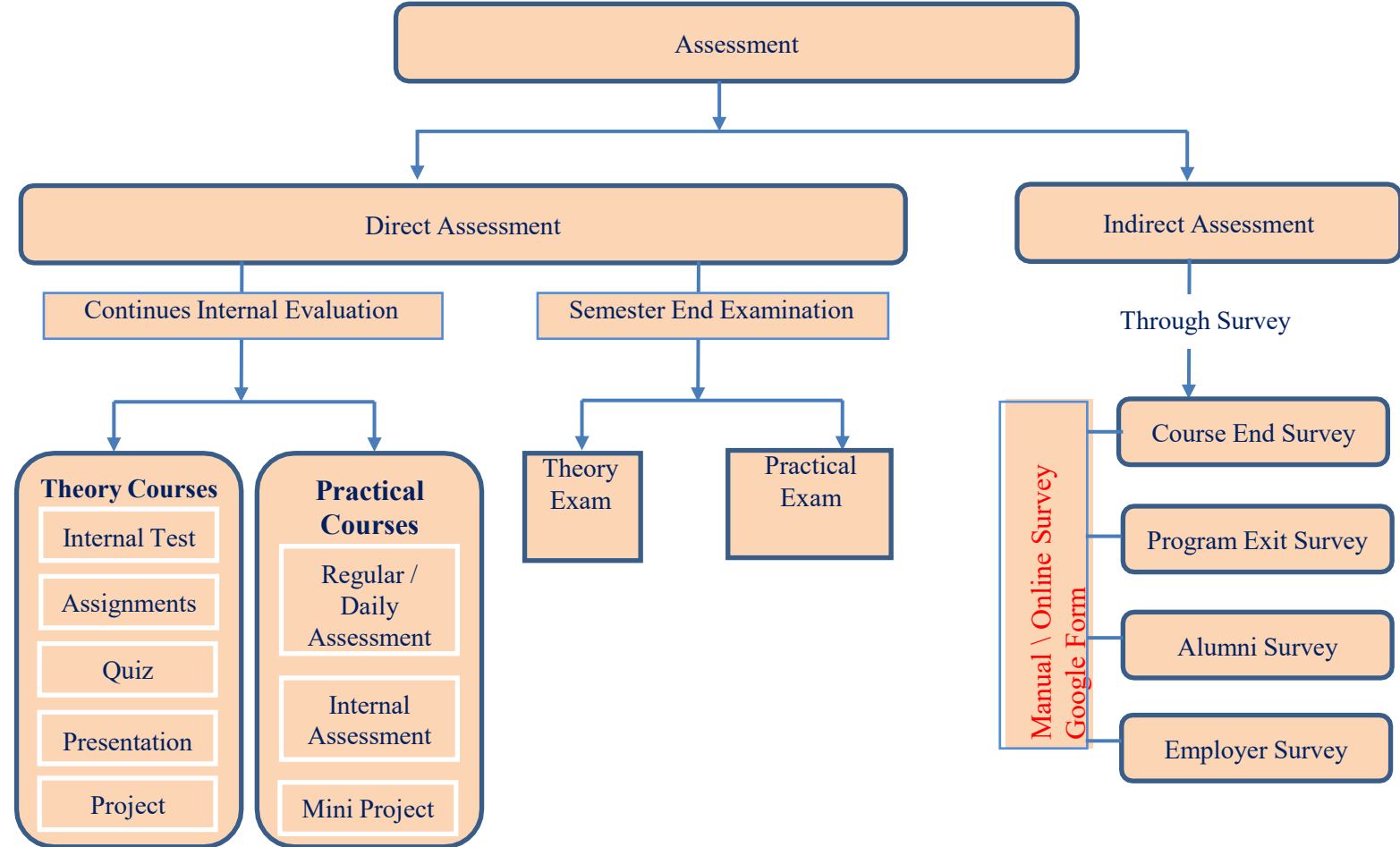


**SJCIT-ISE**

# PO-PSO Attainment Assessment



**SJCIT-ISE**

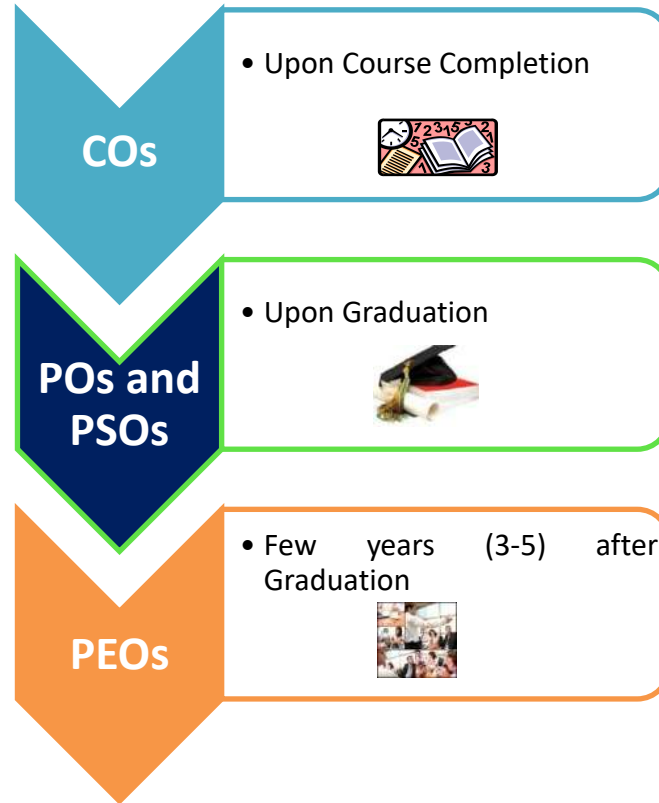


# Assessment processes for COs, POs, PSOs and PEOs

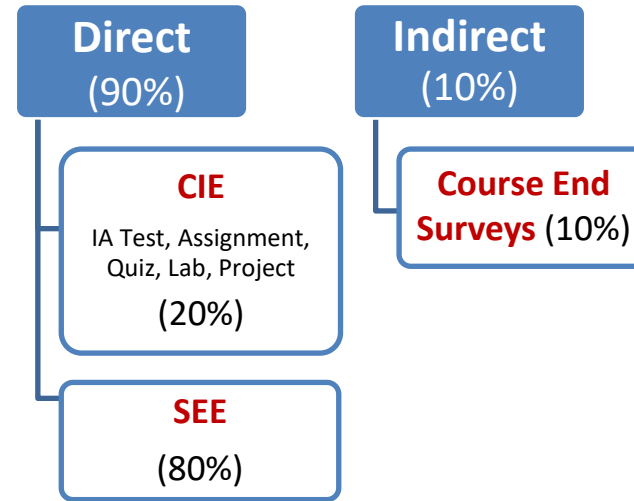


**SJCIT-ISE**

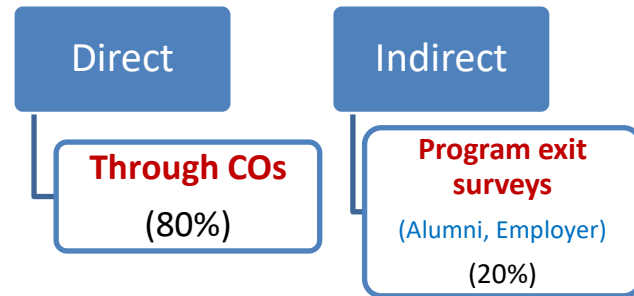
## When to Assess



## Attainment of COs



## Attainment of POs





**Attainment of PEOs :** Exit Surveys + Through POs  
60% : 40%

# Internal assessment test marks entry sheet



**SJCIT-ISE**

| SJCIT/NBA/<br>CIE-MARKS/<br>2019-20 |  <b>S J C INSTITUTE OF TECHNOLOGY</b><br>Chickballapur - 562 101<br>Department of Information Science and Engineering |                               |     |    |                   |                    |      |    |   |    |  <b>S J C INSTITUTE OF TECHNOLOGY</b><br>Chickballapur - 562 101<br>Department of Information Science and Engineering |                               |     |    |                   |                    |      |    |    |    |
|-------------------------------------|--|-------------------------------|-----|----|-------------------|--------------------|------|----|---|----|--|-------------------------------|-----|----|-------------------|--------------------|------|----|----|----|
| <b>Course Title:</b>                | Data Mining and Data Warehousing   |                               |     |    |                   |                    |      |    |   |    | Data Mining and Data Warehousing   |                               |     |    |                   |                    |      |    |    |    |
| <b>Subject Code:</b>                | 17CS651  | <b>Semester &amp; Section</b> |     |    | 5 - A & B         | <b>No.Students</b> |      | 36 |   |    | 17CS651  | <b>Semester &amp; Section</b> |     |    | 5 - A & B         | <b>No.Students</b> |      | 36 |    |    |
| <b>Course Instructor Name:</b>      | Bhanumathi S   |                               |     |    | <b>Course ID:</b> |                    | C315 |    |   |    | Bhanumathi S   |                               |     |    | <b>Course ID:</b> |                    | C315 |    |    |    |
|                                     | <b>Test No:1</b>   |                               |     |    |                   |                    |      |    |   |    | <b>Test No:2</b>   |                               |     |    |                   |                    |      |    |    |    |
| <b>Ref-Question Number:</b>         | 1  | 2                             | 3   | 4  | 5                 | 6                  | 7    | 8  | 9 | 10 | 11   | 12                            | 13  | 14 | 15                | 16                 | 17   | 18 | 19 | 20 |
|                                     | <b>CIE Marks Entry Format For the Academic Year - 2019-20</b>  |                               |     |    |                   |                    |      |    |   |    | <b>CIE Marks Entry Format For the Academic Year - 2019-20</b>  |                               |     |    |                   |                    |      |    |    |    |
| <b>Questions</b>                    | 1,2  | 3,4                           | 5,6 | A1 |                   |                    |      |    |   |    | 1,2  | 3,4                           | 5,6 | A2 |                   |                    |      |    |    |    |
| <b>Main Question No.</b>            | 1  | 2                             | 3   | 4  |                   |                    |      |    |   |    | 1  | 2                             | 3   | 4  |                   |                    |      |    |    |    |
| <b>Mapped CO-No.</b>                | 5  | 1                             | 1   | 5  |                   |                    |      |    |   |    | 2  | 2                             | 3   | 3  |                   |                    |      |    |    |    |
| <b>Sl.</b>                          | <b>USN/Q-Marks</b>   |                               | 10  | 10 | 10                | 10                 |      |    |   |    | 10   | 10                            | 10  | 10 |                   |                    |      |    |    |    |
| 1                                   | 1SJ17IS004   | 10                            | 10  | 6  | 10                |                    |      |    |   |    | 5  | 10                            | 10  | 10 |                   |                    |      |    |    |    |
| 2                                   | 1SJ17IS008   | 10                            | 10  | 6  | 10                |                    |      |    |   |    | 10   | 10                            | 5   | 10 |                   |                    |      |    |    |    |
| 3                                   | 1SJ17IS011   | 10                            | 10  | 7  | 10                |                    |      |    |   |    | 10   | 10                            | 1   | 10 |                   |                    |      |    |    |    |
| 4                                   | 1SJ17IS012   | 10                            | 10  | 7  | 10                |                    |      |    |   |    | 10   | 10                            | 3   | 10 |                   |                    |      |    |    |    |
| 5                                   | 1SJ17IS015   | 10                            | 7   | 8  | 10                |                    |      |    |   |    | 10   | 10                            | 8   | 10 |                   |                    |      |    |    |    |
| 6                                   | 1SJ17IS021   | 10                            | 10  | 7  | 10                |                    |      |    |   |    | 10   | 6                             | 6   | 10 |                   |                    |      |    |    |    |
| 7                                   | 1SJ17IS023   | 10                            | 10  | 7  | 10                |                    |      |    |   |    | 10   | 6                             | 7   | 10 |                   |                    |      |    |    |    |
| 8                                   | 1SJ17IS024   | 10                            | 8   | 7  | 10                |                    |      |    |   |    | 10   | 7                             | 10  | 10 |                   |                    |      |    |    |    |
| 9                                   | 1SJ17IS027   | 8                             | 8   | 10 | 10                |                    |      |    |   |    | 10   | 6                             | 6   | 10 |                   |                    |      |    |    |    |
| 10                                  | 1SJ17IS034   | 9                             | 9   | 9  | 10                |                    |      |    |   |    | 10   | 6                             | 6   | 10 |                   |                    |      |    |    |    |
| 11                                  | 1SJ17IS043   | 10                            | 9   | 8  | 10                |                    |      |    |   |    | 10   | 10                            | 5   | 10 |                   |                    |      |    |    |    |
| 12                                  | 1SJ17IS044   | 8                             | 8   | 8  | 10                |                    |      |    |   |    | 10   | 10                            | 5   | 10 |                   |                    |      |    |    |    |
| 13                                  | 1SJ17IS045   | 10                            | 10  | 8  | 10                |                    |      |    |   |    | 10   | 10                            | 8   | 10 |                   |                    |      |    |    |    |
| 14                                  | 1SJ17IS046   | 8                             | 10  | 7  | 10                |                    |      |    |   |    | 10   | 10                            | 8   | 10 |                   |                    |      |    |    |    |
| 15                                  | 1SJ17IS049   | 10                            | 10  | 9  | 10                |                    |      |    |   |    | 10   | 10                            | 7   | 10 |                   |                    |      |    |    |    |
| 16                                  | 1SJ17IS054   | 10                            | 10  | 9  | 10                |                    |      |    |   |    | 10   | 10                            | 7   | 10 |                   |                    |      |    |    |    |


