

INDEX

| | |
|----|------------------------------|
| 1. | NAAC SSR |
| 2. | NBA SAR |
| 3. | Certificates of NAAC and NBA |
| 4. | Autonomy Application |
| 5. | Research Policy |
| 6. | IRG courses conducted |



SELF STUDY REPORT

FOR

1st CYCLE OF ACCREDITATION

FR. CONCEICAO RODRIGUES COLLEGE OF ENGINEERING

FR.CONCEICAO RODRIGUES COLLEGE OF ENGINEERING FR.AGNEL
ASHRAM,BANDSTAND ,BANDRA (W)

400050

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1. EXECUTIVE SUMMARY

1.1 INTRODUCTION

Located in a picturesque environment in the heart of Mumbai, Fr. Conceicao Rodrigues College of Engineering is one of the renowned, premier and sought-after private Engineering colleges. The Institute is dedicated to make a difference in Engineering education, with its exclusive approach towards the on-going momentum of trends in technology and holistic development.

Beginning with an orphanage and a trade school in carpentry, the Agnel Ashram (1957) has today grown into a full-fledged Technical Complex. The Institute today proudly bears the founder's name as a fitting tribute to his impassioned faith in highly-qualified and fully-trained engineers and technicians in the service of the nation.

The Institute started with only one program in Production Engineering in 1984 with an intake capacity of 60 students. In 1987, Electronics Engineering programme was started with an intake capacity of 60 students followed by Computer Engineering in 1991 with an intake capacity of 60 students. In 2001, the program in Information Technology was started with an intake capacity of 30 students which was later increased to 60 in 2010. The College started offering Master's Degree in Electronics Engineering and Mechanical Engineering in the year 2005, each having an intake capacity of 18. Doctoral programs in Electronics Engineering and Mechanical Engineering commenced in 2014 and 2015 respectively. From year 2019, a new Undergraduate degree program in Mechanical Engineering has been started with an intake capacity of 60. Also, the BE undergraduate program in Electronics Engineering has been changed to Electronics and Computer Science. The Undergraduate programme in Information Technology has been merged with Computer Engineering. From the year 2020, a new program in Artificial Intelligence and Data science has been started with an intake capacity of 60.

Based on the OBE parameters and criteria, three programs of the Institute have been accredited by NBA for a period of three years valid till June 2020. Further, the Institute had applied for NBA compliance which was granted for a further period of three years for the three programs. The Institute has been consistently ranked highly in major surveys like the NIRF, TOI, INDIA TODAY to name a few.

Vision

"Moulding Engineers Who Can Build the Nation"

CRCE will be a Centre-of-Excellence in Engineering Education, moulding engineers with state-of-the art technologies, innovative skills and human values matching with the growing expectations of the corporates and the society and thus play an effective role in nation building.

Mission

- Create an excellent scholastic ambience for students and faculty, by providing facilities with state-of-the-art technologies and continuously updating based on the needs of user organizations.

- **Attract, develop and retain teaching faculty of academic excellence, dedication and commitment. Design the academic administration system to ensure effective teaching - learning process facilitating participation from students and teachers and enabling continuous improvement through evaluation and feedback.**
- **Provide avenues for holistic development of students to become competent engineers with interpersonal skills, leadership qualities and social concern.**
- **Maintain economic discipline, continuously work for optimal utilization of resources and resource generation through consultancy to make quality education affordable. Everybody in the organization to be a role model for integrity, upholding ethical values, fairness and transparency in all dealings.**

1.2 Strength, Weakness, Opportunity and Challenges(SWOC)

Institutional Strength

1. Emphasis on Holistic development
2. Consistently good academic results in University examinations
3. Excellent campus placements in highly reputed companies
4. Sizeable number of students opting for higher studies
5. Productive Alumni engagement.

Institutional Weakness

1. Industrial/ Research Consultancy
2. Sponsored Research
3. Collaboration with National/International Universities
4. Limited IPR acquisition
5. Limitation to admit students from other countries/states

Institutional Opportunity

1. Academic Autonomy
2. Entrepreneurship initiatives
3. Channelizing the knowledge resources of Alumni, holding key positions in Industry or as entrepreneurs
4. Collaboration with premier Research Institutes and Industrial houses
5. Implementation of provisions envisioned in NEP 2020.

Institutional Challenge

1. Improvement of placements in core industries
2. Collaboration with foreign institutions and organizations
3. Establishment of Centers of Excellence of National Repute
4. Integration of rapidly changing technology trends in the curriculum
5. Development and commercialization of projects/products

1.3 CRITERIA WISE SUMMARY

Curricular Aspects

The Institute is affiliated with the University of Mumbai and adheres to the prescribed curriculum. The curriculum for undergraduate engineering programs is designed with humanities, basic and engineering sciences, mathematics, professional core, and skill development courses and equipped with mini projects, tutorials, lab courses, and electives.

Academic activities are planned before they are carried out. Prior to the start of the semester, the Institute's Academic Calendar is created and closely followed. Departments create their own academic calendars, setting deadlines and timetables for their activities and events. Faculty makes extensive usage of various pedagogical methods as well as tools resulting in an interactive learning process and also conducts remedial classes for weak students. Faculty is involved in curriculum design in various capacities at the university.

The Institute integrates Gender diversity, Environmental Sustainability, Human Values and Professional Ethics into the curriculum by various activities conducted by different councils like TedX-CRCE, NSS, Rotoract club to name a few. Research is made an integral part of the curriculum by introducing Projects and Internships.

The curriculum offers academic flexibility in terms of elective courses. Institute has started offering honors and minor degree program in order to facilitate the students to choose additionally the specialized courses in the emerging areas.

Regular student feedback on teaching and learning is gathered for each course (midterm and end-term feedback) and shared with the faculty members in order to improve the teaching and learning process. An Academic audit is conducted by an external auditor at the end of each academic year, the feedback of which is also conveyed to the faculty. For curriculum revision, input from stakeholders like Alumni, Parents, Employers and students is also taken into account.

Teaching-learning and Evaluation

The Institute has a well-qualified, experienced, full-time teaching community engaged in constantly upgrading themselves, many of whom are pursuing their Doctorate degrees. Student-centric teaching methods are adopted in order to simplify and broaden the scope of learning. The basic blackboard/whiteboard teaching method is blended with the latest teaching and learning methodologies like Experiential, Field-based, participative and Problem-based learning methods.

The Outcome-based model is adopted with the related processes followed diligently. The assessment method is transparent and conveyed to students at the beginning of each term. The Course outcomes are defined and the assessment methods are formulated by each faculty. Furthermore, the course attainments are calculated which result in the Program outcomes as well as Program specific outcomes to be calculated. Various activities are planned to attain the various outcomes. A detailed analysis is done course-wise to plan further activities to improve the overall teaching-learning experience. The mechanism of internal assessment as well as examination-related grievances is transparent and robust.

Various surveys are conducted to assess the outcomes.

The Institute has a student community from diverse backgrounds and provides adequate support to cater to their varied learning needs. The student enrollment ratio is consistent and the average student to faculty ratio is 18.5.

To impart Engineering Education in the 21st century to the millennial stakeholders, it is extremely imperative that a full-duplex communication channel be established between the teacher and the student. The effectiveness of the teaching-learning processes can be garnered from the average pass percentage which is around 98 %.

Research, Innovations and Extension

The Institute's Research and Extension activities are constantly progressing. The Institute has a Ph.D. research centre in Mechanical and Electronics Engineering to foster innovative research with University of Mumbai-approved research guides in Mechanical, Electronics, and Computer engineering.

The Institute has a constantly evolving innovation ecosystem with a strong focus on knowledge development and technical ownership. The Institute Innovation Council, R&D committee, and E-cell are largely organising workshops/seminars/conferences on Research Methodology, Intellectual Property Rights (IPR), and entrepreneurship.

The Project Cell and technical project teams, including Abadha, CRCE Formula Racing (CFR), Mavericks, Vaayushastra and Robocon work on innovative projects related to Automobiles, Robotics and UAVs incorporating advanced knowledge in mechanical, electronics and IoT, Machine Learning, and Artificial Intelligence. Over the years, the teams have performed exceptionally well in national and international competitions. Faculty members put consistent efforts for research publications in reputed national and International Journals and Conferences. Culture of securing patents and other IPR is increasing in the institute

NSS, TEDxCRCE and Rotaract carry out numerous extension initiatives, social events, and programmes at the institute, reflecting our dedication to operating in a techno-socially responsible manner. These programmes sensitise students to social issues and holistic development. The institute has participated in UBA programmes to transform rural development. These extension activities have been recognised by government or government-recognized agencies.

The Institute has signed several MOUs with companies, foreign universities, institutes of national and international repute, and technology providers to facilitate faculty exchange, student exchange, internships, field trips, on-the-job trainings, research, and other academic and co-curricular activities.

Infrastructure and Learning Resources

The Institute has adequate infrastructure facilities as per the norms laid down by regulating authorities. Moreover the Institute has been constantly updating facilities as per the requirements of the students and faculty to support the curricular, co-curricular, and extra-curricular activities in campus.

Every class has been assigned a fixed classroom with Multimedia projector and Internet connectivity. The classrooms are well lit with proper ventilation and sufficient number of fans in each room. The classroom furniture is ergonomically designed to give maximum comfort to students. Each department has well-equipped laboratories as per the norms. Laboratories are equipped with state-of-the-art equipment and installed with both open source as well as proprietary software.

The Institute has an auditorium called Samvaad with sitting capacity of 200 and two other seminar halls to conduct various technical and non-technical activities. In addition to the above the Institute has centralised facilities like Central workshop & machine shop, drawing hall, computer center, central library, training & placement cell and Central research laboratory. Also there are common facilities like canteen, boys' common room, girls' common room, reprographic facilities and stationery store.

The Central Library has compilation of books, journals, web-based resources, audio/video materials, etc with latest software for efficient functioning. It has an Internet Center with 25 computers, where students can access journals, NPTEL video, e-books. The Library is using Web OPAC for automation of Library Services. It will be updated to KOHA software very soon.

For Internet access and computing purposes, the Institute has a massive network of 586 computers with 350 Mbps bandwidth. Centralized Sophos UTM is used to monitor the usage of the Internet by individuals. All computers are connected by LAN and Internet. WiFi facility is available in designated areas for accessing the internet.

Wheel chair facility, Divyangjan friendly washrooms and elevator facility are available in the campus for differently-abled students.

The Institute has a volleyball court and basketball court. Facilities for indoor games like carrom, table tennis and chess are available in the students' common room. CCTV cameras are deployed across the campus for surveillance and security purpose.

Student Support and Progression

Through academic, co-curricular, and extra-curricular activities, the Institute aims to nurture students holistically. Overall support for Capacity building and skill enhancement programmes, such as soft skills, life skills, and ICT/computing abilities, enhance the teaching and learning process and also propels student performance to new heights.

The Institute has an efficient system for informing students about various scholarship and freeship programmes. Many students have benefited from various schemes such as scholarships and freeships. To address student grievances, the Institute has several committees, including a student grievance cell and an anti-ragging cell. Grievances may also be sent through offline / online mechanisms - e-mail to the members or registering the same on the grievance portal through college website.

Students are made aware of numerous post-graduation prospects. Institute organizes numerous career counseling/training sessions. The Training and Placement Cell and the Entrepreneurship Development Cell play a crucial role in the delivery of expert lectures and training sessions to students. This effort results in majority of students gaining good placements and sizable amount of students pursuing further studies.

The Institute conducts numerous co-curricular and extra-curricular cultural and sports events that enable the students to exhibit their talents. Students regularly participate at the University, National and global levels. A vibrant Alumni Association is boosted by 'Alma-connect' and conducts annual meetings and consistent interactions. Academic matters and student support are areas where the Alumni Association participates. Through their topic expertise, numerous alumni are actively involved in and provide guidance for a variety of technical and non-technical events.

Governance, Leadership and Management

The Institute follows a culture of a well-defined decentralized governance system and is managed by highly-experienced members in the Governing Council with an acute foresight into the matters concerned with the development of the Institute. The initiatives truly reflect the determined efforts to ensure that the Vision and Mission are accomplished. The governance fosters participative management and plays a significant role in the evolutionary reforms to elevate the Institute to the expectations of its stakeholders. Senior faculty members are given the responsibility to head different bodies and participate in the decision-making process. Faculty are engaged in organizing as well as attending FDPs / STTPs. A well-established process is implemented to excel in comprehensive development through transparency in academic governance. The established organizational structure, with separate in-charges for each function, executes smooth functioning of administrative and academic processes assisted with e-governance. At the institution level, various policies are implemented related to quality improvement, training and placement, Research, etc.

Various strategy deployments have led to Permanent Affiliation, better Industry collaborations, steps towards NEP implementation and Blended learning. E-Governance has been implemented in almost all the administrative processes. The Institute has effective welfare measures and Performance Appraisal System for teaching and non-teaching staff that encourage professional learning and growth. The faculty and students are given financial assistance to attend Conferences/Workshops.

Internal Quality Assurance Cell (IQAC), is established at the Institute level to propose and implement quality assurance strategies and processes to improvise the general and academic administration as well as prepare the Institute to be in compliance to the NAAC/NBA standards.

Institutional Values and Best Practices

Fr. Conceicao Rodrigues College of Engineering (Fr.CRCE) promotes gender equality by offering equal opportunities for growth and development to all. Fr.CRCE provides a platform for empowering women. Events and workshops with a focus on empowering female professors and students to promote their engagement are organized. Moreover, Fr. CRCE also celebrates National/International commemorative days, events, and festivals like International Yoga Day, World Peace Day, Teacher's Day, National Pollution Day, Constitution Day, and World Environment Day to name a few.

In an effort to keep energy consumption in check and to reduce the dependency on conventional energy sources, solar panels are installed. The Institute uses 18% of its power from this renewable energy source. Metal, plastic, and wood waste management is given priority. Rainwater is harvested for sanitation. Divyangjan can also use wheelchair-accessible ramps and washrooms. To promote environmental sustainability and global warming, seminars and events on climate change and carbon

footprints are successfully conducted.

Furthermore, the Institute is constantly working to foster an inclusive environment and to raise constitutional awareness among students and faculty. Initiatives like activities at school for special children, blood donation camps, and beach clean-up are a few examples. Fr.CRCE strives to create a harmonious environment by providing avenues for participating in events like crowd management during the Mount Mary Fair and Ganesh Festival.

Additionally, Fr.CRCE follows some of the best practices like “Open Source culture and In-house software development” and “Special Employability Training”. Open-source culture helps reduce costs and gives freedom to the stakeholders to run the program freely and adapt as per their needs.

Fr.CRCE also strives to promote the student’s holistic development by offering a platform for skill-based learning enhancement and by fostering hands-on learning. Through different co-curricular activities and skill-based learning, the Institute is committed to creating a holistic learning environment that extends beyond the prescribed course.