# Snapshot showing CO attainments by students at CIE



**SJCIT-ISE**

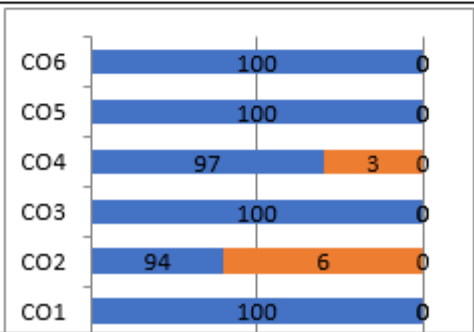
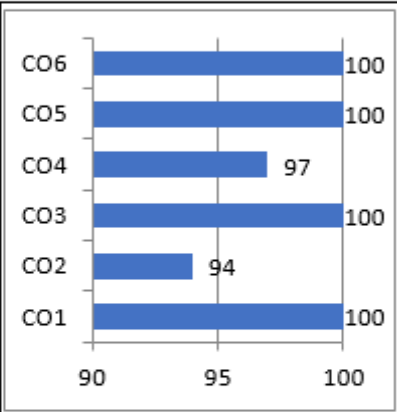
| CO Analysis from -, in the Subject: 17CS651-Based on: TYPE-1, Academic Year 2019-20 |            |                       |     |     |     |     |     |     |
|---|------------|-----------------------|-----|-----|-----|-----|-----|-----|
| Sl.   | USN        | Course Outcome Number | CO1 | CO2 | CO3 | CO4 | CO5 | CO6 |
|   |            | Total Maximum Marks   | 20  | 20  | 30  | 20  | 20  | 10  |
| 1   | 1SJ17IS004 | Amrutha M             | Y   | Y   | Y   | Y   | Y   | Y   |
| 2   | 1SJ17IS008 | Apoorva M             | Y   | Y   | Y   | Y   | Y   | Y   |
| 3   | 1SJ17IS011 | Bhavani V K           | Y   | Y   | Y   | Y   | Y   | Y   |
| 4   | 1SJ17IS012 | Chaithra M S          | Y   | Y   | Y   | Y   | Y   | Y   |
| 5   | 1SJ17IS015 | Divya D M             | Y   | Y   | Y   | Y   | Y   | Y   |
| 6   | 1SJ17IS021 | Harshitha D A         | Y   | Y   | Y   | Y   | Y   | Y   |
| 7   | 1SJ17IS023 | Himabindu N           | Y   | Y   | Y   | Y   | Y   | Y   |
| 8   | 1SJ17IS024 | Impana                | Y   | Y   | Y   | Y   | Y   | Y   |
| 9   | 1SJ17IS027 | Kavya Suresh Gouda    | Y   | Y   | Y   | Y   | Y   | Y   |
| 10  | 1SJ17IS034 | Manasa R              | Y   | Y   | Y   | Y   | Y   | Y   |
| 11  | 1SJ17IS043 | Navya L               | Y   | Y   | Y   | Y   | Y   | Y   |
| 12  | 1SJ17IS044 | Nayanashree K M       | Y   | Y   | Y   | Y   | Y   | Y   |
| 13  | 1SJ17IS045 | Neha                  | Y   | Y   | Y   | Y   | Y   | Y   |
| 14  | 1SJ17IS046 | Nehala G              | Y   | Y   | Y   | Y   | Y   | Y   |
| 15  | 1SJ17IS049 | Nithyashree C         | Y   | Y   | Y   |     | Y   | Y   |
| 16  | 1SJ17IS054 | Pavithra V M          | Y   | Y   | Y   | Y   | Y   | Y   |
| 17  | 1SJ17IS062 | Rachana C R           | Y   | Y   | Y   | Y   | Y   | Y   |
| 18  | 1SJ17IS064 | Rahul M               | Y   | Y   | Y   | Y   | Y   | Y   |
| 19  | 1SJ17IS065 | Rahul N Ankola        | Y   | Y   | Y   | Y   | Y   | Y   |
| 20  | 1SJ17IS066 | Rajasha N R           | Y   | Y   | Y   | Y   | Y   | Y   |
| 21  | 1SJ17IS067 | Rakshitha B S         | Y   | Y   | Y   | Y   | Y   | Y   |
| 22  | 1SJ17IS068 | Ranjitha A            | Y   | Y   | Y   | Y   | Y   | Y   |
| 23  | 1SJ17IS070 | Raushan Kumar         | Y   | Y   | Y   | Y   | Y   | Y   |
| 24  | 1SJ17IS072 | Sanghavi M N          | Y   | Y   | Y   | Y   | Y   | Y   |
| 25  | 1SJ17IS073 | Sara Ayman            | Y   | Y   | Y   | Y   | Y   | Y   |
| 26  | 1SJ17IS074 | Shalini S             | Y   | Y   | Y   | Y   | Y   | Y   |

# CO attainment calculation

| SJCIT/NBA/<br>CO-REPT/<br>2019-20  |  <b>S J C INSTITUTE OF TECHNOLOGY</b><br>Chickballapur - 562 101<br>Department of Information Science and Engineering |                 |       |                |        |                    |       |      |
|--|--|-----------------|-------|----------------|--------|--------------------|-------|------|
| <b>Course Title</b>  | Data Mining and Data Warehousing   |                 |       |                |        | <b>Course Code</b> | C315  |      |
| <b>Subject Code</b>  | 17CS651  | <b>Semester</b> | 6     | <b>Section</b> | A & B  | <b>Emp.ID</b>      | 945   |      |
| <b>Faculty Name</b>  | Bhanumathi S   |                 |       |                |        | <b>No.students</b> | 36    |      |
| <b>CO Attainment from -, in the Subject: 17CS651-Based on: TYPE-1, Academic Year 2019-20</b> |  |                 |       |                |        |                    |       |      |
| Sl.  | CO Number  | Sum             | T_Std | Av-AT          | TS(=3) | AT,%               | Ac_AT | ATNT |
| CO1  | C315.1   | 108             | 36    | 3              | 36     | 100                | 3     | YES  |
| CO2  | C315.2   | 106             | 36    | 3              | 34     | 94                 | 2.8   | YES  |
| CO3  | C315.3   | 108             | 36    | 3              | 36     | 100                | 3     | YES  |
| CO4  | C315.4   | 107             | 36    | 3              | 35     | 97                 | 2.9   | YES  |
| CO5  | C315.5   | 108             | 36    | 3              | 36     | 100                | 3     | YES  |
| CO6  | C315.6   | 108             | 36    | 3              | 36     | 100                | 3     | YES  |

| Sl. | CO Number | 3  | %   | 2 | % | 1 | % |
|-----|-----------|----|-----|---|---|---|---|
| CO1 | C315.1    | 36 | 100 |   | 0 |   | 0 |
| CO2 | C315.2    | 34 | 94  | 2 | 6 |   | 0 |
| CO3 | C315.3    | 36 | 100 |   | 0 |   | 0 |
| CO4 | C315.4    | 35 | 97  | 1 | 3 |   | 0 |
| CO5 | C315.5    | 36 | 100 |   | 0 |   | 0 |
| CO6 | C315.6    | 36 | 100 |   | 0 |   | 0 |


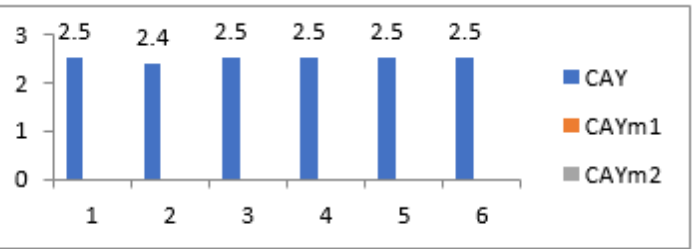
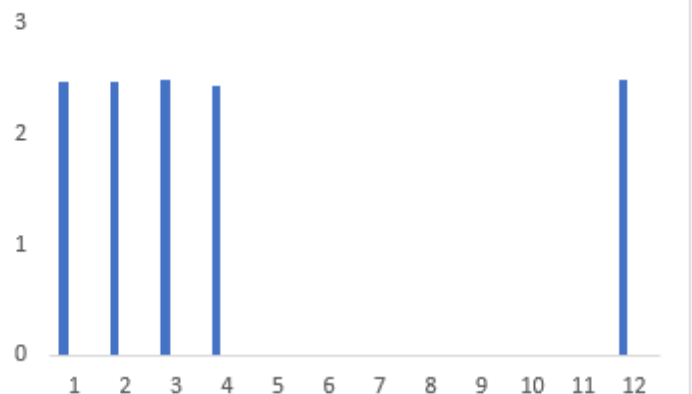


**SJCIT-ISE**

# Snapshot showing the basic initialization with CO attainment



**SJCIT-ISE**

| SJCIT/NBA/<br>S&F-REPT/<br>2019-20                       |         |  <b>S J C INSTITUTE OF TECHNOLOGY</b><br>Chickballapur - 562 101<br>Department of Information Science and Engineering |         |                |  |                    |      |
|--|---------|--|---------|----------------|--|--------------------|------|
| <b>Course Title</b>                                      |         | Data Mining and Data Warehousing   |         |                |  | <b>Course Code</b> | C315 |
| <b>Subject Code</b>                                      | 17CS651 | <b>Semester</b>  | 6       | <b>Section</b> | A & B  | <b>Emp.ID</b>      | 945  |
| <b>Faculty Name</b>                                      |         | Bhanumathi S   |         |                |  | <b>No.students</b> | 36   |
| <b>CO-ATTINMENT COMPARISON FOR THE CAY, CAY-1, CAY-2</b> |         |  |         |                |  |                    |      |
| Sl.  | CO_ID   | 2019-20  | 2018-19 | 2017-18        |   |                    |      |
| 1  | C315.1  | 2.5  |         |                |  |                    |      |
| 2  | C315.2  | 2.4  |         |                |  |                    |      |
| 3  | C315.3  | 2.5  |         |                |  |                    |      |
| 4  | C315.4  | 2.5  |         |                |  |                    |      |
| 5  | C315.5  | 2.5  |         |                |  |                    |      |
| 6  | C315.6  | 2.5  |         |                |  |                    |      |
| <b>PO-ATTINMENT COMPARISON FOR THE CAY, CAY-1, CAY-2</b> |         |  |         |                |  |                    |      |
| Sl.  | PO-No.  | 2019-20  | 2018-19 | 2017-18        |  |                    |      |
| 1  | PO-1    | 2.48   |         |                |  |                    |      |
| 2  | PO-2    | 2.48   |         |                |  |                    |      |
| 3  | PO-3    | 2.5  |         |                |  |                    |      |
| 4  | PO-4    | 2.43   |         |                |  |                    |      |
| 5  | PO-5    |  |         |                |  |                    |      |
| 6  | PO-6    |  |         |                |  |                    |      |
| 7  | PO-7    |  |         |                |  |                    |      |
| 8  | PO-8    |  |         |                |  |                    |      |
| 9  | PO-9    |  |         |                |  |                    |      |
| 10   | PO-10   |  |         |                |  |                    |      |
| 11   | PO-11   |  |         |                |  |                    |      |