2. PROFILE

2.1 BASIC INFORMATION

| Name and Address of the College | |
|---------------------------------|--|
| Name | FR. CONCEICAO RODRIGUES COLLEGE OF ENGINEERING |
| Address | Fr.Conceicao Rodrigues college of Engineering Fr.Agnel Ashram,Bandstand ,Bandra (w) |
| City | Mumbai |
| State | Maharashtra |
| Pin | 400050 |
| Website | www.frcrce.ac.in |

| Contacts for Communication | | | | | |
|----------------------------|-----------------------|-------------------------|------------|--------------|----------------------|
| Designation | Name | Telephone with STD Code | Mobile | Fax | Email |
| Principal | Surendra Singh Rathod | 022-67114101 | 9167635546 | 022-67114100 | crce@frcrce.ac.in |
| IQAC / CIQA coordinator | Sunil Surve | 022-67114000 | 9920228275 | 022-67114100 | surve@fragnel.edu.in |

| Status of the Institution | |
|---------------------------|----------------------------|
| Institution Status | Private and Self Financing |

| Type of Institution | |
|---------------------|--------------|
| By Gender | Co-education |
| By Shift | Regular |

| Recognized Minority institution | |
|--|---|
| If it is a recognized minority institution | Yes Minority Certificate.pdf |
| If Yes, Specify minority status | |
| Religious | Christian |
| Linguistic | |
| Any Other | |

| Establishment Details | | | | |
|--|--|---------------------------------------|---------------------------|----------------|
| State | University name | Document | | |
| Maharashtra | University of Mumbai | View Document | | |
| Details of UGC recognition | | | | |
| Under Section | Date | View Document | | |
| 2f of UGC | | | | |
| 12B of UGC | | | | |
| Details of recognition/approval by stationary/regulatory bodies like AICTE,NCTE,MCI,DCI,PCI,RCI etc(other than UGC) | | | | |
| Statutory Regulatory Authority | Recognition/Approval details Institution/Department programme | Day,Month and year(dd-mm-yyyy) | Validity in months | Remarks |
| AICTE | View Document | 02-06-2022 | 12 | Approved |

| Recognitions | |
|---|----|
| Is the College recognized by UGC as a College with Potential for Excellence(CPE)? | No |
| Is the College recognized for its performance by any other governmental agency? | No |

| Location and Area of Campus | | | | |
|------------------------------------|--|------------------|-----------------------------|---------------------------------|
| Campus Type | Address | Location* | Campus Area in Acres | Built up Area in sq.mts. |
| Main campus area | Fr.Conceicao Rodrigues college of Engineering Fr.Agnel Ashram,Bandstand ,Bandra (w) | Urban | 6070.284 | 11906 |

2.2 ACADEMIC INFORMATION

| Details of Programmes Offered by the College (Give Data for Current Academic year) | | | | | | |
|---|---|---------------------------|---|------------------------------|----------------------------|--------------------------------|
| Programme Level | Name of Programme/Course | Duration in Months | Entry Qualification | Medium of Instruction | Sanctioned Strength | No.of Students Admitted |
| UG | BE,Department Of Electronics And Computer Science | 48 | H.Sc. With PCM | English | 60 | 65 |
| UG | BE,Department Of Computer Engineering | 48 | H.Sc. With PCM | English | 120 | 142 |
| UG | BE,Department Of Mechanical Engineering | 48 | H.Sc. With PCM | English | 60 | 58 |
| UG | BE,Department Of Artificial Intelligence And Data Science | 48 | H.Sc. With PCM | English | 60 | 71 |
| PG | ME,Department Of Mechanical Engineering | 24 | Passed Bachelor Degree in relevant field of engineering and | English | 18 | 2 |

| | | | | | | |
|-----------------|--|----|-------------------------------------|---------|----|---|
| | | | technology with minimum marks | | | |
| Doctoral (Ph.D) | PhD or DPhil, Department Of Electronics And Computer Science | 36 | Masters degree with valid PET score | English | 14 | 2 |
| Doctoral (Ph.D) | PhD or DPhil, Department Of Mechanical Engineering | 36 | Masters degree with valid PET score | English | 10 | 1 |

Position Details of Faculty & Staff in the College

| Teaching Faculty | | | | | | | | | | | | |
|---|-----------|--------|--------|-------|---------------------|--------|--------|-------|---------------------|--------|--------|-------|
| | Professor | | | | Associate Professor | | | | Assistant Professor | | | |
| | Male | Female | Others | Total | Male | Female | Others | Total | Male | Female | Others | Total |
| Sanctioned by the UGC /University State Government | 7 | | | | 20 | | | | 46 | | | |
| Recruited | 5 | 2 | 0 | 7 | 7 | 1 | 0 | 8 | 17 | 29 | 0 | 46 |
| Yet to Recruit | 0 | | | | 12 | | | | 0 | | | |
| Sanctioned by the Management/Society or Other Authorized Bodies | 0 | | | | 0 | | | | 1 | | | |
| Recruited | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Yet to Recruit | 0 | | | | 0 | | | | 0 | | | |

| Non-Teaching Staff | | | | |
|---|-------------|---------------|---------------|--------------|
| | Male | Female | Others | Total |
| Sanctioned by the UGC /University State Government | | | | 46 |
| Recruited | 35 | 11 | 0 | 46 |
| Yet to Recruit | | | | 0 |
| Sanctioned by the Management/Society or Other Authorized Bodies | | | | 0 |
| Recruited | 0 | 0 | 0 | 0 |
| Yet to Recruit | | | | 0 |

| Technical Staff | | | | |
|---|-------------|---------------|---------------|--------------|
| | Male | Female | Others | Total |
| Sanctioned by the UGC /University State Government | | | | 19 |
| Recruited | 13 | 6 | 0 | 19 |
| Yet to Recruit | | | | 0 |
| Sanctioned by the Management/Society or Other Authorized Bodies | | | | 0 |
| Recruited | 0 | 0 | 0 | 0 |
| Yet to Recruit | | | | 0 |

Qualification Details of the Teaching Staff

| Permanent Teachers | | | | | | | | | | |
|------------------------------|------------------|--------|--------|----------------------------|--------|--------|----------------------------|--------|--------|--------------|
| Highest Qualification | Professor | | | Associate Professor | | | Assistant Professor | | | Total |
| | Male | Female | Others | Male | Female | Others | Male | Female | Others | |
| D.sc/D.Litt/LLD/DM/MCH | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ph.D. | 4 | 3 | 0 | 5 | 0 | 0 | 5 | 1 | 0 | 18 |
| M.Phil. | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| PG | 0 | 0 | 0 | 2 | 1 | 0 | 12 | 27 | 0 | 42 |
| UG | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| Temporary Teachers | | | | | | | | | | |
|------------------------------|------------------|--------|--------|----------------------------|--------|--------|----------------------------|--------|--------|--------------|
| Highest Qualification | Professor | | | Associate Professor | | | Assistant Professor | | | Total |
| | Male | Female | Others | Male | Female | Others | Male | Female | Others | |
| D.sc/D.Litt/LLD/DM/MCH | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ph.D. | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| M.Phil. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PG | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| UG | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| Part Time Teachers | | | | | | | | | | |
|------------------------|-----------|--------|--------|---------------------|--------|--------|---------------------|--------|--------|-------|
| Highest Qualification | Professor | | | Associate Professor | | | Assistant Professor | | | Total |
| | Male | Female | Others | Male | Female | Others | Male | Female | Others | |
| D.sc/D.Litt/LLD/DM/MCH | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ph.D. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M.Phil. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PG | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| UG | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| Details of Visting/Guest Faculties | | | | | |
|--|------|---|--------|---|-------|
| Number of Visiting/Guest Faculty engaged with the college? | Male | | Female | | Total |
| | 0 | 0 | 0 | 0 | |
| | 0 | 0 | 0 | 0 | 0 |

Provide the Following Details of Students Enrolled in the College During the Current Academic Year

| Programme | | From the State Where College is Located | From Other States of India | NRI Students | Foreign Students | Total |
|-----------------|--------|---|----------------------------|--------------|------------------|-------|
| UG | Male | 1001 | 17 | 0 | 0 | 1018 |
| | Female | 270 | 4 | 0 | 0 | 274 |
| | Others | 0 | 0 | 0 | 0 | 0 |
| PG | Male | 2 | 0 | 0 | 0 | 2 |
| | Female | 1 | 0 | 0 | 0 | 1 |
| | Others | 0 | 0 | 0 | 0 | 0 |
| Doctoral (Ph.D) | Male | 0 | 0 | 0 | 0 | 0 |
| | Female | 0 | 0 | 0 | 0 | 0 |
| | Others | 0 | 0 | 0 | 0 | 0 |

| Provide the Following Details of Students admitted to the College During the last four Academic Years | | | | | |
|--|--------|---------------|---------------|---------------|---------------|
| Category | | Year 1 | Year 2 | Year 3 | Year 4 |
| SC | Male | 5 | 4 | 1 | 2 |
| | Female | 1 | 1 | 1 | 0 |
| | Others | 0 | 0 | 0 | 0 |
| ST | Male | 0 | 0 | 1 | 0 |
| | Female | 0 | 0 | 0 | 0 |
| | Others | 0 | 0 | 0 | 0 |
| OBC | Male | 22 | 17 | 15 | 5 |
| | Female | 6 | 3 | 1 | 1 |
| | Others | 0 | 0 | 0 | 0 |
| General | Male | 308 | 370 | 305 | 225 |
| | Female | 90 | 98 | 98 | 84 |
| | Others | 0 | 0 | 0 | 0 |
| Others | Male | 20 | 18 | 20 | 14 |
| | Female | 4 | 4 | 5 | 1 |
| | Others | 0 | 0 | 0 | 0 |
| Total | | 456 | 515 | 447 | 332 |

Institutional preparedness for NEP

| | |
|--|--|
| <p>1. Multidisciplinary/interdisciplinary:</p> | <p>As the Institute is affiliated to the University of Mumbai, it adheres to the academic norms as well as syllabus prescribed by the University. The Institute is keen on applying for Autonomy status and plans to offer a multi-disciplinary flexible curriculum. Honor's and Minor degree programs are offered from third year to encourage learning in specialized domains. Courses/ Electives are included to educate students with soft skills and increase awareness towards environmental issues and ethics. With a continuous interaction with industries, students are encouraged to design solutions and conduct research on real-world problem statements. One of the best practices followed is that student teams work on</p> |
|--|--|

| | |
|--|--|
| | projects which require a mix of domain knowledge. |
| 2. Academic bank of credits (ABC): | The University of Mumbai has joined Academic Bank of Credits (ABC), which aims to promote curriculum adaptability and provide students the freedom to study as they choose. Fr. CRCE is ready to join Academic Bank of Credits (ABC). University of Mumbai has started this process for university-owned departments, and the institution must wait for its approval, which is expected soon. To join ABC, Institute is moving toward autonomy. The Institute's pedagogy is student-centric and faculty members use different methods. The University syllabus drafting committee members include many Institute teachers. Teachers can construct novel assignments and evaluation techniques under University of Mumbai syllabus framework. |
| 3. Skill development: | The UGC, AICTE, approved Institute meets NSQF eligibility requirements. Mumbai University is designing vocational and skill-based programmes that Institutes will accept after approval. All interested individuals can take courses in vocational education and skills, such as NC/CNC programming, CAD/CAM, and other areas. Many teachers have completed the Universal Human Value Course by AICTE to help inculcate a moral character in students. The credit structure is set up for skill-based labs like Python programming, Cloud Computing. Workers from IOCL Ltd were given vocational training at our Institute. |
| 4. Appropriate integration of Indian Knowledge system (teaching in Indian Language, culture, using online course): | The Institute uses English as its primary language of instruction in accordance with University norms. However, the Institute consistently supports our traditions and culture. The college magazine "Fragmag" provides a venue for Marathi and Hindi in addition to the English section. Students can connect with our culture and develop a respect for our tradition by taking part in the cultural event "Euphoria". The local language, Marathi, is the mother tongue of many faculty; making them eligible to teach courses in it. |
| 5. Focus on Outcome based education (OBE): | Fr. CRCE has adopted Outcome Based Education(OBE) in 2016 which focuses on measuring student performance through outcomes. Course Outcomes (CO), Program Outcomes(PO) and Program Specific Outcomes(PSO) are evaluated to |

| | |
|--|---|
| | <p>measure the knowledge, skills and behavior of students. The departments have developed the curriculum taking all the POs into consideration and assuring that the curriculum strongly maps to all the POs and the PSOs. The COs for a course are measured by following the assessment plan prepared by the course coordinator at the beginning of the semester. At the beginning of the academic year, the attainment levels are defined by the PAC and deliberated at DAB. The proposals are sent for approval by IQAC.</p> |
| <p>6. Distance education/online education:</p> | <p>The Institute has effectively adopted Online education. Faculty and students are acquainted with Google Meet, Google Classroom, Moodle and Zoom. The majority of the classrooms are equipped with overhead projectors, allowing teachers to switch between projections and chalk-and-board as needed. The library has Internet-connected computers where students can access digital materials including Journals, NPTEL Courses, and EBooks. The Institute is also registered as a SWAYAM-NPTEL Local Chapter. The Institute has the knowledge and resources to provide online distance training of emerging trends in engineering.</p> |

Extended Profile

1 Students

1.1

Number of students year wise during the last five years

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 1277 | 1251 | 1127 | 1136 | 1182 |

| File Description | Document |
|---|-------------------------------|
| Upload supporting document | View Document |
| Institutional data in the prescribed format | View Document |

2 Teachers

2.1

Number of teaching staff / full time teachers during the last five years (Without repeat count):

Response: 85

| File Description | Document |
|---|-------------------------------|
| Upload supporting document | View Document |
| Institutional data in the prescribed format | View Document |

2.2

Number of teaching staff / full time teachers year wise during the last five years

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 62 | 63 | 65 | 69 | 69 |

3 Institution

3.1

Expenditure excluding salary component year wise during the last five years (INR in lakhs)

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|-------------|-------------|-------------|-------------|-------------|
| 334.3746407 | 276.7052898 | 402.0277993 | 364.8279490 | 472.3549518 |

4. Quality Indicator Framework(QIF)

Criterion 1 - Curricular Aspects

1.1 Curricular Planning and Implementation

1.1.1 The Institution ensures effective curriculum planning and delivery through a well-planned and documented process including Academic calendar and conduct of continuous internal Assessment

Response:

Fr. Conceicao Rodrigues College of Engineering (FR.CRCE) is affiliated to the University of Mumbai. The University curriculum is revised every four to five years taking inputs from academic and industry experts. Our faculty members contribute in framing the syllabus as members/coordinators of syllabus revision committees.

Planning Steps:

- Comprehensive curriculum implementation guidelines are published by the Internal Quality Assessment Committee (IQAC).
- The institutional timetable committee, which includes at least one member from each department, is formulated by the Principal. Subject allocation is done by the Head of the departments in advance.
- Institute academic calendar is prepared by a timetable committee by collecting data from concerned faculty in charges, office, examination cell, etc. Then the approved academic calendar and time table is published on the Institute portal.
- The Departmental Academic Calendar is prepared by adding timelines and schedules for department-level activities and events like Lesson Plan Submission, final year project evaluation, Faculty Development Programs(FDPs), Industrial Visits, PAC meetings, DAB meetings.
- Department level academic activities are planned and monitored by the Departmental Quality Advisory Committee (DQAC) for effective curriculum delivery.
- Lesson Plan, consisting of Course Outcomes (COs), CO-PO-PSO Mappings, Targets, Tools used for attainment, Curriculum Gaps, Content beyond Syllabus and detailed Lecture Plan/Lab Plan, is prepared by concerned faculty members and reviewed by DQAC. The Lesson Plans are discussed in the class and uploaded on the web site for students to refer.

Curriculum Delivery Steps:

- Regular classroom teaching is supplemented with Guest Lectures, Seminars, Assignments, Quizzes, Tutorials, Case Studies, hands-on-sessions, Mini projects, Industry visits, Internships, Online resources, NPTEL lectures. The Learning Management System

(MOODLE) or Google Classroom is used by faculty members and students.

- Regular academic activities are monitored by class teachers and HODs along with the IQAC .
- Events are conducted as per the academic calendar which is ensured by faculty in-charges.

Monitoring Effectiveness of students learning:

- Internal Assessment tests are conducted and a mid-term academic progress report with attendance is conveyed to the parents. Advanced and slow learners are identified and necessary actions are taken wherever applicable.
- Internal test question papers and assignments are evaluated by DQAC.
- Periodic Final Year Project evaluation is organized by the Project Coordinator for continuous assessment of the project work.
- Term work assessment is based on continuous evaluation of student performance in laboratory/tutorials and assignments.
- End Semester examinations are conducted by the University.

Feedback and Outcome:

- Mid-term feedback is taken by the HODs from approximately 20 percent randomly selected students. End-term feedback is collected from all students.
- Course exit surveys are conducted by concerned faculty members and used for CO attainment calculation for respective courses.
- Academic audit is conducted every academic year to evaluate the curriculum delivery on parameters like course plan, teaching and learning methods, evaluation rubrics, lab experiments, attainment tools, CO Attainment, content beyond syllabus.
- Departmental Advisory Board (DAB) meetings are conducted every year. The board evaluates the department performance and recommends steps for curriculum enhancement and infrastructure improvement.
- Feedback / observations are noted and used for continuous improvement.

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1.2 Academic Flexibility

| |
|---|
| <p>1.2.1 Number of Add on /Certificate/Value added programs offered during the last five years</p> <p>Response: 0</p> |
|---|

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| |
|--|
| <p>1.2.2 Percentage of students enrolled in Certificate/ Add-on/Value added programs as against the total number of students during the last five years</p> <p>Response: 0</p> |
|--|

| <p>1.2.2.1 Number of students enrolled in subject related Certificate/ Add-on/Value added programs year wise during last five years</p> <table border="1"> <thead> <tr> <th>2021-22</th> <th>2020-21</th> <th>2019-20</th> <th>2018-19</th> <th>2017-18</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> </tbody> </table> | 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 | 0 | 0 | 0 | 0 | 0 |
|--|---------|---------|---------|---------|---------|---|---|---|---|---|
| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 | | | | | | |
| 0 | 0 | 0 | 0 | 0 | | | | | | |

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1.3 Curriculum Enrichment

| |
|---|
| <p>1.3.1 Institution integrates crosscutting issues relevant to Professional Ethics, Gender, Human Values, Environment and Sustainability into the Curriculum</p> <p>Response:</p> <p>Beyond technical aspects, the curriculum design and development has been reasonably dedicated to sensitizing students by imparting socially, professionally, and ethically relevant issues as part of the curriculum for cultivating their personality traits. The curriculum design focuses on major societal factors,</p> |
|---|

including Environmental Sustainability, Gender, Professional Ethics and Human Values, etc., by offering courses in the curriculum and supported by conducting various activities. Yoga day, blood donation camp, and beach cleanup campaign, to mention a few.

Human values and Professional Ethics:

Students are offered courses on professional ethics to insist on social, moral, and ethical values among them. In addition to that, courses like Project Management, Cyber Security and Laws, Human Resource Management and Professional Ethics and CSR are introduced to develop the right attitude among the students to face difficult situations in life and workplace bravely and assertively to resolve them. In addition to these courses, various activities are conducted to develop their ethical, moral, and social values. My story - the motivational talk, vrudhashram visit, world peace day, sustainable living and say no to drugs, to mention a few. These activities enable the students to exhibit their professional responsibilities with ethical standards.

Environment and Sustainability:

The curriculum is designed to take responsibility for environmental sustainability to conserve nature and natural resources and for the well-being of humankind and other living organisms. The Environmental Science and Engineering course is introduced in all programmes to inculcate the understanding of the economic, environmental, and social needs and promote conservation of natural resources and the protection of the environment. The courses like Environmental management and Energy Audit and Management are offered to maintain a healthy environment. In addition to these courses, various activities are conducted to develop environment awareness among the students. Beach cleanup, plastic collection drive and tree plantation and Unnat Bharat Abhiyan, to mention a few.

Gender equality:

The institute is committed to the principle of gender equality by providing both genders with equal opportunities for growth and development and an integrated and interdisciplinary approach to understand the social and cultural structure of gender that outlines the knowledge of women and men in society is promoted. Equal opportunities are offered for employment, training, co-extra-curricular activities, student chapters, placements and councils. The institute promotes the "Best All-Rounder" award for both male and female students who excel in academics as well as extracurricular activities and social work. The Women Development Cell deals with issues faced by female staff and students. The Girls common room provides a safe and comfortable environment. An Anti-Ragging Committee's role is to prevent ragging. To raise awareness among students, images depicting women's safety were exhibited on each floor of the institute.

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1.3.2 Percentage of students undertaking project work/field work/ internships (Data for the latest completed academic year)

Response: 11.67

1.3.2.1 Number of students undertaking project work/field work / internships

Response: 149

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1.4 Feedback System

1.4.1 Institution obtains feedback on the academic performance and ambience of the institution from various stakeholders, such as Students, Teachers, Employers, Alumni etc. and action taken report on the feedback is made available on institutional website (Yes or No)

Response: Yes

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Criterion 2 - Teaching-learning and Evaluation

2.1 Student Enrollment and Profile

2.1.1 Enrolment percentage

Response: 90.04

2.1.1.1 Number of students admitted year wise during last five years

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 305 | 298 | 260 | 233 | 260 |

2.1.1.2 Number of sanctioned seats year wise during last five years

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 318 | 318 | 318 | 276 | 276 |

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Institutional data in the prescribed format

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2.1.2 Percentage of seats filled against seats reserved for various categories (SC, ST, OBC, Divyangjan, etc. as per applicable reservation policy during the last five years (Exclusive of supernumerary seats)

Response: 100

2.1.2.1 Number of actual students admitted from the reserved categories year - wise during the last five years

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 34 | 24 | 18 | 8 | 8 |

2.1.2.2 Number of seats earmarked for reserved category as per GOI/ State Govt rule year wise during the last five years

| | | | | |
|---------|---------|---------|---------|---------|
| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
| 34 | 24 | 18 | 8 | 8 |

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2.2 Student Teacher Ratio

2.2.1 Student – Full time Teacher Ratio (Data for the latest completed academic year)

Response: 20.6

2.3 Teaching- Learning Process

2.3.1 Student centric methods, such as experiential learning, participative learning and problem solving methodologies are used for enhancing learning experiences using ICT tools

Response:

Student centric methods:

The student centric teaching methods are adopted in order to simplify the learning and at the same time to broaden the scope of learning. The basic blackboard teaching method is blended with the following latest teaching and learning methodologies using ICT tools such as virtual laboratory, youtube channels, simulation and animation videos, Google classrooms, online quizzes etc.

1. Experiential learning:

- **Project based learning:**

Students are given an opportunity to work on real time projects which teach them a practical approach to the designing and testing of the product. They also design and develop mini projects as a part of laboratory sessions.

- **Activity based learning:**

The faculty facilitate active learning through the following activities:

- **Debates, group discussions, skits/role play, movies**
- **Model making: Machining Science and Technology**
- **Hardware implementation as well as simulation of mini projects, presentations, case studies etc.**
- **Educational Games, Brainstorming Session**

- **Field based learning:**
Field-based learning allows the students to contextualize their learning experience in a real-world setting. For understanding the work environment in the industries, industrial visits are organized every academic year, both at department and Institute level. All departments encourage the students to undergo internships/summer training at various Industries. Students have demonstrated the knowledge, technical as well as non technical skills gained through the Internships, in their major and mini Project implementation, participation in various competitions, Hackathons etc. This eventually has benefited the students in getting good placement offers in reputed companies and admissions for higher education in good Institutes and Universities.

1. Participative learning:

- **Cooperative learning:**
Students work together to maximize their own and each others' learning through think pair-share, poster presentation techniques, Survey Form, Technical Paper Reading.
- **Paper presentation and publication:**
Publishing papers helps the students to learn the technique of technical paper writing and presentation skills. Hence, students are encouraged to publish papers in esteemed journals and conferences.

1. Problem solving methodologies:

- **Problem based learning:**

Students are encouraged to participate in various activities like project competitions, exhibitions, in which they learn to find solutions for complex and challenging problems. They are also motivated to take part in interdisciplinary project development like Robocon (Team Robocon), Baja (Team Abadha), SAE Aero Modelling (Team Vayushastra), Formula Racing (Team CFR), Go-Karting (Team Avisrota), building Drones (Mavericks), Smart India Hackathon and other coding competitions etc.

Students are also encouraged to take competitive exams like GATE, GRE/TOEFL, IELTS, CAT, MBA CET etc as well as take up NPTEL, Coursera, Codecademy, Udemy etc courses. College has access to the digital library with access to e-journals. College provides an ample computing facility with internet connection and Wi-Fi connectivity for fast access to help the students to further enhance their knowledge.

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2.4 Teacher Profile and Quality

2.4.1 Percentage of full-time teachers against sanctioned posts during the last five years

Response: 99.39

2.4.1.1 Number of Sanctioned posts / required positions for teaching staff/ full time teachers year wise during the last five years:

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 64 | 63 | 65 | 69 | 69 |

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2.4.2 Percentage of full time teachers with NET/SET/SLET/ Ph. D. / D.M. / M.Ch. / D.N.B Superspeciality / D.Sc. / D.Litt. during the last five years (consider only highest degree for count)

Response: 25.3

2.4.2.1 Number of full time teachers with NET/SET/SLET/Ph. D. / D.M. / M.Ch. / D.N.B Superspeciality / D.Sc. / D.Litt. year wise during the last five years

| | | | | |
|---------|---------|---------|---------|---------|
| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
| 18 | 18 | 17 | 18 | 12 |

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2.5 Evaluation Process and Reforms

2.5.1 Mechanism of internal/ external assessment is transparent and the grievance redressal system is time- bound and efficient

Response:

The Institute follows the Mumbai University guidelines for the internal assessment of the theory and laboratory courses. Complete transparency is maintained in all forms of internal evaluations.

The End Semester Examination results are displayed on the notice board. Students can apply for a photocopy/ reverification/revaluation of answer sheets within seven days after the result is declared and the result of reverification/revaluation is declared within 1 month.

Two Unit tests are planned in the academic calendar and accordingly conducted during each Semester; one in the middle of the term and one in the end of the term. The assessed test papers are shown to the students and the grievances are addressed if any. After every class test, report cards of the students showing the test performance and the attendance of the students are sent to the parents by the class teacher. The report cards duly signed by the parents are later collected by the class teacher. In the case of the students having poor performance in the test and/or poor attendance, a parents and teachers meeting is arranged to discuss the students' performance and ensure their wellbeing.

During the COVID period, online tests were conducted. The question paper and answer books were uploaded in the Google Classroom. For the benefit of the students and for maintaining transparency, the assessed test papers are shown to the students and discussed with them. For online tests, the marks were returned in the Google classroom.

The term work is graded based on the performance of the students in the laboratories as well as in the tutorial sessions and/or assignments. The laboratory sessions/tutorials/assignments are assessed on a weekly basis on the basis of the predefined

The progress of the mini project and final year projects is reviewed and evaluated twice in a semester. The marks awarded during these evaluations are displayed on the notice board and considered for the final evaluation at the end of the semester.

Apart from the two unit tests, the PG students present a research paper mentioned in the syllabus or any other topic on the latest development in technology in the field related to the course. The presentations are assessed and the marks are conveyed to the students.

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2.6 Student Performance and Learning Outcomes

2.6.1 Programme Outcomes (POs) and Course Outcomes (COs) for all Programmes offered by the institution are stated and displayed on website and attainment of POs and COs are evaluated

Response:

In the Outcome Based Education (OBE), each program of the college has clearly defined its Program Specific Outcomes (PSOs), Program Outcomes (POs) which are in line with Graduate Attributes and Vision, Mission of the institute. Each department under the guidance of IQAC (Institute Quality Assurance Committee) along with different stakeholders like industry experts, research academicians and alumni formulate the POs and PSOs.

The POs and PSOs are disseminated on the institute website, in laboratories and also printed on the course files of the students. They are periodically communicated to students during classroom teachings, seminars, workshops and other events.

The following process is followed to evaluate the COs and POs attainment.

Process to Measure CO attainment:

- 1. The teachers prepare lesson plans and articulate the Course Outcomes (COs) as per the syllabus and map those to the PSOs, POs.**

The lesson plan includes expected COs, mapping of CO with POs and PSOs, CO assessment tools, rubrics for grading, CO attainment target.

- 1. The Department Quality Assurance Committee (DQAC) reviews the lesson plan.**
- 2. Various assessment activities such as unit tests, assignments, laboratory experiments, quizzes are conducted throughout the semester as per the lesson plan to assess students' performance. Students' grades in these activities as well as end semester examinations are the tools used for CO attainment calculation.**
- 3. Each CO attainment is calculated as per the performance of the students in the above mentioned activities and the weightage assigned to each activity. according to mapping of each CO with various POs, the PO attainment of the course is calculated.**
- 4. Faculty members analyze CO attainment to identify remedial actions if necessary. DQAC verifies attainment and suggests remedial action.**
- 5. The remedial action is taken by the faculty during the following year to improve CO attainment.**

Process to Measure PO/PSO attainment

- 1. DQAC identifies tools and assigns weightage to measure PO and PSO attainment for each PO and PSO. eg. PO attainment through courses, various activities like projects, technical, non technical competitions, seminars, debates etc. Indirect tools such as graduate exit survey, employers' survey are also taken into consideration for PO attainment.**
- 2. DQAC sets target levels for PO and PSO attainment.**
- 3. DQAC formulates equations to calculate attainment based on the mapped activities and their weightage.**
- 4. The data related to CO and PO attainments of all courses is collected from the teachers while the data related to the various tools (activities) is obtained from the coordinators.**
- 5. The attainment of each PO and PSO is calculated as per the formula by the coordinator.**
- 6. DQAC verifies and analyzes PO and PSO attainments suggests the remedial actions to improvise the PO and PSO attainment.**
- 7. DQAC ensures implementation of remedial measures to improve PO and PSO attainment at department level or sets new target value during next academic year.**

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2.6.2 Pass percentage of Students during last five years

Response: 99.13

2.6.2.1 Number of final year students who passed the university examination year wise during the last five years

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 292 | 315 | 276 | 297 | 306 |

2.6.2.2 Number of final year students who appeared for the university examination year-wise during the last five years

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 295 | 315 | 277 | 303 | 309 |

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2.7 Student Satisfaction Survey

2.7.1 Online student satisfaction survey regarding teaching learning process

Response:

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Criterion 3 - Research, Innovations and Extension

3.1 Resource Mobilization for Research

3.1.1 Grants received from Government and non-governmental agencies for research projects / endowments in the institution during the last five years (INR in Lakhs)

Response: 6.24

3.1.1.1 Total Grants from Government and non-governmental agencies for research projects , endowments, Chairs in the institution during the last five years (INR in Lakhs)

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 0 | 0 | 2.5 | 1.93 | 1.81 |

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3.2 Innovation Ecosystem

3.2.1 Institution has created an ecosystem for innovations and has initiatives for creation and transfer of knowledge

Response:

The institute has an innovation ecosystem that is in constant evolution. The primary focus is on knowledge production and technological ownership.

The following initiatives have been adopted in order to establish new innovative practices:

Research and Development Committee

The Research and Development Committee organizes workshops for students and teachers to improve their understanding related to research and IPR and encourage research publications and patents.

Research Centre

The Institute has a Ph.D. research centre in Mechanical and Electronics Engineering to promote innovative research work and has aided in IPRs and journal / conference publications. Presently, the research centre has six and seven Ph.D. candidates pursuing Ph.D. in Mechanical and Electronics engineering. The research guides approved by University of Mumbai are available in Mechanical, Electronics, and Computer engineering.

Institute Innovation Council (IIC)

IIC-FrCRCE was established in November 2018 to promote a vibrant local innovation ecosystem to develop innovative mindsets and nurture technology students' innovative ideas through start-up support. IIC-FrCRCE initiated various innovation, startup and entrepreneurship related activities such as workshops, online Boot Camps, Seminars, Hackathons, Mini Challenges, success stories and interactions with professionals and alumni Entrepreneurs in the institute, Idea Competition, PoC Competition, Business Model Canvas, and Demo Day. The top three Idea Competition teams are felicitated during the yearly event. Innovation Trophy is also awarded to the student cell that enthusiastically organizes startup and innovation activities. 22 IIC members are currently trained as Innovation Ambassadors. Eleven members have registered as mentors on the IIC portal. IIC received 4.5 and 4 for 2019-20 and 2020-21.