# PO /PSO Direct Attainment

| Courses             | PO1  | PO2  | PO3  | PO4  | PO5  | PO6  | PO7 | PO8  | PO9  | PO10 | PO11 | PO12 | PSO1 | PSO2 |
|---------------------|------|------|------|------|------|------|-----|------|------|------|------|------|------|------|
| <b>III SEMESTER</b> |      |      |      |      |      |      |     |      |      |      |      |      |      |      |
| C201                | 2.36 | 2.35 | 2.33 | 2.34 | 2.32 |      |     |      |      |      |      |      |      |      |
| C202                | 1.26 | 1.23 | 1.23 | 1.23 |      |      |     |      |      |      |      | 1.25 | 1.25 | 1.26 |
| C203                | 1.82 | 1.82 | 1.85 | 1.90 | 1.90 |      |     |      |      |      |      |      | 1.83 | 1.90 |
| C204                | 1.95 | 1.95 | 1.95 | 1.95 |      |      |     |      |      |      |      | 1.95 | 1.95 | 1.95 |
| C205                | 1.40 | 1.43 | 1.43 | 1.48 |      |      |     |      |      |      |      |      | 1.36 | 1.40 |
| C206                | 1.60 | 1.60 | 1.60 | 1.60 |      |      |     |      |      |      |      |      | 1.60 | 1.60 |
| C207                | 2.22 | 2.22 | 2.21 | 2.22 |      |      |     |      |      |      |      | 2.23 | 2.23 | 2.22 |
| C208                | 2.70 | 2.70 | 2.70 | 2.70 | 2.70 |      |     |      |      |      |      |      | 2.70 | 2.70 |
| <b>IV SEMESTER</b>  |      |      |      |      |      |      |     |      |      |      |      |      |      |      |
| C211                | 1.85 | 1.85 | 1.88 | 1.85 | 1.86 |      |     |      |      |      |      |      |      |      |
| C212                | 1.59 | 1.58 | 1.58 |      |      | 1.60 |     | 1.60 | 1.58 | 1.60 |      | 1.58 | 1.70 | 2.00 |
| C213                | 1.98 | 1.96 | 1.96 | 1.98 |      |      |     |      |      |      |      | 2.05 | 2.30 | 2.00 |
| C214                | 1.91 | 1.92 | 1.91 | 1.92 |      |      |     |      |      |      |      | 1.93 | 2.70 | 2.70 |
| C215                | 1.14 | 1.12 | 1.08 | 1.38 | 1.50 |      |     |      |      |      |      |      | 2.50 |      |
| C216                | 1.78 | 1.80 | 1.84 | 1.75 | 1.90 |      |     |      |      |      |      |      | 2.80 | 2.00 |
| C217                | 2.40 | 2.40 | 2.40 | 2.40 | 2.40 |      |     |      |      |      |      |      | 2.50 | 2.00 |
| C218                | 2.20 | 2.20 | 2.20 | 2.20 | 2.20 |      |     |      |      | 2.20 | 2.20 | 2.20 | 3.00 | 3.00 |



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# PO / PSO - Indirect Attainment

| Assessment Tool                    | PO1         | PO2         | PO3         | PO4         | PO5         | PO6         | PO7         | PO8         | PO9         | PO10        | PO11        | PO12        | PSO1        | PSO2        |
|------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Alumni Survey                      | 1.86        | 2.40        | 2.49        | 2.57        | 2.51        | 2.46        | 2.60        | 2.54        | 2.51        | 2.57        | 2.57        | 2.51        | 2.44        | 2.44        |
| Employer Survey                    | 2.67        | 2.33        | 2.50        | 2.00        | 2.50        | 2.50        | 2.50        | 2.50        | 2.33        | 2.17        | 2.17        | 2.50        | 2.14        | 2.25        |
| Program Exit Survey                | 1.86        | 2.40        | 2.49        | 2.57        | 2.51        | 2.46        | 2.60        | 2.54        | 2.51        | 2.57        | 2.57        | 2.51        | 2.44        | 2.14        |
| <b>Indirect Attainment Average</b> | <b>2.13</b> | <b>2.38</b> | <b>2.49</b> | <b>2.38</b> | <b>2.51</b> | <b>2.47</b> | <b>2.57</b> | <b>2.53</b> | <b>2.45</b> | <b>2.44</b> | <b>2.44</b> | <b>2.51</b> | <b>2.34</b> | <b>2.28</b> |



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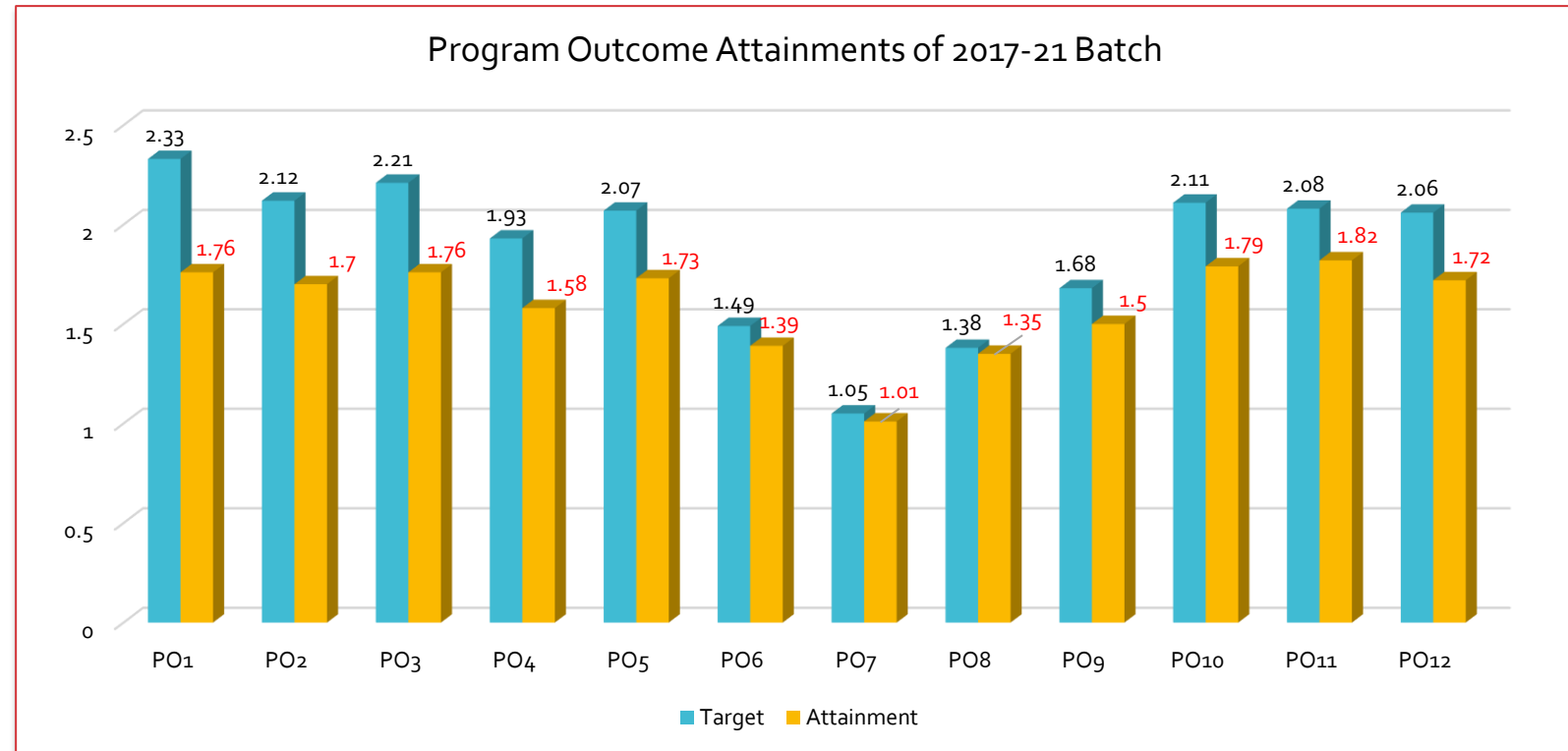
# Program Outcomes Attainment

## 2017-21 Batch



### SJCIT-ISE

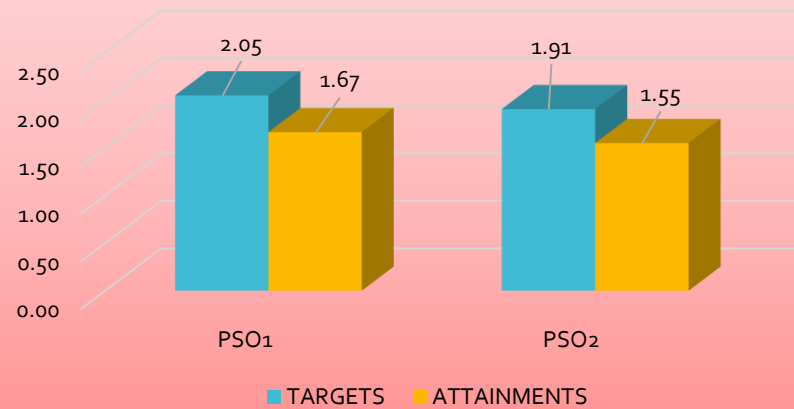
| PO / Attainment levels | PO1  | PO2  | PO3  | PO4  | PO5  | PO6  | PO7  | PO8  | PO9  | PO10 | PO11 | PO12 |
|------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Target                 | 2.33 | 2.12 | 2.21 | 1.93 | 2.07 | 1.49 | 1.05 | 1.38 | 1.68 | 2.11 | 2.08 | 2.06 |
| Attainment             | 1.76 | 1.70 | 1.76 | 1.58 | 1.73 | 1.39 | 1.01 | 1.35 | 1.50 | 1.79 | 1.82 | 1.72 |



# PSO Attainment 2017-21 Batch

| PSOs / Attainment levels | PSO1 | PSO2 |
|--------------------------|------|------|
| Target                   | 2.05 | 1.91 |
| Attainment               | 1.67 | 1.55 |

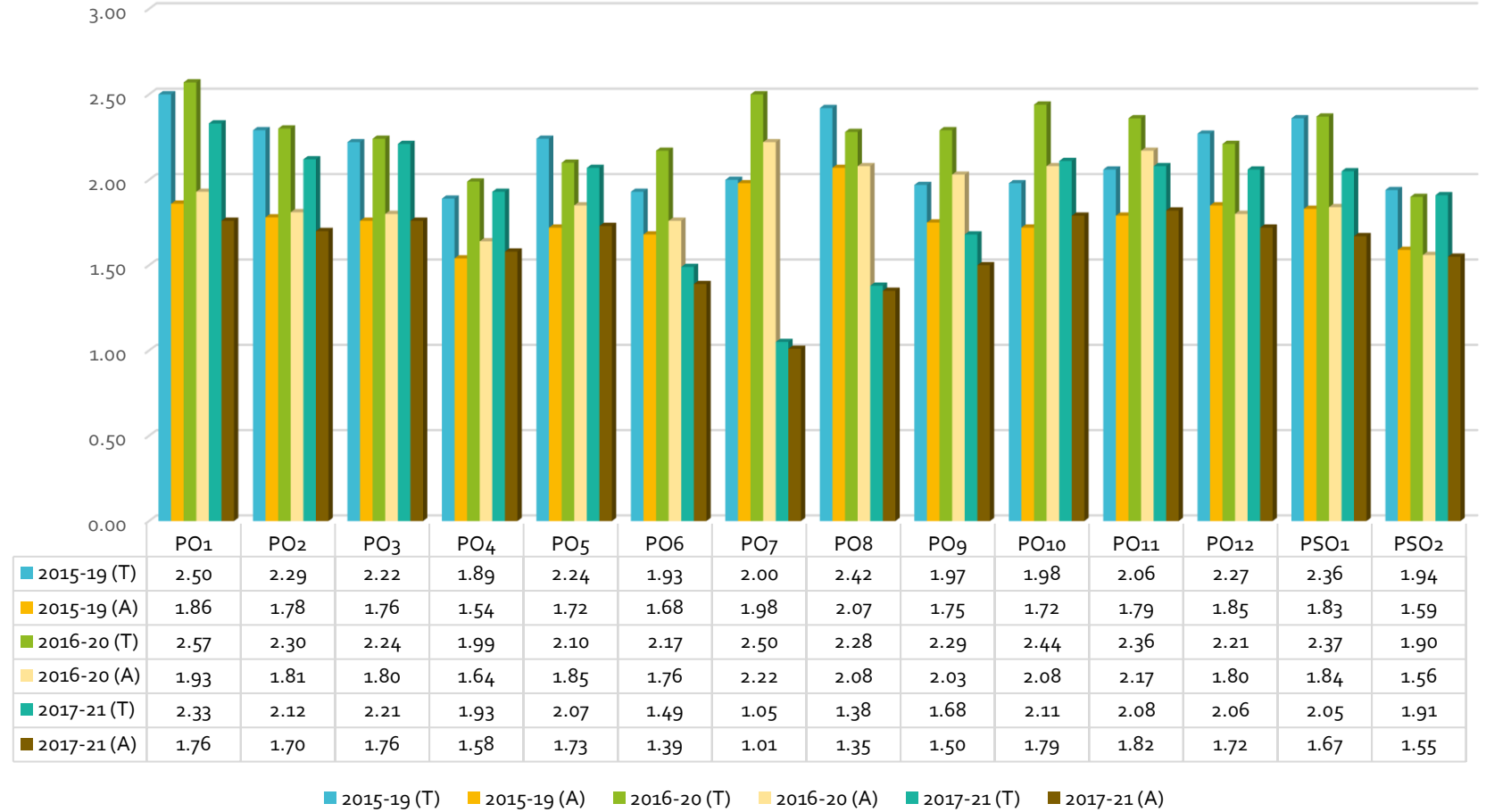
Program Specific Outcomes Attainments of 2017-21 Batch



**SJCIT-ISE**

# Consolidated PO/PSO attainment for the three batches

## Program Outcome, PSO Attainments of 2015-19, 2016-20, 2017-21 Batches



**SJCIT-ISE**

# Criteria – 4

## Student Performance

### #Students Admitted and Enrolment Ratio



**SJCIT-ISE**

| Item<br>(Information to be provided cumulatively for all the shifts with explicit headings, wherever applicable)   | CAY<br>2020-21     | CAYm1<br>2019-20 | CAYm2<br>2018-19 |
|--|--------------------|------------------|------------------|
| Sanctioned intake of the program (N)   | 120                | 120              | 120              |
| 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 (N1) | 126                | 126              | 125              |
| Number of students admitted in 2 <sup>nd</sup> year in the same batch via lateral entry (N2)   | 0                  | 0                | 0                |
| Separate division students, if applicable (N3)   | 0                  | 0                | 0                |
| Total number of students admitted in the Program (N1 + N2 + N3)  | 126                | 128              | 125              |
| Enrolment Ratio= N1/N  | 1.0                | 1.0              | 1.0              |
| <b>Average Enrolment Ratio</b>   | <b>1.0 = 100 %</b> |                  |                  |

# STUDENTS' PERFORMANCE

without backlogs



**SJCIT-ISE**

| Year of Entry   | No. of Students<br>N1+N2+N3 | Number of students who have successfully graduated without backlogs in any semester/year of study |         |          |         |
|-----------------|-----------------------------|---|---------|----------|---------|
|                 |                             | I year  | II year | III year | IV year |
| 2020-21 (CAY)   | 126                         | 85  | 0       | 0        | 0       |
| 2019-20 (CAYm1) | 126                         | 77  | 73      | 0        | 0       |
| 2018-19 (CAYm2) | 125                         | 81  | 76      | 72       | 0       |
| 2017-18 (CAYm3) | 91                          | 58  | 55      | 49       | 48      |
| 2016-17 (LYG)   | 116                         | 66  | 52      | 50       | 44      |
| 2015-16 (LYGm1) | 125                         | 86  | 64      | 61       | 60      |
| 2014-15 (LYGm2) | 115                         | 38  | 37      | 37       | 37      |

# STUDENTS' PERFORMANCE

## with backlogs



# SJCIT-ISE

| Year of Entry   | No. of Students<br>N1+N2+N3 | Number of students who have successfully graduated with backlogs in stipulated period of study |         |          |         |
|-----------------|-----------------------------|--|---------|----------|---------|
|                 |                             | I year   | II year | III year | IV year |
| 2020-21 (CAY)   | 126                         | 122  | 0       | 0        | 0       |
| 2019-20 (CAYm1) | 126                         | 121  | 119     | 0        | 0       |
| 2018-19 (CAYm2) | 125                         | 115  | 114     | 114      | 0       |
| 2017-18 (CAYm3) | 91                          | 81   | 77      | 76       | 76      |
| 2016-17 (LYG)   | 116                         | 95   | 88      | 87       | 87      |
| 2015-16 (LYGm1) | 125                         | 113  | 105     | 105      | 105     |
| 2014-15 (LYGm2) | 115                         | 74   | 74      | 71       | 71      |

# Success Rate in the stipulated period of the program

without backlogs



**SJCIT-ISE**

| Item  | Latest Year of Graduation, LYG (2016-17)                       | Latest Year of Graduation minus 1, LYGm1 (2015-16) | Latest Year of Graduation minus 2 LYGm2 (2014-15) |
|---|--|--|---|
| Number of students admitted in the corresponding First Year + admitted in 2 <sup>nd</sup> year via lateral entry and separate division, if applicable | 116  | 125  | 115   |
| Number of students who have graduated without backlogs in the stipulated period   | 44   | 60   | 37  |
| Success Index (SI)  | 0.38   | 0.48   | 0.32  |
| Average SI  | <b>0.39</b>  |  |   |
| Success rate without backlogs in any year of study  | $25 \times \text{Average SI} = 25 \times 0.39 = \mathbf{9.75}$ |  |   |

# Success Rate in the stipulated period of the program with backlogs



**SJCIT-ISE**

| Item  | Latest Year of Graduation, LYG (2016-17)                        | Latest Year of Graduation minus 1, LYGm1 (2015-16) | Latest Year of Graduation minus 2 LYGm2 (2014-15) |
|---|---|--|---|
| Number of students admitted in the corresponding First Year + admitted in 2 <sup>nd</sup> year via lateral entry and separate division, if applicable | 116   | 125  | 115   |
| Number of students who have graduated with backlogs in the stipulated period  | 87  | 105  | 71  |
| Success Index (SI)  | 0.75  | 0.84   | 0.62  |
| Average SI  | <b>0.74</b>   |  |   |
| Success rate with backlogs in any year of study   | $15 \times \text{Average SI} = 15 \times 0.74 = \mathbf{11.05}$ |  |   |

# Academic Performance in Third Year

| Academic Performance  | CAYm3<br>(2017-18)       | LYG<br>(2016-17) | LYGm1<br>(2015-16) |
|---|--------------------------|------------------|--------------------|
| Mean of CGPA or Mean Percentage of all successful students(X) | 7.0                      | 6.7              | 6.4                |
| Total no. of successful students (Y)                          | 76                       | 87               | 105                |
| Total no. of students appeared in the examination (Z)         | 77                       | 88               | 105                |
| API = $X \times (Y/Z)$  | 6.89                     | 6.60             | 6.36               |
| Average API = $(AP1 + AP2 + AP3)/3$                           | <b>6.61</b>              |                  |                    |
| Academic performance level = $1.5 \times \text{Average API}$  | $1.5 \times 6.61 = 9.91$ |                  |                    |



**SJCIT-ISE**

# Academic Performance in Second Year

| Academic Performance   | CAYm2<br>(2018-19)                | CAYm3<br>(2017-18) | LYG<br>(2016-17) |
|--|-----------------------------------|--------------------|------------------|
| Mean of CGPA or Mean Percentage of all successful students (X) | 7.1                               | 7.1                | 6.2              |
| Total no. of successful students (Y)                           | 114                               | 77                 | 88               |
| Total no. of students appeared in the examination (Z)          | 115                               | 81                 | 95               |
| API = $X \times (Y/Z)$   | 7.03                              | 6.71               | 6.20             |
| Average API = $(AP1 + AP2 + AP3) / 3$                          | <b>6.64</b>                       |                    |                  |
| Academic performance level = $1.5 \times \text{Average API}$   | $1.5 \times 6.64 = \mathbf{9.97}$ |                    |                  |



**SJCIT-ISE**

# Placement, Higher Studies and Entrepreneurship



**SJCIT-ISE**

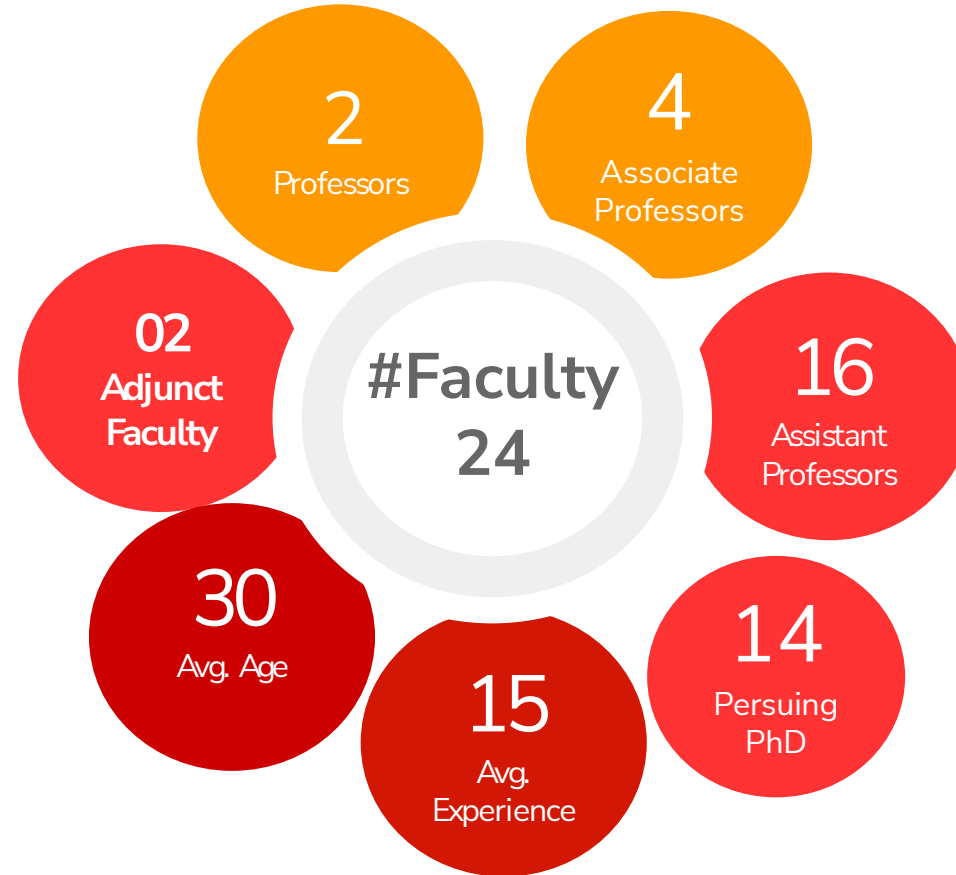
| Item  | LYG<br>(2016-17)                  | LYGm1<br>(2015-16) | LYGm2<br>(2014-15) |
|---|-----------------------------------|--------------------|--------------------|
| Total No. of Final Year Students (N)  | 87                                | 105                | 71                 |
| No. of Students placed in companies or Government Sector (x)  | 72                                | 69                 | 47                 |
| No. of students admitted to higher studies with valid qualifying score (GATE or equivalent state or National level Tests, GRE, GMAT etc.) (y) | 6                                 | 5                  | 3                  |
| No. of students turned entrepreneur in engineering/technology (z)   | 00                                | 00                 | 00                 |
| $x + y + z =$   | 78                                | 74                 | 50                 |
| Placement Index: $(x + y + z) / N$  | 0.90                              | 0.70               | 0.70               |
| Average placement = $(P1 + P2 + P3) / 3$  | <b>0.77</b>                       |                    |                    |
| Assessment Points = $40 \times$ Average placement   | $40 \times 0.77 = \mathbf{30.67}$ |                    |                    |

# Criteria – 5

## Faculty Information and Contributions



**SJCIT-ISE**



# Student - Faculty Ratio

| Year                                       | CAY<br>(2020-21)    | CAYm1<br>(2019-20) | CAYm2<br>(2018-19) |
|--|---------------------|--------------------|--------------------|
| u1.1                                       | 120                 | 120                | 120                |
| u1.2                                       | 120                 | 120                | 120                |
| u1.3                                       | 120                 | 120                | 122                |
| UG1  | <b>360</b>          | <b>360</b>         | <b>362</b>         |
| Total No. of Students in theDepartment (S) | <b>360</b>          | <b>360</b>         | <b>362</b>         |
| No. of Faculty in the Department (F)       | <b>22</b>           | <b>23</b>          | <b>23</b>          |
| Student Faculty Ratio (SFR)                | <b>SFR1 = 16.36</b> | <b>SFR2= 15.65</b> | <b>SFR3= 15.74</b> |
| <b>Average SFR</b>                         | <b>15.92</b>        |                    |                    |



**SJCIT-ISE**

# Faculty Cadre Proportion

| Year                               | Professors   |              | Associate Professors |                 | Assistant Professors |               |
|------------------------------------|--------------|--------------|----------------------|-----------------|----------------------|---------------|
|                                    | Required F1  | Available    | Required F2          | Available       | Required F3          | Available     |
| <b>CAY</b><br>2020-21              | 2            | 0            | 4                    | 1               | 12                   | 21            |
| <b>CAY<sub>m1</sub></b><br>2019-20 | 2            | 0            | 4                    | 1               | 12                   | 22            |
| <b>CAY<sub>m2</sub></b><br>2018-19 | 2            | 0            | 4                    | 0               | 12                   | 23            |
| <b>Average Numbers</b>             | <b>RF1=2</b> | <b>AF1=0</b> | <b>RF2=4</b>         | <b>AF2=0.67</b> | <b>RF3=12</b>        | <b>AF3=22</b> |

$$\text{Cadre Ratio Marks} = \left[ \left[ \frac{\text{AF1}}{\text{RF1}} \right] + \left[ \frac{\text{AF2} \times 0.6}{\text{RF2}} \right] + \left[ \frac{\text{AF3} \times 0.4}{\text{RF3}} \right] \right] \times 12.5$$

$$\text{Cadre Ratio Marks} = [(0)+[(0.1675*0.6)]+[(1.83*0.4)]]*12.5 = 10.406$$



**SJCIT-ISE**

# Faculty Qualification

| Year                                | X | Y  | F  | $FQ=2.5 \times [(10X + 4Y)/F]$    |
|-------------------------------------|---|----|----|-----------------------------------|
| <b>CAY<br/>2020-21</b>              | 1 | 21 | 18 | $2.5 \times [(10+84)/18] =13.06$  |
| <b>CAY<sub>m1</sub><br/>2019-20</b> | 1 | 22 | 18 | $2.5 \times [(10 +88)/18] =13.61$ |
| <b>CAY<sub>m2</sub><br/>2018-19</b> | 0 | 23 | 18 | $2.5 \times [(0 +92)/18] =12.77$  |
| <b>Average Assessment</b>           |   |    |    | <b>13.33</b>                      |