Project Cell

Established in 2014, Project Cell is an endeavour to promote innovative thinking amidst young minds. The project cell has worked on projects involving technologies like IoT, Machine Learning, Artificial Intelligence. Project cell participates in E-yantra Robotics and Innovation challenge competitions held at IIT Mumbai. Project Pani puri vending machine and Coconut harvester won the best hardware design competition in Eyantra innovation challenge competition in 21-22 and 19-20 respectively.

Experiential learning and innovations by technical project teams

To promote innovations in the automotive, UAV and robotics domain, the institute has various technical project teams namely Abadha, CRCE Formula Racing (CFR), Mavericks, Vaayushastra and Robocon. These teams continuously employ novel methods, promoting innovation culture among students. Over the years, the teams have performed exceptionally well in national and international competitions involving ATVs, Go-Karts, Robotics, Aero, and Quad-copter.

E-cell

E-cell believes in creating and fostering entrepreneurial culture among budding engineers by identifying, training and motivating students to become entrepreneurs. The E-cell organizes various seminars, workshops and competitions to promote innovation among the students and help them realize their potential as future entrepreneurs.

Other activities

Our institute's partnership with Bennett University has provided new avenues for innovation and research in AI and machine learning for students and faculty. In order to familiarize scholars with developing technologies, workshops in emerging fields such as AI and deep learning are offered. Our students and teachers perform innovative projects in conjunction with Bennett University.

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3.2.2 Number of workshops/seminars/conferences including on Research Methodology, Intellectual Property Rights (IPR) and entrepreneurship conducted during the last five years**Response:** 83**3.2.2.1 Total number of workshops/seminars/conferences including programs conducted on Research Methodology, Intellectual Property Rights (IPR) and entrepreneurship year wise during last five years**

| | | | | |
|---------|---------|---------|---------|---------|
| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
| 43 | 10 | 16 | 8 | 6 |

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3.3 Research Publications and Awards**3.3.1 Number of research papers published per teacher in the Journals on UGC care list during the last five years****Response:** 1.01**3.3.1.1 Number of research papers in the Journals notified on UGC CARE year wise during the last five years**

| | | | | |
|---------|---------|---------|---------|---------|
| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
| 18 | 13 | 33 | 3 | 19 |

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3.3.2 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years**Response:** 1.92

3.3.2.1 Total number of books and chapters in edited volumes/books published and papers in national/ international conference proceedings year wise during last five years

| | | | | |
|---------|---------|---------|---------|---------|
| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
| 34 | 28 | 41 | 43 | 17 |

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3.4 Extension Activities**3.4.1 Extension activities are carried out in the neighborhood community, sensitizing students to social issues, for their holistic development, and impact thereof during the last five years.****Response:**

In the institute, various extension activities, social events and programs are carried out which reflect our commitment to operate in a techno-social responsible manner. These activities succeed in sensitizing and motivating the students to social issues and their holistic development. We aim to pursue our goals as one, keeping agreement with the planet and society.

The institute, under the Unnat Bharat Abhiyan (UBA) has been actively involved in the cluster of villages including Agashi, Arnala Killa, Dahe, Dongare, Khand, Mahim. The activities are conducted to help in transformational change in the rural development process. The team conducted a book donation drive for the school children of the respective gram panchayats and carried out a survey according to the UBA scheme in April 2022. The event helped the team to build a good relation and a strong point of contact with which would be further utilized to plan, coordinate and conduct future activities in the village. The team also conducted a counseling session for clearing the doubts in the minds of the students for selecting a future career path on 24th June 2022. The Counsellor from our college conducted an interactive session in consultation with the faculty of the zilla parishad school to address the issues of increased suicide rates among the students and also guided them regarding their future career paths.

The NSS unit in the institute has always stood up to its strong spirit of serving the society, keeping in mind the motto "Not Me but You". Rotaract club and TedxCRCCE council are also actively involved in the extension activities. The extension activities conducted in past five years include Marathon for health awareness, Mount Mary Traffic regulation during Mount Mary Fair, Blood Donation Camp, Cleanliness of Juhu Beach, Awareness on human Trafficking, Road Safety Awareness and Welfare, Climate change Workshop, Road Safety Awareness and Welfare, Plastic ban rally, organ donation workshop and a webinar on child labor, an evening with a cop, Yoga-day workshop, smoking pledge, blood donation camps, plastic ban rally, Corona awareness and many more.

These sensitizing activities also further result into programs which deal with various social issues and

environmental issues. For example, Climate change Workshop sensitized students and neighborhood communities in areas related to climate change and sustainability and further resulted into activities like Tree plantation and Waste Management activity.

Under IEEE student chapter training on basics of computers given to economically backward kids of Fr. Agnel Ashram. Social activities enhance and create social awareness and responsibilities among the students.

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3.4.2 Awards and recognitions received for extension activities from government / government recognised bodies

Response:

NSS, UBA, TEDx, Rotaract club Councils' activities are well appreciated.

- TEDx and NSS students received letters of appreciation from the Mumbai Police Commissioner's Office for traffic regulation at Mount Mary Fair.
- TEDx got appreciation for food distribution by Roti Foundation.
- NSS students received appreciation from the University for leadership training camp.
- NSS students received a letter of thanks for providing computer education and career guidance in Raigad based school.
- Swapnavan and Rotary Club praised Rotaract's social work. Rotary club also honored the faculty mentor with vocational excellence award.
- A school in Palghar appreciated UBA activity by college team for providing stationery to their children.

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3.4.3 Number of extension and outreach programs conducted by the institution through NSS/NCC/Red cross/YRC etc., (including the programmes such as Swachh Bharat, AIDS awareness, Gender issues etc. and/or those organised in collaboration with industry, community and NGOs) during the last five years

Response: 127

3.4.3.1 Number of extension and outreach Programs conducted in collaboration with industry, community, and Non- Government Organizations through NSS/ NCC/ Red Cross/ YRC etc., year wise during the last five years

| | | | | |
|---------|---------|---------|---------|---------|
| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
| 24 | 39 | 28 | 21 | 15 |

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3.5 Collaboration

3.5.1 Number of MoUs, collaborations/linkages for Faculty exchange, Student exchange, Internship, Field trip, On-the- job training, research and other academic activities during the last five years:

Response: 26

| File Description | Document |
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Criterion 4 - Infrastructure and Learning Resources

4.1 Physical Facilities

4.1.1 Availability of adequate infrastructure and physical facilities viz., classrooms, laboratories, ICT facilities, cultural activities, gymnasium, yoga centre etc. in the institution

Response:

- **The institution has adequate facilities to fulfil the norm laid by the AICTE, DTE, and University of Mumbai. The available facilities are enhanced by addressing the needs of students and faculty to support Research and Development activities in college campus.**
- **The institute has 19 classrooms, 1 tutorial room, 38 laboratories and 2 seminar halls, an auditorium, canteen, boys and girls common room, drawing hall, library and computer center.**
- **All the classrooms and seminar halls have LCD projector, Internet connectivity. well furnished furniture, ventilation, and luminance. Some classrooms are being fitted with Smart Boards. The institute has a seminar hall to conduct different activities such as technical workshops, debate, STTPs, etc. A public addressing system is available in the seminar hall.**
- **The Institute has a big auditorium called Samvaad with seating capacity 200 in the campus for conducting various activities. This hall is regularly used for conducting various activities such as placement, seminars, cultural events and conferences at the college, state and national level.**
- **Each department has well-equipped laboratories as per norms. Laboratories are regularly maintained and updated. The Charts and models are displayed in the laboratories for better understanding of theory and practical concepts. Laboratories are equipped with state-of-the-art machines/equipment and both open source and proprietary software.**
- **The institute has a central Research laboratory to promote R&D activities.**
- **The college has workshops and Machine shop for hands on training in carpentry, fitting, lathe Milling etc.**
- **For Internet access and computing purposes, the institute has a massive network of 586 computers with 350 Mbps bandwidth. Centralized Sophos UTM is used to monitor the usage of the Internet by individuals. All computers are connected by LAN and Internet.**
- **Central Library has compilation of books, journals, web-based resources, audio/video materials, etc with latest software for efficient functioning. It has an Internet Center with 25 dedicated computers on which students can access journals , NPTEL video, e-books. The Library is using commercial software Web OPAC for automation of Library Services. It will be updated to KOHA software from December 2022 onwards**
- **Training and Placement (T & P) cell uses the existing infrastructure to organise Training and**

Placement activities.

- For the physically impaired (Divyangjan) students, the institute provides ramps, washrooms and elevators.
- The institute has a volleyball court and basketball court. Facilities for indoor games like carrom, table tennis and chess are available in the students common room. We hire Professional Sport Grounds for outdoor sport activities.
- The need for infrastructure is analysed regularly, based on the Institute's requirements and updated to fulfill the requirements. Further, the top management periodically discusses with Principal and HODs regarding enhancement of infrastructural facilities to enable a suitable environment for effective teaching learning process.
- The college also maintains a parking facility, CCTV cameras, UPS and generators.

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4.1.2 Percentage of expenditure, excluding salary for infrastructure augmentation during last five years (INR in Lakhs)**Response:** 13.18**4.1.2.1 Expenditure for infrastructure augmentation, excluding salary during the last five years (INR in lakhs)**

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 33.45 | 1.52 | 27.46 | 40.7 | 140.71 |

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4.2 Library as a Learning Resource

4.2.1 Library is automated using Integrated Library Management System (ILMS), subscription to e-resources, amount spent on purchase of books, journals and per day usage of library

Response:

Library uses Proprietary software Libsuite for managing library transactions. This software helps the students and faculty to check books availability anywhere in the campus.

The Libsuite software mainly consist of 7 modules which are as follows:

- 1. Cataloging : This allows for register editing and updation, changing accession Number, facilitate interlibrary loan and Generate reports on Holding status , unique title and Missing accession numbers**
- 2. Circulation : In this Front desk operations are managed , reservation of book is facilitated, Report on Documents issued, received and Transactions can be generated**
- 3. Queries : This allows for Quick search on queries like new arrivals and procurement between dates, search on cost and generates list of documents**
- 4. Serial Control : This allows for Journal Add/list, kardex system and manage Subscriptions.**
- 5. Acquisition : This module consist of Acquisition Register, Purchase Order Generation , Payment Processing, Return/Receive of Documents and Manage Reports on the above**
- 6. Setup : This allows for managing user logins and managing other modules**
- 7. Housekeeping : this allows for Stock verification , Enter and delete Stock , clear log files and Update Index**

Software also provides statistical analysis required for Library Management systems such as daily, weekly, monthly, yearly transactions carried out in a particular period.

Library has membership with DELNET(Developing Library Network). The main objective of the Delnet is to promote Resource sharing among the member libraries by collecting, storing, and disseminating information and by offering networking services to users. The Resources available in Delnet are Union catalogue databases, CD ROM Databases, Union list of Video and sound recordings, Thesis and Dissertations, and ILL(Inter library loan) and Document Delivery services.

Library has Institutional membership for NDL(National Digital Library) for Students and Staff Members. who have access 24x7. It is a digital repository of 17 million-plus items containing textbooks, articles, videos, audio books, lectures, simulations, fiction and all other kinds of learning materials, in 200- plus languages from more than 170 institutions. It has been designed to hold content of any language and provides learning and research interface support for leading Indian languages. It is arranged to provide support for all academic levels including researchers and life-long learners from all disciplines and in all popular forms of access device and also to differently abled learners.

Library has nearly 25000+ Text Books, 5000+ Reference books and Encyclopedias published by CRC press, IEEE press, Elsevier, Springer, McGraw Hill, Kluwer publications, etc.

Library has a regular subscription of 6 Newspapers to create awareness about society, and the library has a unique display rack to display the newspaper cuttings projecting developments in Science & Technology, News, Current Affairs and events, etc.

Library is also well built with ‘E Resources’ like e-PG Pathshala, and e-books like Knimbus virtual library. Students are given QR codes to scan and open the E-journals in Mobile phones.

Further Upgradation of the Library software to ‘KOHA’ is scheduled to take place in December 2022.

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4.3 IT Infrastructure

4.3.1 Institution frequently updates its IT facilities and provides sufficient bandwidth for internet connection

Response:

The institute has a total of 586 computers for its students and staff.

The college is connected to the internet via a 350 Mbps Broadband ADSL line.

The college frequently updates its IT facilities including WiFi. Institute updates 4-5 labs every year. Laboratories are continuously updated with the latest version of computers such as i3, i5 and i7. 63 computers added in 2017-18, 56 in 2018-19, 111 in 2022-23.

In terms of computer hardware, high end Dell power edge T30 server, Lenovo SR 650 AI & ML, Dell Precision 3650 Tower i7 II generation, Windows server is available for smooth conduction of various activities such as online examinations, workshops, online competitive exams, virtual lab, etc. 4 Server's purchased in 2018-19, one in 2021-22 and 6 (4 workstation) in 2022-23.

AI and machine learning projects need to process high volumes of unstructured data with sophisticated mathematical models which demand the highest level of computing power and performance. Lenovo SR 650 (ML server) is made available to students for various project work and faculty for their research work. All the labs have machines with Linux, Ubuntu and Windows OS. Institute has a well established language lab to enhance communication skills of students and faculty.

The connectivity through a fully networked campus with state-of-the-art IT infrastructure, computing & communication resources, offers students the facilities of e-mail, net surfing, up/down loading of web based applications, besides helping them in preparing projects & seminars.

Licensed application software such as Virtual lab closed loop control system (2020-21), Labview, Ultiboard & Multisim (2017-18), Autocad 2008, Arena Software renewed from 2017, solidworks 2017-18, Charity SNET 2017-18, UG NX5 CAD/CAM Modeling and manufacturing software , Ansys 16.1, Windows 8.1, Windows 10, Fluid Sim 4.2 Pneumatic, Fluid Sim 4.2 (Hydraulic) , IBM RSA is available at institute level. Softwares are updated continuously. Apt-catcher is used as the internal caching server for faster installation of softwares.

We promote the use of Open source softwares and it is widely used on campus.

The institute has a Central login authentication system (LDAP) for using all available services in the campus.

Centralized Sophos UTM appliance is used for network security management of network/ internet facilities. UTM device offers complete visualization of activity based on application IP or network address, protocols, user etc.,

Biometric login system is used for staff attendance management. All students are provided with storage space in college drive, a cloud based self hosted file share solution.

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4.3.2 Student – Computer ratio (Data for the latest completed academic year)

Response: 2.36

4.3.2.1 Number of computers available for students usage during the latest completed academic year:

Response: 542

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4.4 Maintenance of Campus Infrastructure

4.4.1 Percentage of expenditure incurred on maintenance of infrastructure (physical and academic support facilities) excluding salary component during the last five years (INR in Lakhs)

Response: 85.06

4.4.1.1 Expenditure incurred on maintenance of infrastructure (physical facilities and academic support facilities) excluding salary component year wise during the last five years (INR in lakhs)

| | | | | |
|---------|---------|---------|---------|---------|
| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
| 270.43 | 191.65 | 304.66 | 355.97 | 451.17 |

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Criterion 5 - Student Support and Progression

5.1 Student Support

5.1.1 Percentage of students benefited by scholarships and freeships provided by the Government and Non-Government agencies during last five years

Response: 22.4

5.1.1.1 Number of students benefited by scholarships and freeships provided by the Government and Non-Government agencies year wise during last five years

| | | | | |
|---------|---------|---------|---------|---------|
| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
| 378 | 317 | 221 | 235 | 187 |

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5.1.2 Capacity building and skills enhancement initiatives taken by the institution include the following

1. Soft skills
2. Language and communication skills
3. Life skills (Yoga, physical fitness, health and hygiene)
4. ICT/computing skills

Response: A. All of the above

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5.1.3 Percentage of students benefitted by guidance for competitive examinations and career counseling offered by the Institution during the last five years

Response: 73.31

5.1.3.1 Number of students benefitted by guidance for competitive examinations and career counselling offered by the institution year wise during last five years

| | | | | |
|---------|---------|---------|---------|---------|
| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
| 551 | 1106 | 830 | 1483 | 409 |

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5.1.4 The Institution has a transparent mechanism for timely redressal of student grievances including sexual harassment and ragging cases

1. Implementation of guidelines of statutory/regulatory bodies
2. Organisation wide awareness and undertakings on policies with zero tolerance
3. Mechanisms for submission of online/offline students' grievances
4. Timely redressal of the grievances through appropriate committees

Response: A. All of the above

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5.2 Student Progression

5.2.1 Percentage of placement of outgoing students and students progressing to higher education during the last five years

Response: 55.84

5.2.1.1 Number of outgoing students placed and / or progressed to higher education year wise during the last five years

| | | | | |
|---------|---------|---------|---------|---------|
| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
| 180 | 190 | 132 | 147 | 188 |

5.2.1.2 Number of outgoing students year wise during the last five years

| | | | | |
|---------|---------|---------|---------|---------|
| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
| 295 | 315 | 277 | 303 | 309 |

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5.2.2 Percentage of students qualifying in state/national/ international level examinations during the last five years (eg: JAM/CLAT/GATE/ GMAT/ CAT/ GRE/ TOEFL/ Civil Services/State government examinations)

Response: 100

5.2.2.1 Number of students qualifying in state/ national/ international level examinations (eg: JAM/CLAT/NET/ SLET/ GATE/ GMAT/CAT/GRE/ TOEFL/ Civil Services/ Judicial Services/Public Prosecution services/All India Bar Exams/State government examinations) year wise during last five years

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 37 | 30 | 38 | 27 | 40 |

5.2.2.2 Number of students appearing in state/ national/ international level examinations (eg: JAM/CLAT/NET/ SLET/ GATE/ GMAT/CAT,GRE/ TOFEL/ Civil Services/ State government examinations) year wise during last five years

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 37 | 30 | 38 | 27 | 40 |

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5.3 Student Participation and Activities

5.3.1 Number of awards/medals for outstanding performance in sports/ cultural activities at University / state/ national / international level (award for a team event should be counted as one) during the last five years

Response: 12

5.3.1.1 Number of awards/medals for outstanding performance in sports/cultural activities at

national/international level (award for a team event should be counted as one) year wise during the last five years

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 1 | 0 | 5 | 2 | 4 |

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| Institutional data in the prescribed format | View Document |

5.3.2 Average number of sports and cultural programs in which students of the Institution participated during last five years (organised by the institution/other institutions)

Response: 4.2

5.3.2.1 Number of sports and cultural programs in which students of the Institution participated year wise during last five years

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 4 | 1 | 7 | 5 | 4 |

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5.4 Alumni Engagement

5.4.1 There is a registered Alumni Association that contributes significantly to the development of the institution through financial and/or other support services

Response:

The Institute established the Alumni Association in the Academic year 1993 - 94. The Alumni committee is functional since 1994 with the objectives to promote and foster mutually beneficial interaction between Alumni and the Institute, to encourage the Alumni to take abiding interest in the process and development of Institute, to arrange and support placement activities for the students of Institute, to encourage the students of the Institute and members of the Association for research and development work in various fields, to mentor the students of the Institute for higher education, to guide the students of the Institute on

self-employment to become entrepreneurs, to promote the Industry-Institute interaction to bridge the gap between industry requirements and education offered and enhance students' employability.

Citing the above objectives of Alumni Association, our Alumni contributes to the development and betterment of the Institute. Our students and Institute are benefited in various fields such as student placement, training, expert lectures, career guidance sessions and mentoring. The Alumni guides and nurtures our students to become engineering professionals.

Contribution from Alumni:

Financial Contribution:

Our Alumni contributes significantly to the development of the Institution through financial means. Our Alumnus from batch 1995, Mr. Suresh Balakrishnan has instituted a yearly scholarship of around 4-7 lakhs from AY 2018-19 for deserving but economically-constrained students. This academic year 2021-22, he had sponsored 7 lakhs and also Mr. Milind Mehere from 1995 branch, has contributed 1.51 lakh.

Non - Financial Contribution:

Expert speakers: Alumni are invited for guest lectures in their respective domains, as Keynote speakers for training programs, Career counseling seminars, etc.

Curriculum enrichment: Alumni contribute for curriculum enrichment through their structured feedback on the curriculum in-order to keep pace with the recent advancements in industry. They also help us to mitigate the identified gaps through beyond-syllabus activities like Hands-on Workshops, Guest lectures and value-added courses.

TEdx, Euphoria Guest: Alumni are invited to grace as Guests of Honor for our Annual Cultural fest Euphoria and also as speakers for Tedx- CRCE.

IQAC: Alumni are active members of Internal Quality Assurance Committee (IQAC) and their valuable inputs are used for quality enhancements.

Placements & Internship: There is an active contribution of our Alumni towards placements as well as student internships.

DAB & Governing Council: Alumni are also invited on the Department Advisory Board (DAB) of the various programs and also as a member of Governing Council of the Institute. They contribute by regularly attending meetings and give their inputs.

Alumni Spotlight: The CRCE Alumni Spotlight brings to the forefront the successful journeys of the iconic personalities who graduated from our Institute. The Alumni Spotlight is a series of videos from the distinguished alumni of CRCE which bring to the light their successful journeys with the intention to motivate and spark action from the student and alumni base.

Alma connect: Alumni committee has a networking portal Alma Connect. Alma Connect is a social network based on private alumni networks focused on helping an alum / student get trusted help from his/her alumni network. Help ranging from getting referral for jobs, advice for careers, recommendations

for services, introductions, fund raising etc. Alumni committee use Alma Connect for strengthening our alumni relations and leveraging the network for increasing placements and branding.

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Criterion 6 - Governance, Leadership and Management

6.1 Institutional Vision and Leadership

6.1.1 The governance and leadership is in accordance with vision and mission of the institution and it is visible in various institutional practices such as decentralization and participation in the institutional governance

Response:

The Governing Council is the topmost body to frame the policies as per the vision and mission of the institute. The Governing Council comprises highly experienced members with acute foresight into the matters concerned with the development of the institute. The various proposals by the Governing Council truly reflect the determined efforts to ensure vision and mission are accomplished. For example, the addition of state-of-the-art equipment in all the laboratories, approving policies for the holistic development of students and looking after regular recruitment of faculty. In addition, management has set up a Local Council (LC) committee to take important decisions as regards the governance of Agnel Educational Complex.

Institute follows the culture of a well-defined decentralised governance system.

The Principal, being the Head of the Institution, is authorised to take academic and administrative decisions like preparation & execution of the academic plan, budgetary plan, infrastructure development, and so on. Adequate autonomy and freedom are given to all departments. HOD is the primary decision authority in the department. Input from all stakeholders is collected before decisions are implemented. HODs are also part of the Institutional Level (IL) committee that looks after approving and implementing the rules at the institutional levels. HODs can decide the budgetary requirements of their department. HODs have the authority to approve and allocate seed money required for students' projects and activities. The decisions after approval will be made available to all the staff for proper execution. This will enable each staff member to participate in the decision-making process and ensure the fulfilment of the vision and mission of the institute.

Senior faculty members are given the responsibility to head different administrative bodies and participate in the decision-making process. For example, IQAC, IIC, Student Affairs, Exam cells, Research and Development, IRG, etc. All the student activities at the institute level are the responsibility of the In-charge (Student affairs). Accreditation of various programs by the NBA and the Institute by NAAC is the responsibility of the IQAC.

Faculty members are given an opportunity to function as team leaders for various committees and activities at the department as well as institute level. Both faculty and student representatives are actively involved in carrying out extracurricular, co-curricular, cultural & technical events and sports activities.

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6.2 Strategy Development and Deployment

6.2.1 The functioning of the institutional bodies is effective and efficient as visible from policies, administrative setup, appointment and service rules, procedures, deployment of institutional Strategic/ perspective/development plan etc

Response:

Policies and Administrative Set-Up:

Appropriate policies and properly planned administrative set up are the two key factors for the success of any educational institution. At the institution level following policies are implemented /revision under the process:

- 1.Policies related to quality improvement:
- 2.Research and Ethics Policies:
- 3.Policies as regards day today activity(academic/Non-academic):
- 4.Training and Placement policy:
- 5.IRG policy(under process):
- 6.Start up cell policy(under process):

Administrative set up is split in two levels for smooth functioning of the organisation viz. Institutional Level and Departmental Level. Organisational set up with proper flow of information is shown in the links provided.

Appointment, Service Rules And Procedures:

Being an affiliated college to University of Mumbai, we at our institute adhere to the procedures laid down by University and Maharashtra Public University act. A copy of service rules, procedures applicable to appointment of faculty and other procedures, is available on the institute website.

Deployment of Strategic/ Perspective/Development Plan:

Strategy Deployment helps to set clear execution goals, establish effective metrics, cascade accountabilities, and diagnose bottlenecks. Following are the strategies adopted by the institute.

- 1.Autonomy: Got Permanent affiliation from University of Mumbai. first milestone towards autonomy. Also processed 12b and 2f and forwarded to UGC. Awaiting response from UGC.
- 2.Industry Collaboration: To enhance Industry-Institute interaction,MoU's are signed with Industries. Honours and Minor degrees introduced as per University curriculum . This has an overwhelming

response from students while selecting interdisciplinary courses. (impact on admissions).

3. Research and Development: Quest for institute to be a research hub, Research and Ethics policies are in place to promote the research culture among students and staff. In order to enhance the quality of research papers, the Institute has purchased Turnitin plagiarism check software. Students as well as faculty are required to use the software before submitting the research papers and/or project reports. College has a policy of ensuring a similarity index below 20%.
4. Steps towards NEP implementation: Institute has taken steps to implement National Education Policy (NEP) to ensure Holistic development of the students.
5. Quality improvement: Better the facilities Examination reforms, Blended learning
6. In order to maintain the continuity of communication, role based mail IDs are provided to the faculty-in-charges. For example: principal.crce@fragnel.edu.in, hodprod@fragnel.edu.in

Strategy deployment as regards Quality Improvement shown below:

Blended Learning:

Blended learning is planned to be implemented from the academic year 2023-24. Objectives of blended learning are:

- Facilitating the students to attend the theory classes in online mode. This will benefit them to reduce their commuting time on a day-to-day basis. It is mandatory for the students to attend practical sessions in offline mode only because “engineering is essentially practical”.
- To encourage the students to use online resources available at the institute. For example: e-Library, e-Journals etc.
- To utilise the available time for enhancing innovation and creativity.

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6.2.2 Implementation of e-governance in areas of operation

1. Administration
2. Finance and Accounts
3. Student Admission and Support
4. Examination

| | |
|--------------------------------------|-------------------------------|
| Response: A. All of the above | |
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6.3 Faculty Empowerment Strategies

6.3.1 The institution has effective welfare measures and Performance Appraisal System for teaching and non-teaching staff

Response:

Appraisal System for teaching and non-teaching staff

Based on the feedback from the employees, management has implemented flexible official reporting timings and online leave application policy. Management nurtures the process of connecting well with its staff by extending benefits to its employees. Given below are the few welfare schemes for the staff:

1. Accidental Insurance.
2. Agnel Cooperative Credit Society.
3. MOU with holy family hospital

Accidental Insurance is one such scheme. Eligible staff members are insured up to Rs 1 lac and expenditure will be borne by insured firm in the case of accident met by an employee.

Agnel Employees Co-Operative Credit Society was started way back in 1985. Eligible staff becomes member and avails the different loans like long term loans, medium term loans and emergency loans. Loan amount ranges from 10,000 to 7.5lacs and may be paid in upto 180 months. Term insurance equal to the amount of loan is mandatory with single insurance premium, an initiative by the institute to take care of an employee's family in the case of untimely death.

For Medical assistance, the management has signed an MOU with Holy Family hospital. This facility is for students as well as staff members. Any student or staff will be given first aid treatment at the institute premises and later will be shifted to holy family hospital for further treatment. Recently our employees Deepak Gaikwad and Sakshi Sukale have availed the facility. Staff members are sent for training in domains of their choice. To facilitate the upgradation of qualifications, faculty are sponsored for Post graduate or Doctoral programmes with reduced teaching load and can avail O/D if required.

Performance Appraisal System:

The Teacher Performance Appraisal System provides teachers with meaningful appraisals that encourage professional learning and growth. The process is designed to foster development and identify opportunities for additional support where required. The performance appraisal process helps teachers achieve their full potential.

Performance Appraisal is based on three parameters Teaching Learning Process, Research/Consultancy, Administration. Duly filled form with relevant documents of faculty are processed by the IQAC and referred to the principal for further processing. Each faculty is evaluated based on the courses taught, Activities Beyond Syllabus, innovation in teaching, Contribution towards Learning Resources Development at Institute, UG/PG projects guided, Efforts for Lab Work/Tutorials and University related work.

Academic audit, of faculty and department, is conducted each year by an external expert.

Student Development comprises of results, average student attendance, student feedback, co-curricular activities, mentoring and placement in the preceding year.

The Institutional Development comprises efforts of faculty towards the overall development of the institute like participation in conferences, STTPs, FDPs etc., participation in various committee's activities, revenue generation and funding, service to community or product development, governance responsibilities and interaction with the outside world. Professional Development is evaluated based on publications, patents, qualification upgradation, honours/awards, fellowship received and books published.

Appraisal System -Non-Teaching Staff:

Skills, and abilities of non-teaching staff are assessed. Quality assessment refers to evaluation against predetermined standards and procedures.

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6.3.2 Percentage of teachers provided with financial support to attend conferences/workshops and towards membership fee of professional bodies during the last five years

Response: 14.63

6.3.2.1 Number of teachers provided with financial support to attend conferences/workshops and towards membership fee of professional bodies year wise during the last five years

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 0 | 1 | 8 | 18 | 21 |

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6.3.3 Percentage of teaching and non-teaching staff participating in Faculty development Programmes (FDP), professional development /administrative training programs during the last five years

Response: 36.34

6.3.3.1 Total number of teaching and non-teaching staff participating in Faculty development Programmes (FDP), professional development /administrative training programs during the last five years

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 18 | 41 | 33 | 12 | 17 |

6.3.3.2 Number of non-teaching staff year wise during the last five years

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 0 | 0 | 0 | 4 | 1 |

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6.4 Financial Management and Resource Mobilization

6.4.1 Institution has strategies for mobilization and optimal utilization of resources and funds from various sources (government/ nongovernment organizations) and it conducts financial audits regularly (internal and external)

Response:

The college is self-financed and the primary source of income is tuition fees received from the students. The Fee regulating authority of the State government approves the tuition fees.

IRG courses, corporate training and conducting examinations on behalf of Government and Non-Government organisations like GATE, CET ,NEET etc. mobilise the funds. In addition, some industries sponsor co-curricular and extra curricular activities of the students.

Optimum utilisation of funds:

The funds so mobilised are used for conducting orientation programmes, workshops, FDPs and training

programmes to ensure quality education. Adequate funds are utilised for development and maintenance of infrastructure of the institute towards upkeep of the tangible fixed assets, repairs and maintenance of administrative areas, laboratories, classrooms, gymkhana etc. The funds are allocated to conduct Guest lectures by eminent experts.

Institute has an Accounts and Finance section in the administrative office which is headed by the Registrar. Administrative department maintains the data related to all financial transactions of the Institute. Agnel Technical Education Complex also has a Financial Officer to regularly assist Accounts and Finance section in all the finance related matters. Internal and external auditing is a regular feature of Agnel Technical Education Complex. The Institute completes an audit of its finances by a government authorised auditor. Cash and bank vouchers, purchase orders, bills, bank reconciliation reports, students fee reconciliation report, salary registers, ledgers etc. are verified during the audit process. The Audited Balance sheet, income and expenditure statement are prepared and then approved by the Local Managing Committee (LMC) and Governing Council.