# Faculty Retention

|   | CAY <sub>m2</sub> (2018-19) | CAY <sub>m1</sub> (2019-20) | CAY (2020-21) |
|---|-----------------------------|-----------------------------|---------------|
| <b>Number of faculties retained</b>                               | 23                          | 22                          | 21            |
| <b>No of faculties in the base year CAY<sub>m3</sub>(2017-18)</b> | 23                          | 23                          | 23            |
| <b>Percentage of retained</b>                                     | 100                         | 95.65                       | 91.3          |
| <b>Average Faculty Retention = 95.65</b>                          |                             |                             |               |

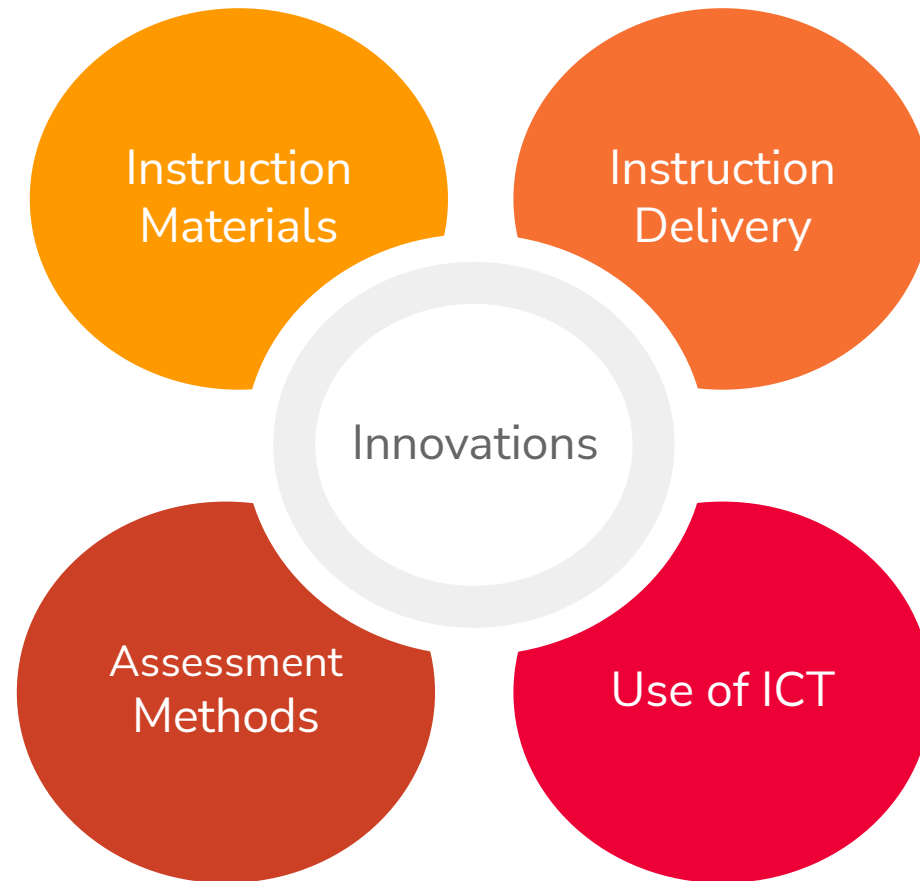


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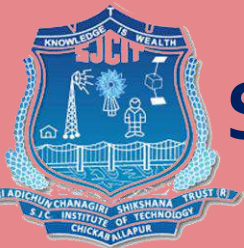
# Innovations by the Faculty in Teaching and Learning



**SJCIT-ISE**



# Faculty as participants in Faculty development/training activities



**SJCIT-ISE**

| Sl. No | Name of the faculty   | Max. 5 per faculty |                    |                    |
|--------|---|--------------------|--------------------|--------------------|
|        |   | CAYm1<br>[2020-21] | CAYm2<br>[2019-20] | CAYm3<br>[2018-19] |
| 1.     | Dr G T Raju   | 3                  | --                 | --                 |
| 2.     | Mr. Satheesh Chandra Reddy  | 5                  | 5                  | --                 |
| 3.     | Mr.AravindaThejas Chandra   | 5                  | --                 | 3                  |
| 4.     | Mr.Nagaraju G.  | 5                  | 3                  | 3                  |
| 5.     | Dr. Vijay G R   | 3                  | 3                  | --                 |
| 6.     | Mrs.Bhanumathi S  | 3                  | 5                  | --                 |
| 7.     | Mrs.Nandini S   | 5                  | 5                  | --                 |
| 8.     | Mr. Abdul Khadar  | 3                  | 5                  | 3                  |
| 9.     | Mrs.Shwetha G R   | 5                  | 5                  | --                 |
| 10.    | Mr.ChandraShekar J M  | 5                  | 5                  | --                 |
| 11.    | Mrs. Susheelamma K H  | 3                  | 3                  | --                 |
| 12.    | Mr.AnandTilagul   | 5                  | 5                  | --                 |
| 13.    | Mr.ChandreGowda S   | 5                  | 5                  | --                 |
| 14.    | Mrs.Vindya L  | 5                  | 5                  | --                 |
| 15.    | Mr.Badrinath K  | 5                  | 5                  | 3                  |
| 16.    | Mr.Sharath P V  | 5                  | 3                  | --                 |
| 17.    | Mr.Nagesh R   | 5                  | 3                  | 3                  |
| 18.    | Miss. Prathibha R   | 3                  | 3                  | --                 |
| 19.    | Mr. Sabin T T   | 3                  | 3                  | 3                  |
| 20.    | Mr.Yogaraja G S R   | 3                  | 5                  | --                 |
| 21.    | Mrs.Pushpa  | --                 | --                 | --                 |
| 22.    | Mrs. Asha C V   | --                 | --                 | --                 |
| 23.    | Mr.Chethan H V  | 5                  | 3                  | --                 |
| 24.    | Mrs.Vimala Devi   | 3                  | 3                  | --                 |
|        | SUM   | 92                 | 82                 | 18                 |
|        | RF=Number of faculty Required to comply with 15:1 student faculty Ratio | 24                 | 23                 | 23                 |
|        | Assessment=3x(Sum/0.5RF)<br>Marks limited to 15                         | 24                 | 21.39              | 4.69               |
|        | Average Assessment over three years(Marks limited to 15)=16.69          |                    |                    |                    |

# Faculty Details

|    |                               |         |     |      |          |                 |          |           |
|----|-------------------------------|---------|-----|------|----------|-----------------|----------|-----------|
| 1  | Dr. G T Raju                  | P. hD   | VTU |      | 1 Year   | Professor       | 3/2/2021 | 5/2/2021  |
| 2  | Mr. Satheesh Chandra Reddy .S | M. Tech | VTU | 2004 | 22 Years | Assoc.Pro & HOD | 1/6/2012 | 17/4/2000 |
| 3  | Mr. AravindaThejas Chandra    | M. Tech | VTU | 2003 | 23 Years | Asso. Prof      | 1/6/2012 | 7/9/1998  |
| 4  | Mr. Nagaraja. G               | M. Tech | VTU | 2002 | 15 Years | Asso. Prof      | 1/6/2012 | 27/8/2007 |
| 5  | Dr. Vijay G R                 | P. hD   | VTU | 2019 | 12 Years | Asso.Prof       | 1/4/2017 | 16/7/2010 |
| 6  | Dr. KeshavaMunegowda          | P. hD   | VTU | 2016 |          | Adjunct. Prof   |          | 1/7/2021  |
| 7  | Mrs. Bhanumathi . S           | M. Tech | VTU | 2012 | 15 Years | Asst. Prof      |          | 9/8/2007  |
| 8  | Mr. Abdul Khadar A            | M. Tech | VTU | 2014 | 14 Years | Asst. Prof      |          | 1/2/2008  |
| 9  | Mrs. Nandini .S               | M. Tech | VTU | 2011 | 12 Years | Asst. Prof      |          | 24/3/2010 |
| 10 | Mrs. Shwetha . G R            | M. Tech | VTU | 2011 | 12 Years | Asst. Prof      |          | 1/4/2010  |
| 11 | Mr. Chandra Shekar J M        | M. Tech | VTU | 2010 | 12 Years | Asst. Prof      |          | 22/7/2010 |
| 12 | Mrs. Susheelamma K H          | M. Tech | VTU | 2011 | 11 Years | Asst. Prof      |          | 18/7/2011 |
| 13 | Mr. ChandreGowda .S           | M. Tech | VTU | 2012 | 11 Years | Asst. Prof      |          | 26/7/2011 |
| 14 | Mrs. Vindya L                 | M. Tech | VTU | 2012 | 15 Years | Asst. Prof      |          | 23/8/2007 |
| 15 | Mr. AnandTilagul              | M. Tech | VTU | 2011 | 11 Years | Asst. Prof      |          | 20/7/2011 |
| 16 | Mr. Badrinath K               | M. Tech | VTU | 2012 | 10 Years | Asst. Prof      |          | 8/8/2012  |
| 17 | Mr. Nagesh R                  | M. Tech | VTU | 2010 | 9 Years  | Asst. Prof      |          | 15/7/2013 |
| 18 | Miss. Prathiba .R             | M. Tech | VTU | 2011 | 9 Years  | Asst. Prof      |          | 13/8/2013 |
| 19 | Mr. Sabin T T                 | M. Tech | VTU | 2012 | 8 Years  | Asst. Prof      |          | 21/7/2014 |
| 20 | Mr. Yogaraja . G S R          | M. Tech | VTU | 2013 | 8 Years  | Asst. Prof      |          | 21/7/2014 |
| 21 | Mr. Chethan H V               | M. Tech | VTU | 2014 | 5 Years  | Asst. Prof      |          | 31/1/2017 |
| 22 | Miss. Vimala Devi R           | M. Tech | VTU | 2016 | 5 Years  | Asst. Prof      |          | 2/9/2017  |
| 23 | Mrs. Pushpa                   | M. Tech | VTU | 2013 | 5 Years  | Asst. Prof      |          | 31/1/2017 |
| 24 | Mrs. Asha C V                 | M. Tech | VTU | 2014 | 5 Years  | Asst. Prof      |          | 31/1/2017 |



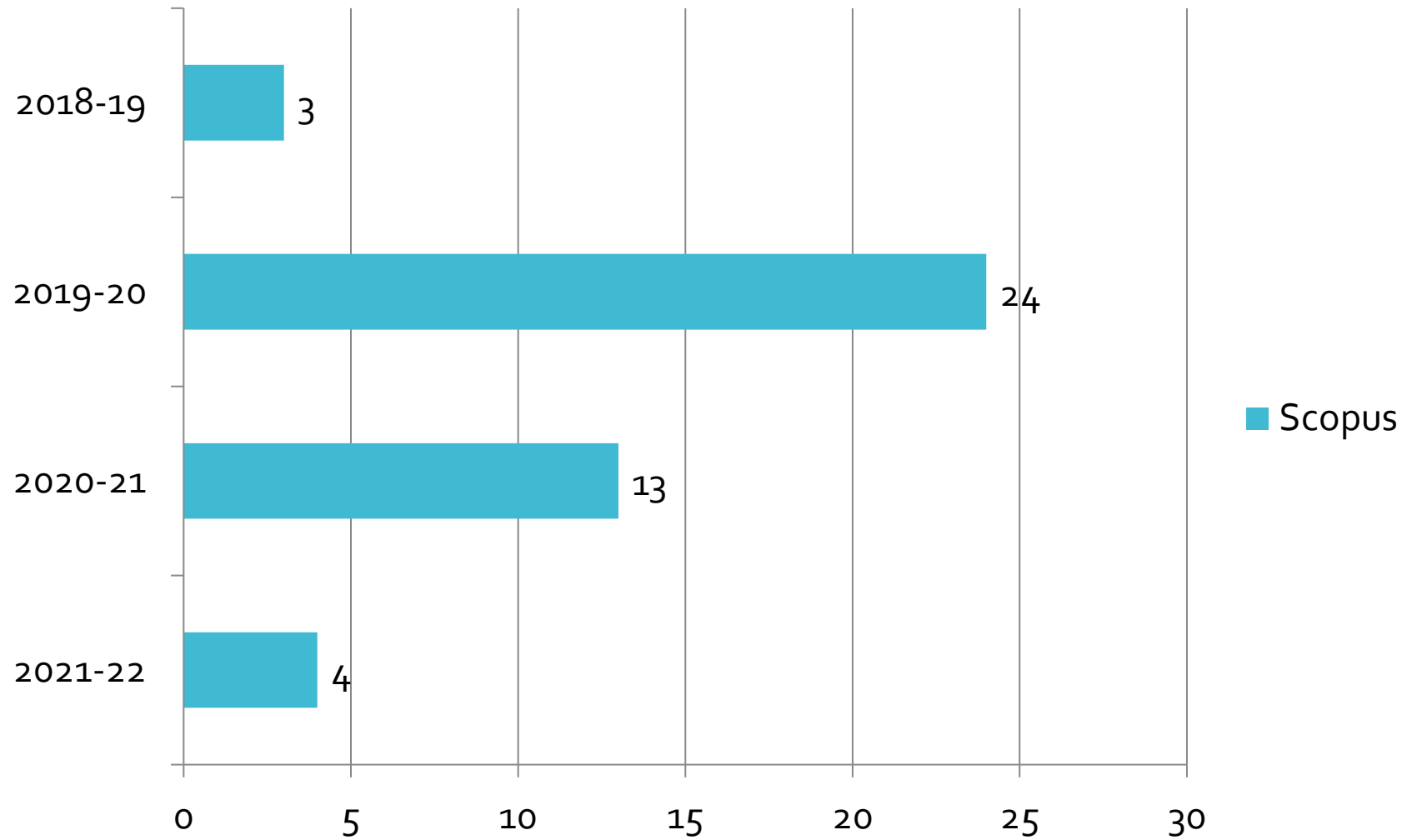
**SJCIT-ISE**

# Publications



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## Publications



# Patents Applied/ Granted



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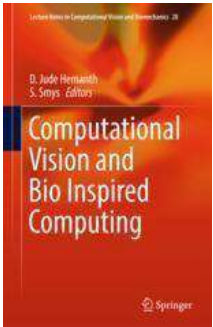
| Sl. No | Author/s  | Title  | Application No. | Year of Grant/Applied | National/International               |
|--------|---|--|-----------------|-----------------------|--------------------------------------|
| 1      | Mrs. Bhanumathi S<br>Mrs. Vindya L                          | Enhanced security prediction on IoT based smart weather conditions system. | 202141016707A   | 2021                  | National                             |
| 2      | Dr. Keshav<br>Munegowda                                     | FAT file in reserved cluster entry with ready entry state                  | 8452734         | 2013                  | International                        |
|        |   | IC updating File system meta data with log record data                     | 9043286         | 2013                  | International                        |
|        |   | File access method and system thereof                                      | 9569447         | 2017                  | International                        |
|        |   | Method and System for File storage and access                              | 9817837         | 2017                  | International                        |
|        |   | Sharing input and output devices in networked systems                      | 13401356        | 2021                  | International                        |
| 3      | Mr. Chandrashekar JM<br>Mr. AnandTilagul<br>Miss. Prathibha | IOT based pill dispenser   | 202141011019A   | 2021                  | National                             |
| 4      | Dr. G T Raju  | System for Improving prediction Accuracy of Healthcare Ontology            | 2021102318      | 2021                  | International<br>Australian Govt. IP |
|        |   | System for Improving Prediction Accuracy of Healthcare Ontology            | 202121011671 A  | 2021                  | National                             |
|        |   | System for Improving Prediction Accuracy of Healthcare Ontology            | 202141018698 A  | 2021                  | National                             |

# Sponsored Research / Books Published



**SJCIT-ISE**

| Sl. No.                         | Project title        | Funding Agency             | Year of Grant | Amount      | Principal Investigator | Duration | Status  |
|---------------------------------|----------------------|----------------------------|---------------|-------------|------------------------|----------|---------|
| 1                               | Smart Traffic System | New Age Incubation Network | 2019          | Rs.2,50,000 | Nagesh R               | 3 Years  | Ongoing |
| 2                               | Virtual SIM          | New Age Incubation Network | 2019          | Rs.2,30,000 | Abdul Kadar            | 3 Years  | Ongoing |
| <b>Total Amount=Rs.4,80,000</b> |                      |                            |               |             |                        |          |         |

| Sl. No | Title  | Author/s   | Year of Publication | Name of Publisher/s  |
|--------|--|------------|---------------------|--|
| 1      | Springer International Conference on Computational Vision and Bio Inspired Computing, published as <b>Book Chapter</b> in Computational Vision and Bio Inspired Computing, | Dr.GT Raju | Feb2018             |  <p>Lecture Notes in Computational Vision and Biomechanics book series(LNCVB),v olume 28, pp335-348,PrintISBN978-3-319-71766-1,Springer, Cham,</p> |

# Criteria-6 Facilities and Technical Support



**SJCIT-ISE**

- 140** Computers
- 12** LCD Projectors
- 500** Mbps Shared Internet
- 04** Printers
- 01** Interactive Display

- 06** Class Rooms
- 04** Computing Labs
- 01** Shared- Central Computing Lab
- 02** CoE (AI & ML, MAD) Shared

# Laboratories and Technical Manpower details



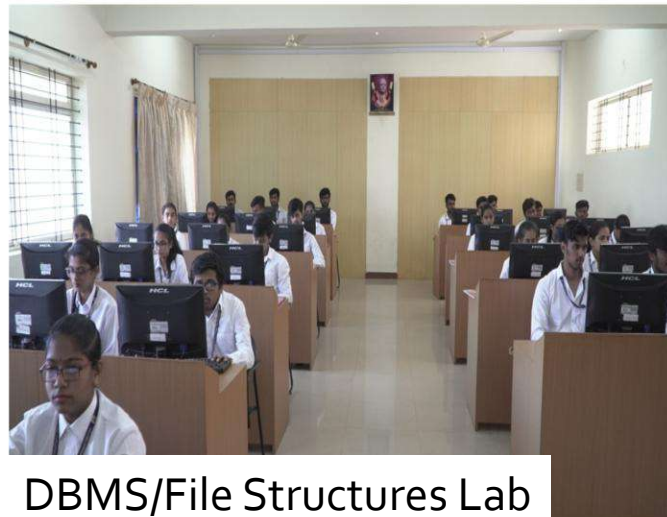
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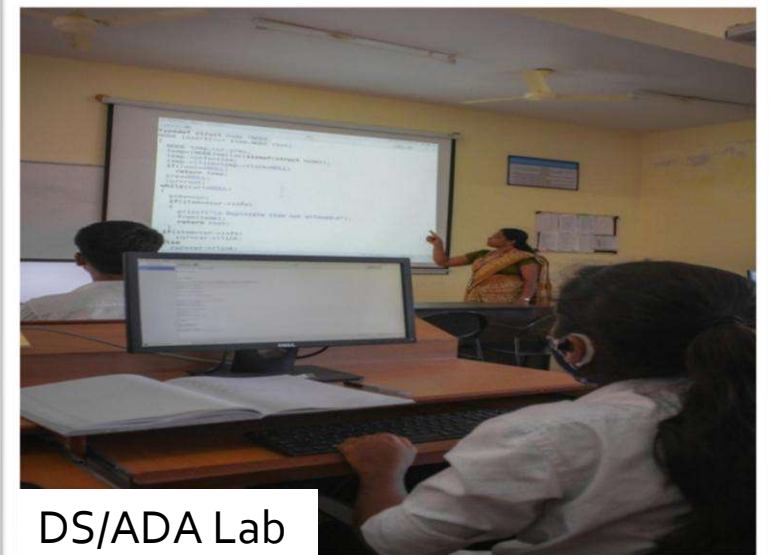
**ADE / MES Lab**



**Software Testing / Network Laboratory**



**DBMS/File Structures Lab**



**DS/ADA Lab**

# Additional facilities created for improving the quality of learning experience in laboratories

| SI No. | Facility Name  | Details  | Reason(s) for Creating facility   | Utilization             | Area in which students are expected to have enhanced learning                                | Relevance to POs/PSOs               |
|--------|--|--|---|-------------------------|--|-------------------------------------|
| 1      | Center of Excellence in AI & ML                        | Computers with Intel(R) Core(TM) i3-7500 CPU @ 3.40GHz 3.41 GHz, 4.00 GB with 500 MBPS internet connectivity | To provide industry oriented training to the students                                   | Throughout the semester | To bridge the gap between academic and industry.<br>To upgrade students to industry standard | PO5,PO6, PO9, PO11, PO12 PSO1, PSO2 |
| 2      | Center of Excellence in Mobile Application Development | Computers with Intel(R) Core(TM) i5-7500 CPU @ 3.40GHz 3.41 GHz, 8.00 GB with 500 MBPS internet connectivity | To develop and implement cross platform mobile applications using trending technologies | Throughout the semester | Cross platform mobile application development  | PO6, PO9, PO10, PO11, PSO1, PSO2    |
| 3      | New Age Incubation Network                             | Funded Projects from Govt.   | Helps student to develop additional skills, also to drive their own learning            | Throughout the semester | Modern tools, Programming , Project Development  | PO5,PO6, PO9,PO11, PO12,PSO1, PSO2  |



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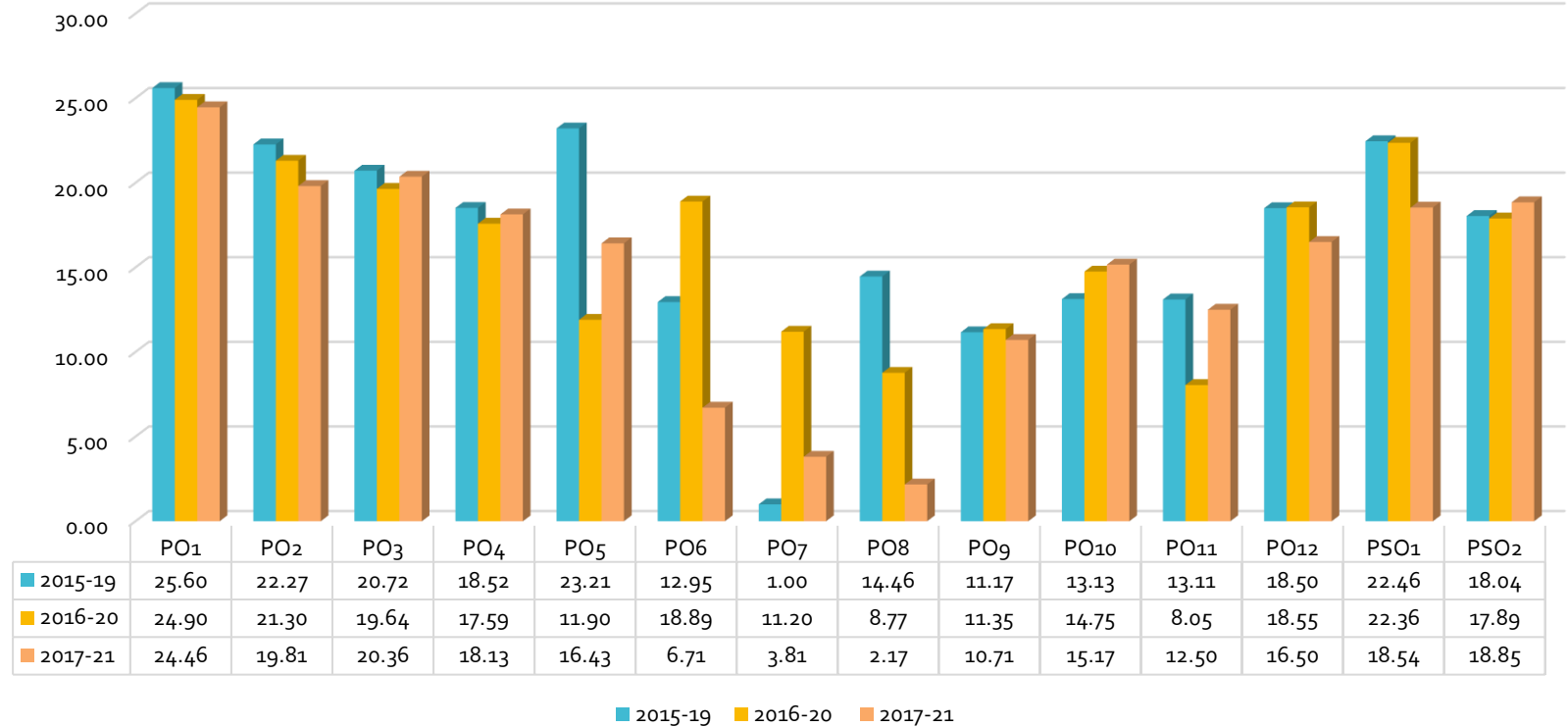
# Criteria – 7 Continuous Improvement

## GAP Analysis on POs and PSOs



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Gap Analysis of POs & PSOs Attainment