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6.5 Internal Quality Assurance System

6.5.1 Internal Quality Assurance Cell (IQAC) has contributed significantly for institutionalizing the quality assurance strategies and processes. It reviews teaching learning process, structures & methodologies of operations and learning outcomes at periodic intervals and records the incremental improvement in various activities

Response:

Internal Quality Assurance Cell (IQAC), is established at the institute level to propose and implement quality assurance strategies and processes. IQAC strategies may be implemented to materialise the following

1. Strategies and process to improve the general and academic administration.
2. To frame the processes in tune with requirements of statutory bodies such as NBA and NAAC as well as Autonomy related and any other requirements of UGC and/or AICTE.

Once the strategies and processes are established, IQAC is committed to review the proper implementation of the same. Its one more primary objective is to review teaching-learning processes and learning outcomes at regular intervals. Following processes are in place to assure the quality in teaching learning process:

- Subject allocation is done at the end of the semester to facilitate the faculty to prepare course material and additional material in advance.

- Faculty submits the lesson plan as well as laboratory sessions plan(if any), at the beginning of the semester. Department Quality Assurance Cell (DQAC) at the department level ensures proper preparedness of these.
- Regular monitoring of lectures and practical sessions at the department level by DQAC.
- Assessing the quality of Unit Test papers, assignments and laboratory manuals by DQAC.
- Collecting the mid-term feedback from students for corrective action needed.
- Feed back at the end of the semester to monitor and ensure the implementation of corrective actions suggested.
- CO, PO and PSO attainments are calculated and recorded. Based on attainment values, remedial actions are suggested by DQAC, if not attained.
- Actions suggested by DQAC are implemented by respective departments during the next academic year.
- DQAC submits reports to IQAC for further action.

| File Description | Document |
|---|-------------------------------|
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| Provide Link for Additional information | View Document |

6.5.2 Quality assurance initiatives of the institution include:

1. Regular meeting of Internal Quality Assurance Cell (IQAC); Feedback collected, analysed and used for improvements
2. Collaborative quality initiatives with other institution(s)/ membership of international networks
3. Participation in NIRF
4. any other quality audit/accreditation recognized by state, national or international agencies such as NAAC, NBA, ISO Certification etc

Response: A. All of the above

| File Description | Document |
|---|-------------------------------|
| Upload supporting document | View Document |
| Institutional data in the prescribed format | View Document |

Criterion 7 - Institutional Values and Best Practices

7.1 Institutional Values and Social Responsibilities

7.1.1 Measures initiated by the Institution for the promotion of gender equity and Institutional initiatives to celebrate / organize national and international commemorative days, events and festivals during the last five years

Response:

The institute is committed to the principle of gender equality by providing both genders with equal opportunities for growth and development. The institute provides a platform for empowering women. It provides events and workshops with a focus on empowering female professors and students and promoting their engagement. Programs such as International Women's Day demonstrate our dedication to honouring women's power. It is commemorated by inviting and honouring women achievers from various fields, which serves to inspire female members of the institute. Through our TEDx platform, we invite eminent and successful female entrepreneurs and torchbearers to our campuses to share their struggles and success stories, which motivate our members. The institute encourages the participation of female staff and students.

The institute has a Women Development Cell (WDC) to address professional issues faced by female staff and students. The Internal Complaints Committee (ICC) has been established by the college to address sexual harassment of women at work. The institute has an Anti-Ragging Committee to ensure compliance with the provisions of the regulations as well as any law currently in effect concerning ragging, as well as to monitor and oversee the performance of the Anti-Ragging Squad in preventing ragging in the institution. During the First Year Induction program, students are made aware of these committees.

The institute has joined forces with Nimaya Foundation and Katalyst NGO for improving the prospects of economic strength of women. The institute has promoted the "Best All-Rounder" award for students who excel in academics as well as extracurricular activities and social work. For both awards, equal opportunity is given to male and female candidates to participate and compete. The award is given to male and female students separately. This will ensure that comparisons of achievement by different genders are rational. There is a common room facility for female members of the institute, which provides a safe and comfortable environment.

Our Institute celebrates/organizes national and international commemorative days, events, and festivals. The faculty, staff, and students of the institution all come together to celebrate these occasions. The institute organises seminars to spread the message of unity, peace, love, and happiness on International Yoga Day, World Peace Day, Teacher's Day, National Pollution Day, National Science Day, Unity day and World Environment Day.

In accordance with the AICTE guidelines, Constitution Day (Samvidhan Diwas) is celebrated every year on 26th November, to commemorate the adoption of the Constitution of India and to honor the contributions of Founding Fathers of the constitution. This year the day is being celebrated on the subject of "India-the Mother of Democracy".

| File Description | Document |
|---|-------------------------------|
| Upload Additional information | View Document |
| Provide Link for Additional information | View Document |

7.1.2 The Institution has facilities and initiatives for

1. Alternate sources of energy and energy conservation measures
2. Management of the various types of degradable and nondegradable waste
3. Water conservation
4. Green campus initiatives
5. Disabled-friendly, barrier free environment

Response: A. 4 or All of the above

| File Description | Document |
|----------------------------|-------------------------------|
| Upload supporting document | View Document |

7.1.3 Quality audits on environment and energy regularly undertaken by the Institution. The institutional environment and energy initiatives are confirmed through the following

1. Green audit / Environment audit
2. Energy audit
3. Clean and green campus initiatives
4. Beyond the campus environmental promotion activities

Response: C. Any 2 of the above

| File Description | Document |
|----------------------------|-------------------------------|
| Upload supporting document | View Document |

7.1.4 Describe the Institutional efforts/initiatives in providing an inclusive environment i.e., tolerance and harmony towards cultural, regional, linguistic, communal socioeconomic and Sensitization of students and employees to the constitutional obligations: values, rights, duties and responsibilities of citizens (Within 500 words)

Response:

The institute is consistently working to foster an inclusive environment and to create awareness among students and faculty toward constitutional obligations and cultural harmony.

Students actively participate in the activities conducted by the National Service Scheme (NSS) unit of Fr. CRCE (NSS-CRCE), which was initiated to provide an opportunity for students to serve society. NSS CRCE organises activities at school for special children, blood donation camps, collection drives (clothes, stationery, toys) to benefit underprivileged people, and visits to old age homes and orphanages to create a

sense of responsibility towards socio-economic issues. NSS-CRCE also organises seminars to create awareness among the students about social issues and challenges. The institute provides scholarship opportunities to economically underprivileged students to motivate them for continuing education.

Through flagship event, Fr. Conceicao Rodrigues Memorial Debate (CRMD) at the national level, the institute provides avenues for boosting cultural and linguistic diversity awareness and sustaining harmony in relation to the same. Some of the topics discussed in the debates foster critical thinking about cultural and linguistic issues, which contributes to the creation of an inclusive atmosphere for these issues. The students of the institute participate in various regional and cultural events like crowd management during the Mt. Mary fair and the Ganesh festival etc.

The institute conducts events like voter awareness drives through NSS CRCE to create awareness about voting among students and an awareness seminar about the Right to Information Act (RTI) as a constitutional right. It also conducts events related to saving the environment, beach clean-up drives, blood donation drives, etc. to sensitise students and staff towards their duties as citizens. Certain events organised by the institute also consider the protection of other living organisms like animals and plants as a part of the fundamental duties of citizens.

The institute also encourages staff to participate in Faculty Development Programs related to Universal Human Values. Such staff members create awareness about such values among students and other staff members by conducting seminars.

To summarise, the institute takes initiatives by various means to create an inclusive environment for maintaining harmony and to sensitise students and faculty towards constitutional obligations.

| File Description | Document |
|---|-------------------------------|
| Upload Additional information | View Document |
| Provide Link for Additional information | View Document |

7.2 Best Practices

7.2.1 Describe two best practices successfully implemented by the Institution as per NAAC format provided in the Manual

Response:

Best Practice 1

1. Title of the Practice

Open-Source Culture and In-house Software Development

2. Objectives of the Practice

Proprietary commercial software is expensive, has licensing limitations, and annual fees. Commercial software's limited customization affects learning outcomes and administrative tasks. The college suggested developing an ecosystem to promote open-source technologies and in-house software development for academic and administrative purposes.

3. The Context

Open source and in-house software development allow for more transparent decision-making and stakeholder ownership. Software development and deployment requires clarity of processes. Stakeholders must provide feedback frequently. Before employing open-source software in the lab, special training programmes must be organised. Open-source culture promotes diversity, transparency, and openness. Teamwork and collaboration are necessary for institute-level software development and use.

4. The Practice

For lab work and projects, college recommends open-source software and tools. Students can use Libreoffice, OpenCV, PyTorch, OpenNN, TensorFlow, LaTeX, Octave, Scilab, GCC compiler, JDK, Eclipse, Umbrello, GNU plot, python compiler, packet tracer, NS2, Apache Hadoop ecosystem, and others to conduct lab experiments on desktop PCs. College has a Linux cloud. Project groups are mentored to use open-source technologies for academic projects/contests.

Developers can freely change code in open-source technology without any restrictions. Software's could be tailor made as per the necessity of institution or department. Open-source has a great chance of success that can deliver a great value. Open source technologies are reliable and virus free. Hence, there are many applications which the institution require that are developed in-house using open source tools. Following are the examples of applications developed:

- Application for

1. Admission
2. Biometric marking
3. Leave Application
4. Service Records
5. Student Attendance Marking
6. Payment of Fees
7. Examination e.g. Marksheet Printing
8. Maintenance of Stores (In-process)
9. Allotment of Invigilation Slots
10. International Conference Review Process

Most of the commercial software's available in the market for academic engagement and also governance in higher education institutions are developed by multinational companies. This culture of open source will create confidence among students to develop in-house applications.

CRCE has signed MoU with Linux Professional Institute (LPI) which is the global certification standard and career support organization for open source professionals. Students and faculty are given courseware for self-learning and then they can get themselves certified as Linux Professionals.

5. Evidence of Success

Software's developed are used in day-to-day college administration. Laboratory classes also employ open-source tools. This method has other benefits besides cost savings:

1. Code customization and innovation for institution needs.
2. It cultivates curiosity and ingenuity.
3. Promotes adding, replacing, or upgrading features.
4. Invites third-party developers/contributors to collaborate.
5. In-house apps are reliable, open, and trustworthy.
6. Open-source tools allow unrestricted learning.
7. Easy source code modification.
8. Create virus-free environment without antivirus software.
9. Faculty and students use all produced apps for academic, research, and administrative purposes.

6. Problems Encountered and Resources Required

Regular Maintenance: Teams must manage, maintain, upgrade, and innovate code throughout. Need to streamline procedures so newcomers can learn the tool quickly.

Governance: Open-source software deployment and maintenance require careful planning.

Absence of vendor support: During lab sessions, you must address problems alone or with open-source communities.

Interoperability of Tools Creating Silos: Some open-source tools are so independent that they don't give uniformity or easily connect and integrate. Data from multiple departments or sources is challenging. Application integration is difficult.

Deployment to a larger scale: Software often works well in prototype projects but fails when deployed on a broader scale.

Best Practice 2

1. Title of the Practice

Special Employability Training

2. Objectives of the Practice

- To improve the student's employability and prepare them for the competitive world.
- To prepare students for interviews and improve placement using a constructivist approach and different soft skills, communication skills, and intrapersonal abilities.
- To engage students in collaborative learning from the first year to the last for crucial career,

industrial, and entrepreneurship knowledge.

3. The Context

To make students employable, communication and aptitude trainings are conducted. Internships, problem-solving, and social learning theory were encouraged during the pandemic. The Training & Placement Cell (TPC) provides aptitude training and pre-placement evaluation to students. Supporting Placement & Higher Education Requirements in Engineering (SPHERE) provides students with a 360-degree support system for career counseling, higher education, placements, skill development, academic guidance, and more. The college's Alumni Portal connects students with alumni for internships and study abroad guidance.

4. The Practice

The institute's Professional Communication and Ethics course has developed a realistic approach to education that meets students' requirements and corporate demands. The curriculum teaches soft skills. Listening, Speaking, Reading, and Writing are prioritised. Interpersonal skills including Leadership, Team Work, Time Management, Negotiation and Decision making, Emotional Intelligence, constructivist approach, collaborative learning approach, social learning theory-based approach, etc. are also taught to the students.

Activities like role plays, case studies, group discussions, mock interviews, etc. are also conducted to render hand-in-glove recruitment experience used by esteemed companies for recruitment procedures. The images below show an on-going session.





The institute uses technology to engage students on multiple platforms for outside-classroom learning. Events help students improve presentation, persuasive, and marketing skills. TPC continually interacts with stakeholders to develop a strong brand presence in industries.

TPC inspires and prepares students for interviews and potential jobs. TPC and department staff and student coordinators provide career guidance, internships, and employment to promising engineers.

Students apply for internships. The institute helps them find reputable company for internships. Internship fairs play a significant role in registering the concept of internships among students.

5. Evidence of Success

- Student feedback and placement records.
- Improved student communication and confidence.
- Improved On-Campus and Off-Campus performance.
- Technical skills and HR interviews have increased for students.
- Increased student participation.
- Improved student entrepreneurship.
- Increased industry networking.
- Foreign multinationals are joining our list.

Placement Statistics

| Academic Terms | Overall Placements of Students Eligible & Interested (%) | Students Opting Higher Studies & Other Careers (%) | Highest Salary Package Offered (Per Annum) | Average Salary Package Offered (Per Annum) | Total Number of Companies Visited On Campus |
|----------------|--|--|--|--|---|
| 2016-2017 | 82 | 18 | INR 14,45,000/- | INR 3,95,000/- | 48 |
| 2017-2018 | 81 | 19 | INR 16,60,000/- | INR 4,57,000/- | 51 |
| 2018-2019 | 80 | 20 | INR 18,00,000/- | INR 5,45,000/- | 61 |
| 2019-2020 | 85 | 15 | JPY 38,00,000/- | INR 6,50,000/- | 75 |
| 2020-2021 | 95 | 25 | INR 15,60,000/- | INR 5,22,000/- | 75 |
| 2021-2022 | 99 | 20 | INR 34,30,000/- | INR 6,85,000/- | 81 |

6. Problems Encountered and Resources Required

The partially online teaching-learning experience in 2021-22 required extra work from teachers and students. Classes and placements were conducted online. A lot of companies conducted Virtual Interviews. For uninterrupted learning and delivery, a stable internet connection, a laptop with a web camera, an audible mic, and a silent room were needed.

| File Description | Document |
|---|-------------------------------|
| Best practices as hosted on the Institutional website | View Document |
| Any other relevant information | View Document |

7.3 Institutional Distinctiveness

7.3.1 Portray the performance of the Institution in one area distinctive to its priority and thrust within 1000 words

Response:

Fr. Conceicao Rodrigues College of Engineering (CRCE) believes in moulding engineers to build the nation. In this context, CRCE strives to promote the student's holistic development by offering a platform for skill-based learning enhancement and by fostering hands-on learning. Through different co-curricular activities and skill-based learning, the institute is committed to creating a holistic learning environment that extends beyond the prescribed course.

The following are the objectives and underlying principles:

1. To establish an immersive learning environment in which students can learn through experience.
2. To make students interested in the subject content and so increase retention.
3. To provide learners with opportunities to participate actively in the learning process.
4. To improve cognitive, creative, and critical thinking abilities.
5. To instil in learners a sense of inquiry, teamwork, and a growth mentality.

Due to the quick development and active changes in the fields of science and technology, it is necessary to go beyond the traditional curriculum and investigate the most recent engineering achievements. Enrolling in numerous technical councils provides students with opportunities and broad exposure to the dynamic world of practice. Participating in various projects, activities, and events provides students with hands-on learning opportunities. Through additional design-based experiments, lab work, and projects, the existing gap in the traditional education system is filled. Students learn not only technical abilities, but also soft skills, such as working in teams, communicating with people, time management through meeting deadlines, critical thinking, creative thinking, and problem-solving, among others. Consequently, enhancing their uniqueness and character. Through such councils, students' interest, passion, and curiosity for their subject are honed as they develop into active learners. Thereby, creating a holistic development of the skills and knowledge of students.