# Criteria – 7 Continuous Improvement

## Actions taken on evaluation of each PO/PSO



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| POs  | TARGET LEVEL | ATTAINMENT LEVEL | OBSERVATIONS   |
|--|--------------|------------------|--|
| <b>PO1: Engineering Knowledge:</b> To Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems   |              |                  |  |
| PO1  | 2.33         | 1.76             | <p><b>Observation:</b> Target is not attained,</p> <ul style="list-style-type: none"> <li>24% of the gap, because of students lack of applying knowledge in some subjects.</li> </ul>                                    |
| <p><b>Action 1:</b> Students will be asked viva questions relating to the basic concepts to refresh their fundamentals in laboratory sessions.</p> <p><b>Action 2:</b> Additional classes will be conducted beyond the regular classes for the courses which has less attainment.</p> <p><b>Action 3:</b> Co-curricular activities are scheduled in the area of information security, cyber security, AGILE and AI &amp; ML.</p> |              |                  |  |
| <b>PO2: Problem Analysis:</b> Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.  |              |                  |  |
| PO2  | 2.12         | 1.70             | <p><b>Observation:</b> Target is not attained,</p> <ul style="list-style-type: none"> <li>20% of the gap, because Student's analytical skills needed to enhance more to analyze complex Engineering Problems.</li> </ul> |
| <p><b>Action1:</b> Additional classes will be conducted beyond the regular classes for the courses which has less attainment.</p> <p><b>Action2:</b> Conduct Expert lectures, Seminars and Guest lecture to help students in identifying &amp; analyzing the real time problems.</p>   |              |                  |  |

## Actions taken on evaluation of each PO/PSO



|  |      |      |  |
|--|------|------|--|
| <b>PSO1:</b> Apply the Knowledge of Data Structures, Data Base Systems, System Programming, Networking, Web Development, and AI & ML Techniques in Engineering the Software.   |      |      |  |
| <b>PSO1</b>  | 2.05 | 1.67 | <b>Observation:</b> Target is not attained <ul style="list-style-type: none"> <li>19% of the gap,it is observed that new programming skills and technologies need to be strengthened.</li> </ul> |
| <b>Action1:</b> Extra efforts will be made to understand the codes used for the analysis and design of structures pertaining to the courses.<br><b>Action2:</b> To strengthen the domain knowledge and make them job ready graduates, Department is planning to introduce more number of certification courses and encouraged to attend technical workshops.<br><b>Action 3:</b> Additional classes will be conducted to the students, which enable them to apply fundamentals of programming for advanced analysis of complex Information Science Engineering related problems. |      |      |  |
| <b>PSO2:</b> Exhibit solid foundations and advancements in developing Software/Hardware systems for solving contemporary problems.   |      |      |  |
| <b>PSO2</b>  | 1.91 | 1.55 | <b>Observation:</b> Target is not attained <ul style="list-style-type: none"> <li>19% of the gap,Motivation forcreative thinking and to apply theirskills is lacking</li> </ul>                  |
| <b>Action 1:</b> Students are encouraged to carryout projects to enhance advancements in developing Software/Hardware systems.<br><b>Action 2:</b> Students are motivated to do case studies of contemporary IT solutions for real time problems.  |      |      |  |

## Actions taken on evaluation of each PO/PSO

| Sl. No | Gap/Topic  | Action Taken  | Date-Month-Year          | Resource Person with Designation  | No. Of Students   | Relevance to POs and PSOs                          |
|--------|--|---|--------------------------|---|---|--|
| 1      | Real Time IOT projects   | Workshop on “Hands on Approach on Internet of Things & its Protocols” | 20/Aug /2020             | Mr. Baba Fakruddin Ali, Asst. Ptof. SSE, Technical Head, NRET Bangalore   | 70 Students from 8 <sup>th</sup> Sem, Participated                                    | PO1,PO2, PO3,PO5, PO7, PO10, PSO1,PSO2             |
| 2      | In house projects from final year students   | Webinar on “Inhouse Academic Project Ideas”                           | 06/10/2021               | Mr.Janardhan HV, CEO Hire Craft, Bengaluru. (Alumni, SJCIT)   | 70 Students from 8 <sup>th</sup> Sem, Participated                                    | PO1,PO2, PO3,PO5, PO7, PO10, PO12, PO11 PSO1, PSO2 |
| 3      | Coordinated a Webinar on “Inhouse Academic Project Ideas” for 7 <sup>th</sup> Sem students | PPT was shared and Students were guided on Placement                  | 09/10/2021               | Dr. Keshava Mune Gowda, Vice President, SecDB Engineering at Goldman Sachs, Bengaluru. (Adjunct Faculty, Dept of ISE)           | 70 Students from 8 <sup>th</sup> Sem, Participated                                    | PO1,PO2, PO3,PO5, PO7, PO10, PO12, PO11 PSO1, PSO2 |
| 4      | AI & ML  | PPT was shared  | 20/09/2021 to 22/09/2021 | Dr Sudarshan Iyengar, IITRopar, Dr Sathanath Bhatt IIT Goa, Dr BS Satish Babu, RVCE, B’lore Dr Shreedhara KS,UBDTCE, Davanagere | 50 Students from 8 <sup>th</sup> Sem, ISE Participated and 45 Faculty have registered | PO3,PO5, PO7, PS09, PO10, PO12, PO11 PSO1, PSO2    |
| 5      | Cross Platform Mobile Application Development  | Webinar on “Cross Platform Mobile Application Development”            | 4 <sup>th</sup> May 2021 | Deepak garg, GNS Technologies, Bangalore  | 98 Students form 8 <sup>th</sup> Sem participated                                     | PO3,PO5, PO7, PS09, PO10, PO12, PO11 PSO1, PSO2    |



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## Actions taken on evaluation of each PO/PSO

| Sl. No | Gap/Topic                            | Action Taken  | Date-Month-Year            | Resource Person with Designation                           | No. of Students   | Relevance to POs and PSOs                           |
|--------|--------------------------------------|---|----------------------------|--|---|---|
| 6      | Innovative Project Development       | Online Boot Camp  | 24 <sup>th</sup> May 2021  | NAIN- New Age Innovation Network                           | 150 Students from 45 <sup>th</sup> , 6 <sup>th</sup> and 8 <sup>th</sup> Sem participated | PO3, PO5, PO7, PS09, PO10, PO12, PO11<br>PSO1, PSO2 |
| 7      | Orientation on Real time internships | Webinar on “Industrial Skill Development & Internship Program”    | 29 <sup>th</sup> May 2021, | Nithin, Tech Lead Tequed Labs, Bangalore                   | 75 Students from 8 <sup>th</sup> Sem Participated   | PO3, PO5, PO7, PS09, PO10, PO12, PO11<br>PSO1, PSO2 |
| 8      | Android Application Development      | Workshop on “Android Mobile Application Development”              | Apr 18-20, 2021            | Nitin Kumar, VVCE Mysore and Veerendra Patil from Industry | 12 Students with faculty from other colleges participated                                 | PO3, PO5, PO7, PS09, PO10, PO12, PO11<br>PSO1, PSO2 |
| 9      | Mobile Pages                         | Lecture on “Accelerated Mobile Pages”                             | 19/01/2021                 | Mrs. Susheelamma K H                                       | 56 Students of 7 <sup>th</sup> semester   | PO1, PSO2   |
| 10     | Text Classifier real time examples   | Discussion on “Text classification using naïve bayes classifier.” | 12/11/2020                 | Mr. Chandra Shekhar J M                                    | 60 Students of 7 <sup>th</sup> semester   | PO3, PO4  |

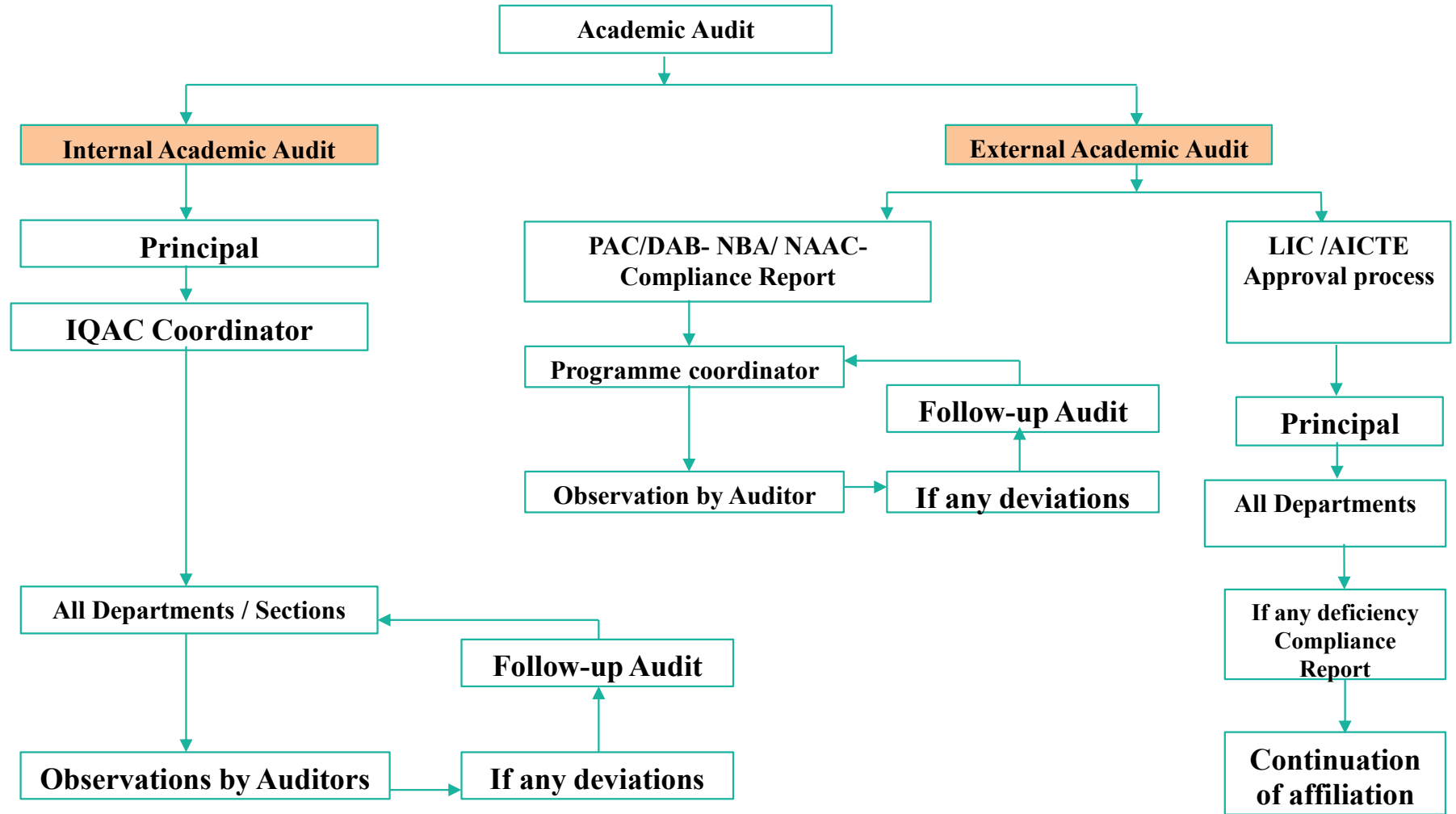


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# Academic Audit on COs, POs, PSOs and PEOs



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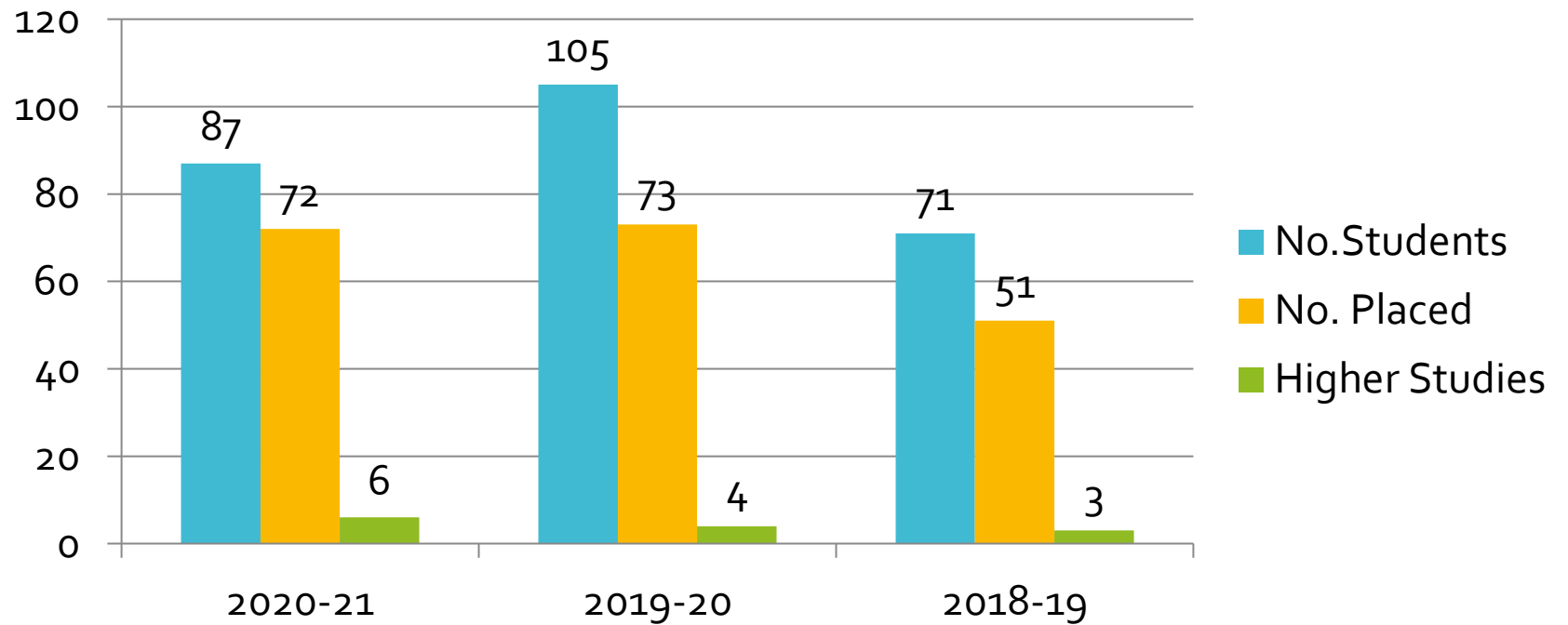


# Improvement in Placement, Higher Studies and Entrepreneurship



**SJCIT-ISE**

| Item   | 2020-21       | 2019-20 | 2018-19 |
|--|---------------|---------|---------|
| Total No. of Final Year Students (N)   | 87            | 105     | 71      |
| No. of Students placed in companies or Government Sector (x)   | 72            | 73      | 51      |
| No. of students admitted to higher studies with valid qualifying scores (GATE or equivalent state or National level Tests, GRE, GMAT etc.) (y) | 6             | 4       | 3       |
| No. of students turned entrepreneurs in engineering/technology (z)   | -             | -       | -       |
| $x + y + z =$  | 78            | 77      | 54      |
| Placement Index: $(x + y + z) / N$   | 0.78          | 0.77    | 0.54    |
| Average placement = $(P1 + P2 + P3) / 3$   | <b>0.699</b>  |         |         |
| Average Placement Percentage =   | <b>69.9 %</b> |         |         |



# Improvement in the Quality of Students Admitted to the Program



## SJCIT-ISE

| Item  |                                 | CAY<br>2020-21 | CAYm1<br>2019-20 | CAY m2<br>2018-19 |
|---|---------------------------------|----------------|------------------|-------------------|
| National level entrance<br>Examination<br>(Name of the entrance examination<br>COMED-K)             | Number of students admitted     | -              | -                | -                 |
|   | Opening Score/Rank              | -              | -                | -                 |
|   | Closing Score/Rank              | -              | -                | -                 |
| State/university/level entrance<br>Examinations/others<br>(Name of the entrance examination<br>CET) | Number of the students admitted | 57             | 52               | 80                |
|   | Opening Score/Rank(GM)          | 21160          | 30134            | 28608             |
|   | Closing Rank(GM)                | 110323         | 111908           | 58717             |
| Name of the entrance examination<br>lateral entry or Diploma CET                                    | Number of students admitted     | --             | --               | 02                |
|   | Opening Score/Rank(GM)          | --             | --               | 3925              |
|   | Closing Rank(GM)                | --             | --               | 8520              |
| Average CBSE /any other board result of admitted students (physics,<br>chemistry and mathematics)   |                                 | <b>76.38%</b>  | <b>74.12%</b>    | <b>74.76%</b>     |

## The Road Ahead

2024

CoE in Cyber Security  
R& D Centre  
PG Program in DS

2025

60% PhDs  
CoE In VR and AR



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# OBE Philosophy adopted by the department



**SJCIT-ISE**

**What the student should be able to do?**

**OBE**  
(Education)



**OBC**  
(Curriculum)



**How to make the student achieve the outcome?**

**OBLT**  
(Learning & Teaching)



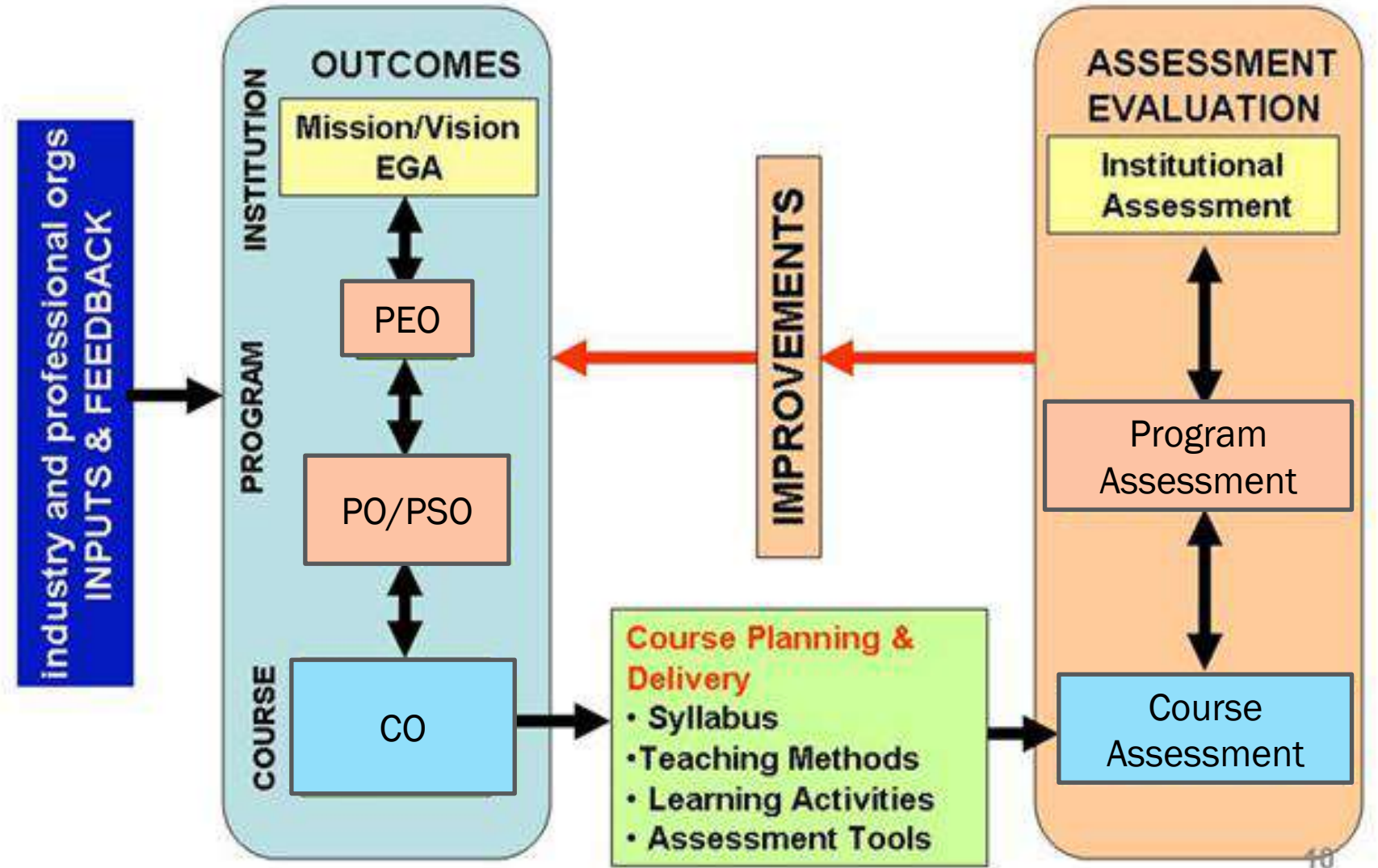
**How to measure what the student has achieved?**

**OBA**  
(Assessment)

# The OBE Frame Work



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# Assessment methods and tools

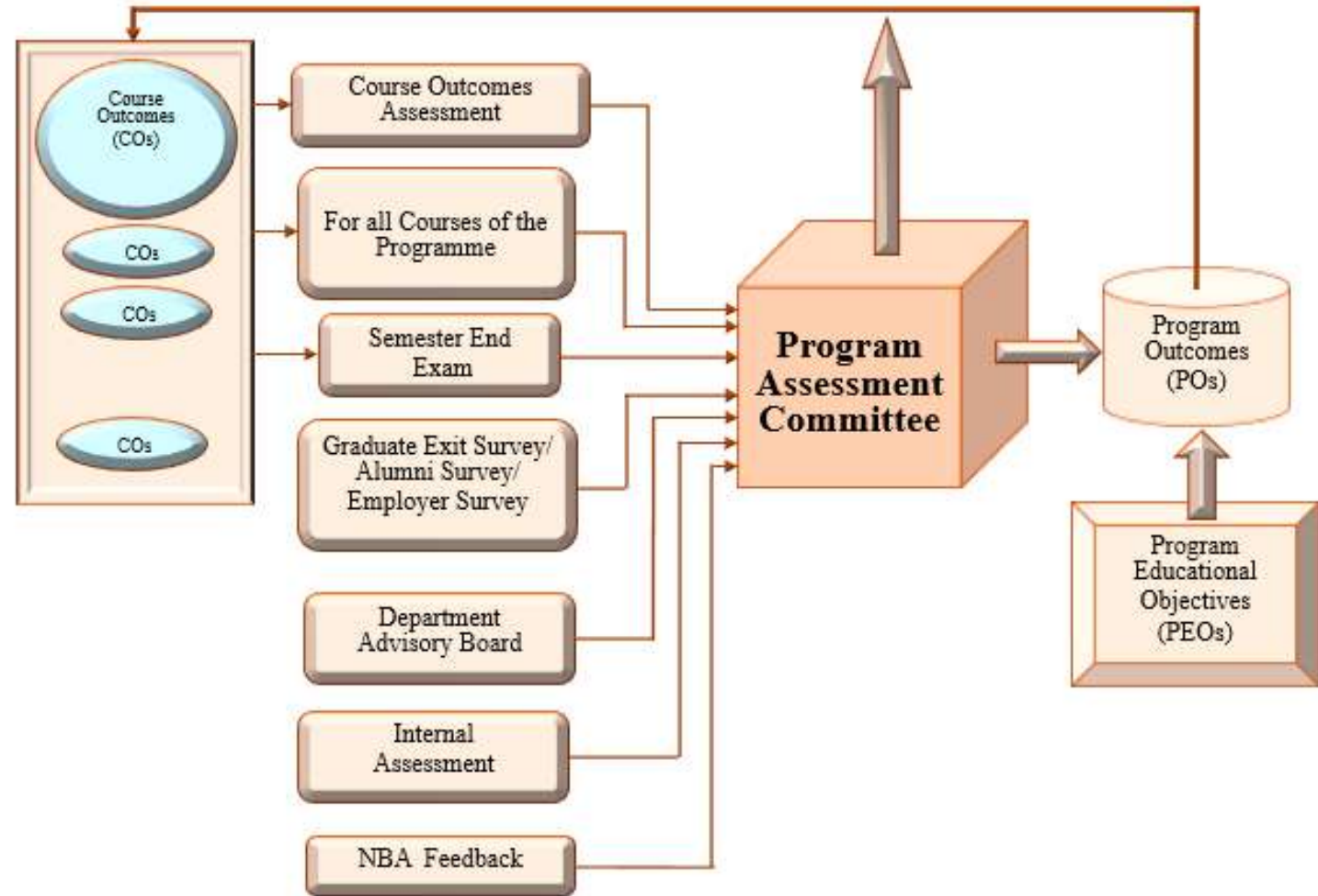


- **Direct Assessment Method:** Using measurable performance indicators of students
  - Exams
  - Assignments/Quiz
  - Projects
  - Tutorials
  - Labs
  - Presentations
- **Indirect Assessment Method:** Ascertaining opinion or self-reports
  - Alumni survey
  - Employer survey
  - Program-exit survey
  - Course-end survey etc.,.

# PROGRAM OUTCOMES - Assessment/ Review Process



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# SWOC



**SJCIT-ISE**

## Strengths

- 100% Admissions
- > 80% Placements
- Experienced Faculty
- Excellent Infrastructure
- High Faculty Retention
- Certification Programs
- Industry Real Time Projects
- Strong Alumni Network

## Weakness

- Research Culture
- Consultation
- Book Writing
- Funded Projects and Patents
- Industry Specific Labs

## Opportunities

- Paid Internships
- Trending IT
- Starting new programs
- Setup CoE
- In house Product Development

## Challenges

- Private Universities
- Collaborations with Reputed Industries
- Achieving 100% Placements

Thank You



**SJCIT-ISE**

**Looking forward to Your  
Encouragement and Support for  
Our Development**