The College believes in conveying knowledge through a variety of methods. In addition to regular lectures and labs, students participate in several technical and non-technical committees/councils. They are encouraged to participate in various events such as Hackathon, Robotics, Project Competition, Automobile Design and Manufacturing, Workshops, Guest Lectures by Industry professionals and famous professors, Industrial Visits, etc.

The student chapters/councils from our college are listed below:

1. American Society of Mechanical Engineers (ASME)
2. Association of Computing Machinery (ACM CRCE)
3. CodeLabs CRCE
4. Computer Society of India (CSI)
5. Entrepreneurship Cell (E-Cell)
6. Institute of Electrical and Electronics Engineering (IEEE CRCE)
7. Indian Institution Industrial Engineering (IIIE)
8. Mozilla Campus Club CRCE
9. National Service Scheme (NSS)
10. Project Cell
11. Rotaract Club

12. Students Council
13. Team Abadha
14. Team Vaayushastra
15. Team CRCE Formula Racing (Team CFR)
16. Team Robocon
17. Team Mavericks
18. TEDxCRCE
19. IEEE-WIE

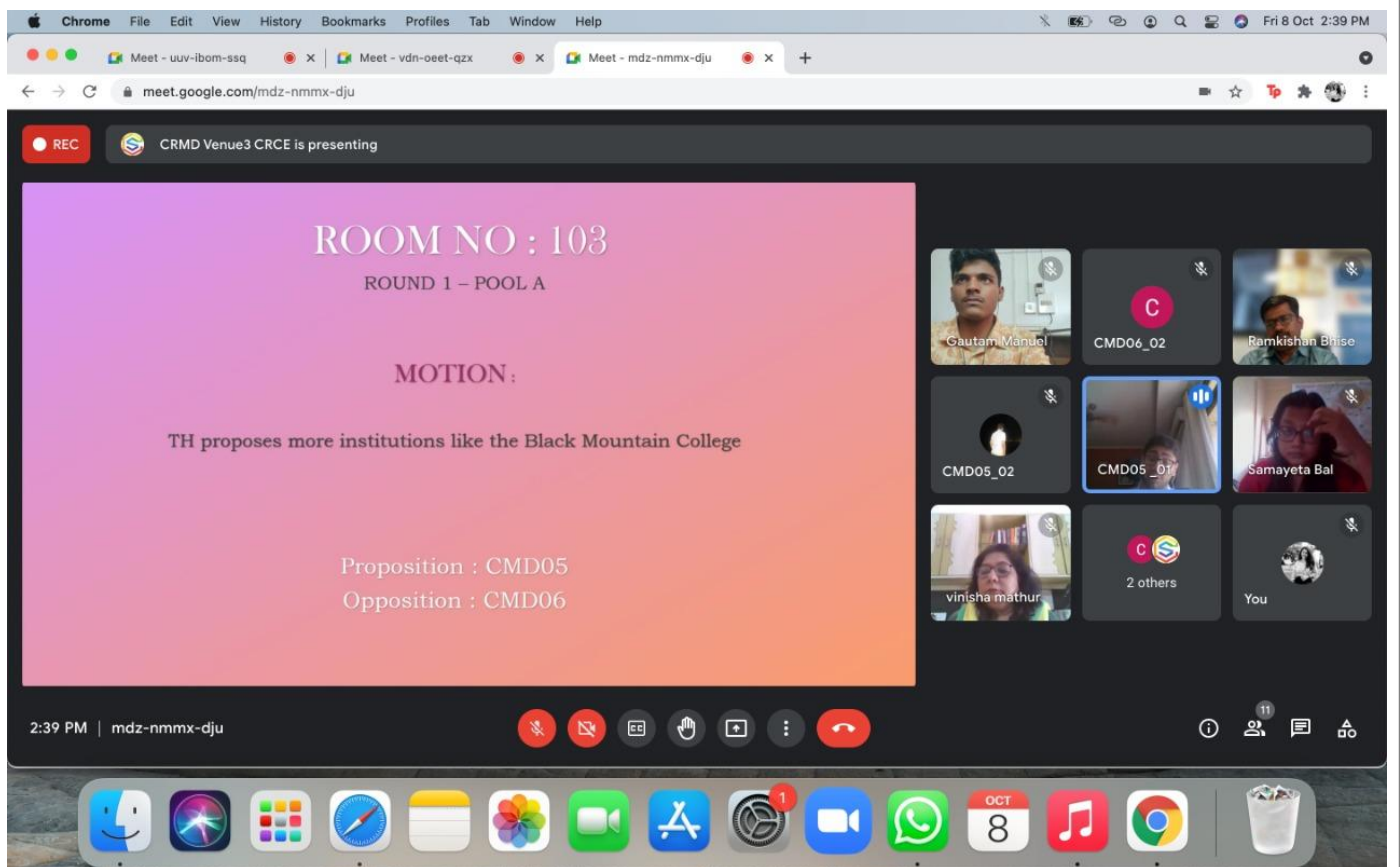
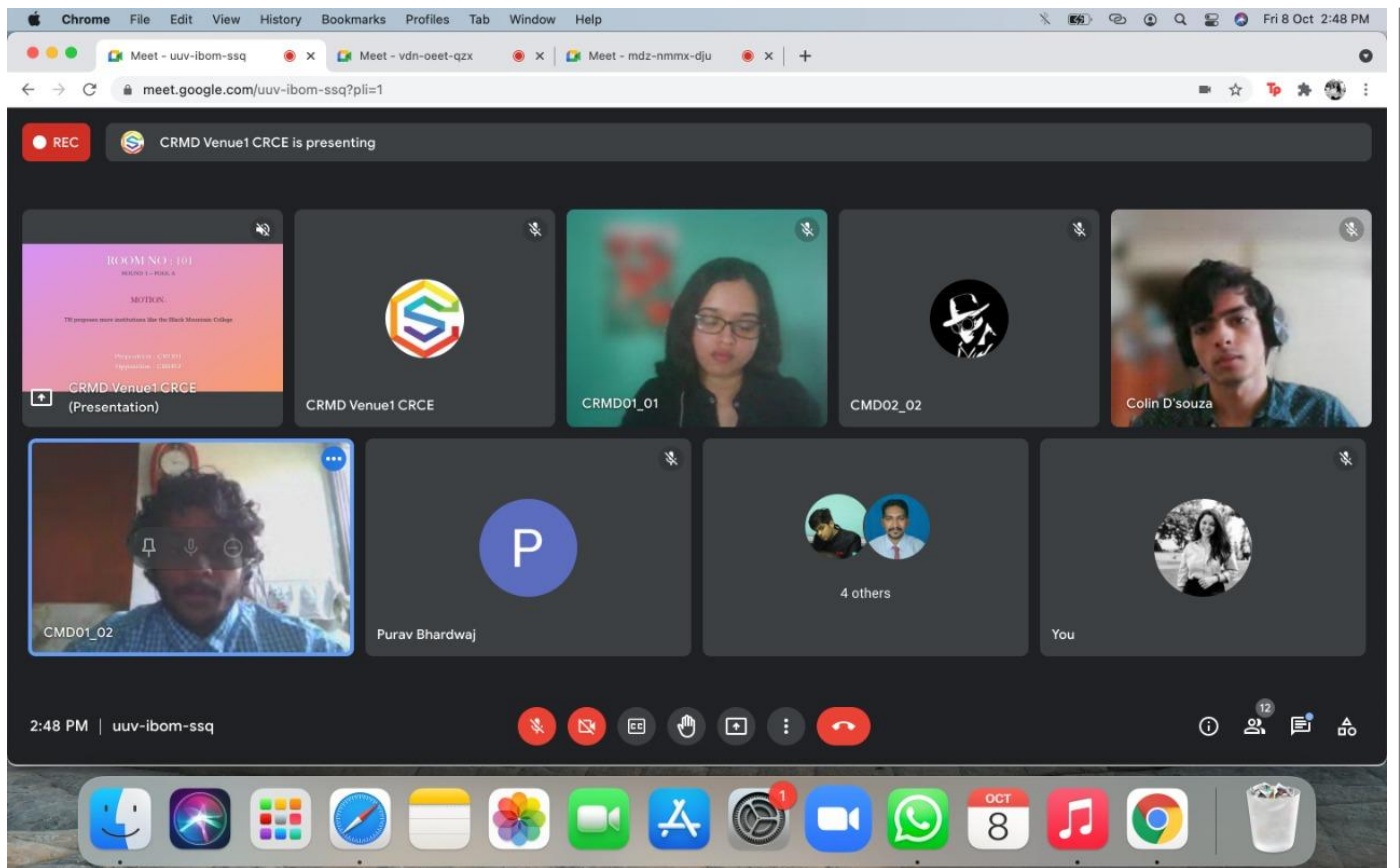
Given below are some of the events which these chapters/councils have conducted to address the holistic development of the students.

The Students' Council of CRCE organizes a national-level debate competition known as Conceicao Rodrigues Memorial Debate (CRMD). This is CRCE's flagship event organized since 1999. In the current academic year, CRMD was organized on the 7th and 8th October 2022. The theme was "The India Agenda – Global Influence and Dominance." More than 30 short-listed institutions participated in the debate. The power of real debate is in the language and intellectual honesty of the debaters, alongside the engagement of spectators. The debates provided a forum for today's youth to engage in various affairs experienced in daily life, CRMD was an indulgent treat for the debaters and the audience alike. Some photos of CRMD - 2022 are shown below:





CRMD – 2021 was organized from 8th to 10th October. The theme was “The Emanation of Unbecoming Comportment.” Some photos of CRMD - 2021 are shown below:



Testimonials from past chief guests.

TESTIMONIALS



No wonder films don't always do well. After seeing a debate like this where so many intellectual young minds fight it out who would want to go to a movie theatre?



MAHESH BHATT
DIRECTOR, PRODUCER AND SCREENWRITER



Way beyond my expectations. Never expected a technical college to hold such a non-technical Debate!



DOLLY THAKORE
THEATRE ACTRESS AND CASTING DIRECTOR

ACM CRCE organized a national-level Hackathon on 22-23 January 2022. The hackathon allowed student developers to explore their technical, soft, and communication skills, investigate their area of interest, and discover and build new skills, The hackathon allowed students to network with industry professionals, faculty, and one another. The event included 1000 attendees; many were from CRCE.



UNSCR;PT 2K22



Rookie's Hackathon

CASH PRIZES
WORTH
RS 35K!!

EXCLUSIVELY FOR 2ND YEAR
STUDENTS!!

22ND-23RD JAN
2022

- 🕒 24 HRS ONLINE HACKATHON
- 📄 NATIONAL LEVEL CODING COMPETITION
- 🏆 WIN CASH PRIZES AND EXCITING VOUCHERS
- 💻 3 EXCITING CODING DOMAINS
 - WEB
 - APP
 - AI / ML



SCAN NOW
OR VISIT

[HTTPS://UNSCRIPTROOKIES.NETLIFY.APP/](https://unscriptrookies.netlify.app/)



ORGANIZED BY:



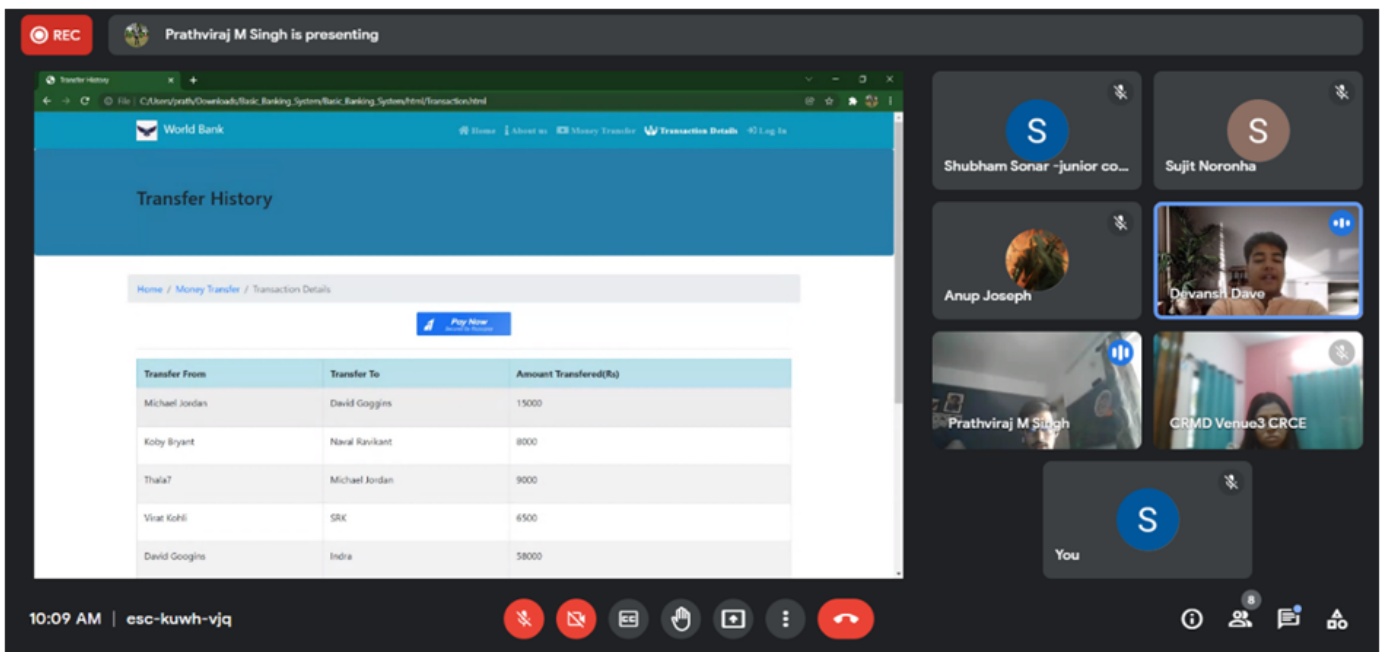
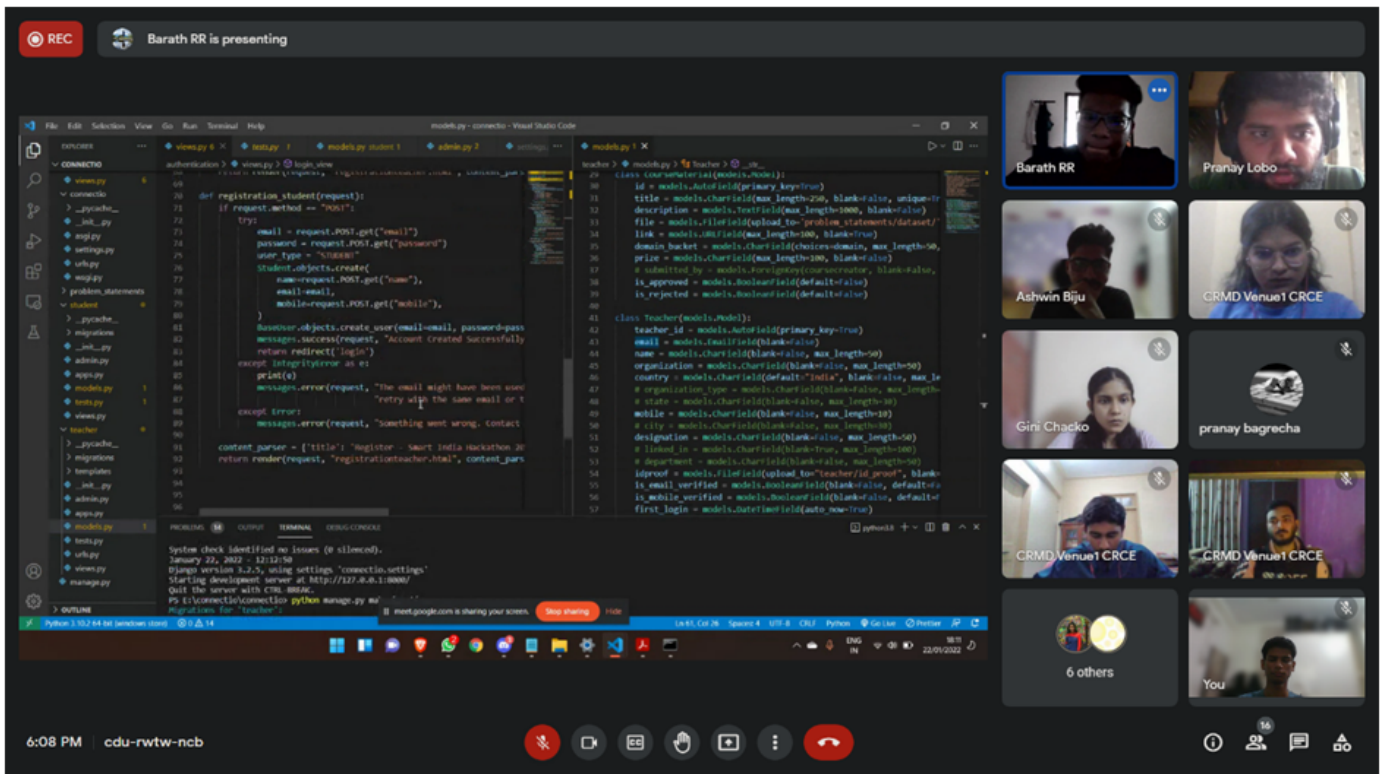
OUR SPONSORS:



Devfolio



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CSI conducted a “Workshop on Developing A Corona Virus Tracker Software” on 23rd October 2021. 78 students participated. The outcome of the workshop was that all the students learned about python programming and understood how real-life problems are handled. The session helped the students learn the basic concepts that are necessary for building up their python programming skills. It enlightened the students to keep working on such problems. The poster for the event is given below:



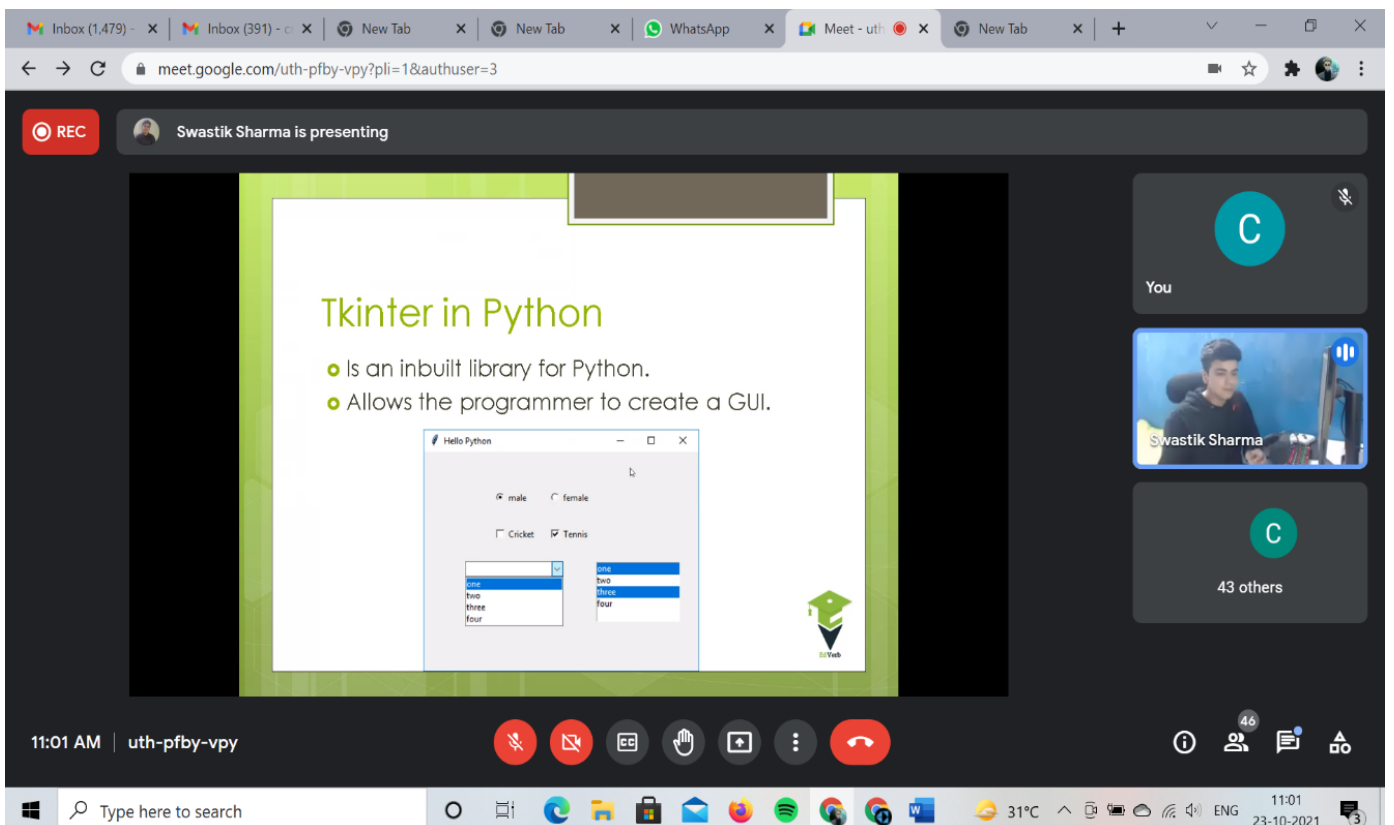
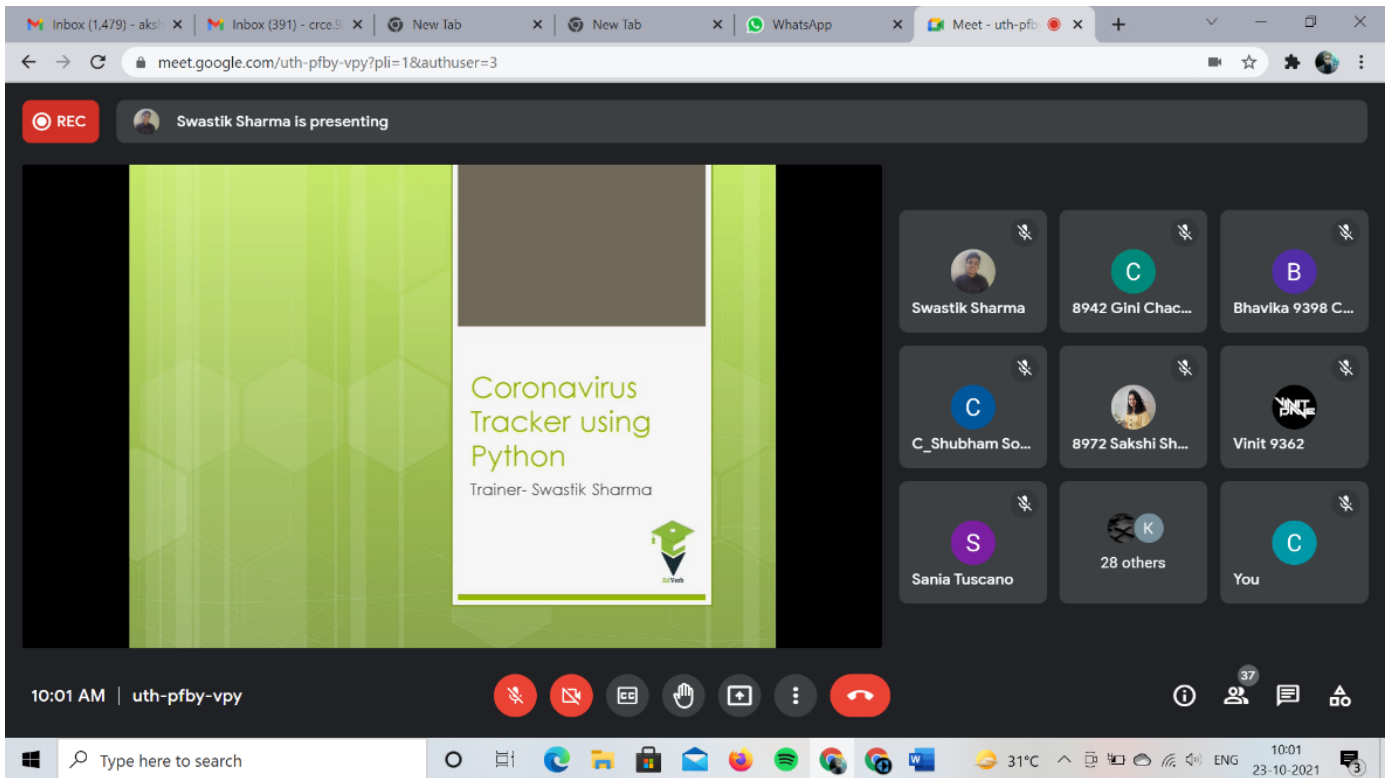
Workshop on developing a Corona Virus Tracker Software



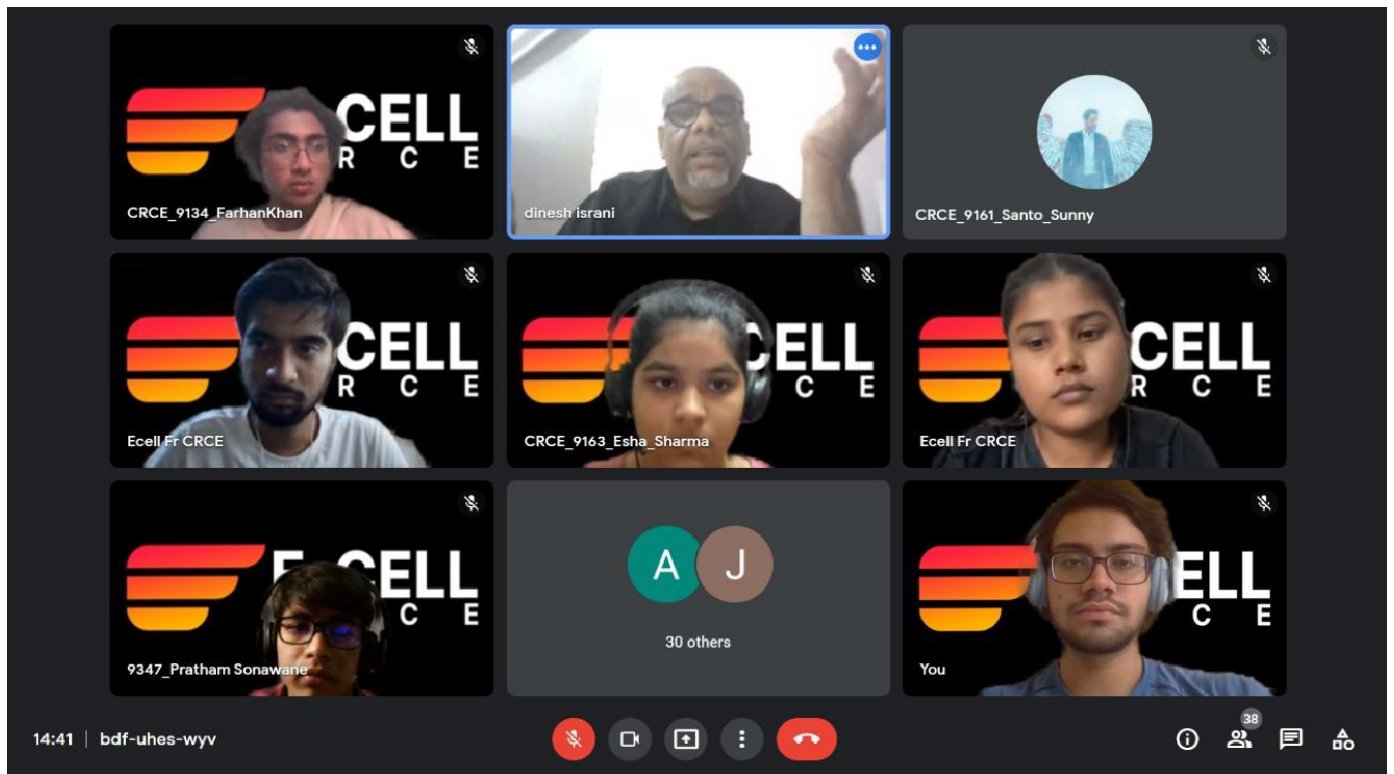
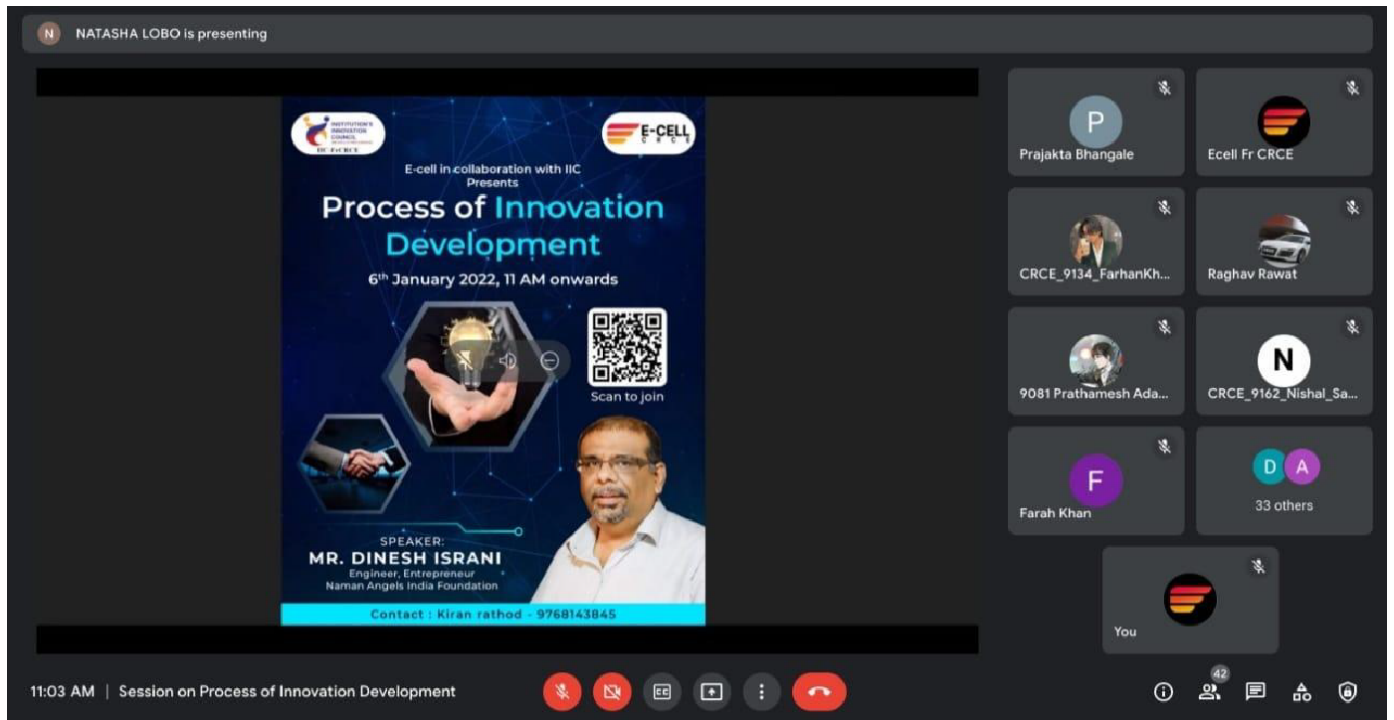
Mr. Swastik Sharma

WINNER OF JP MORGAN
CODE FOR GOOD | JAVA
DEVELOPER

OCTOBER
23
10am-12pm



E-Cell CRCE arranged a webinar for the students on the Topic: "Process of Innovation Development" on 6th January 2022, The main points discussed in the event were Introduction to Innovation Development, Idea generation and mobilization, Experimentation and Commercialization.



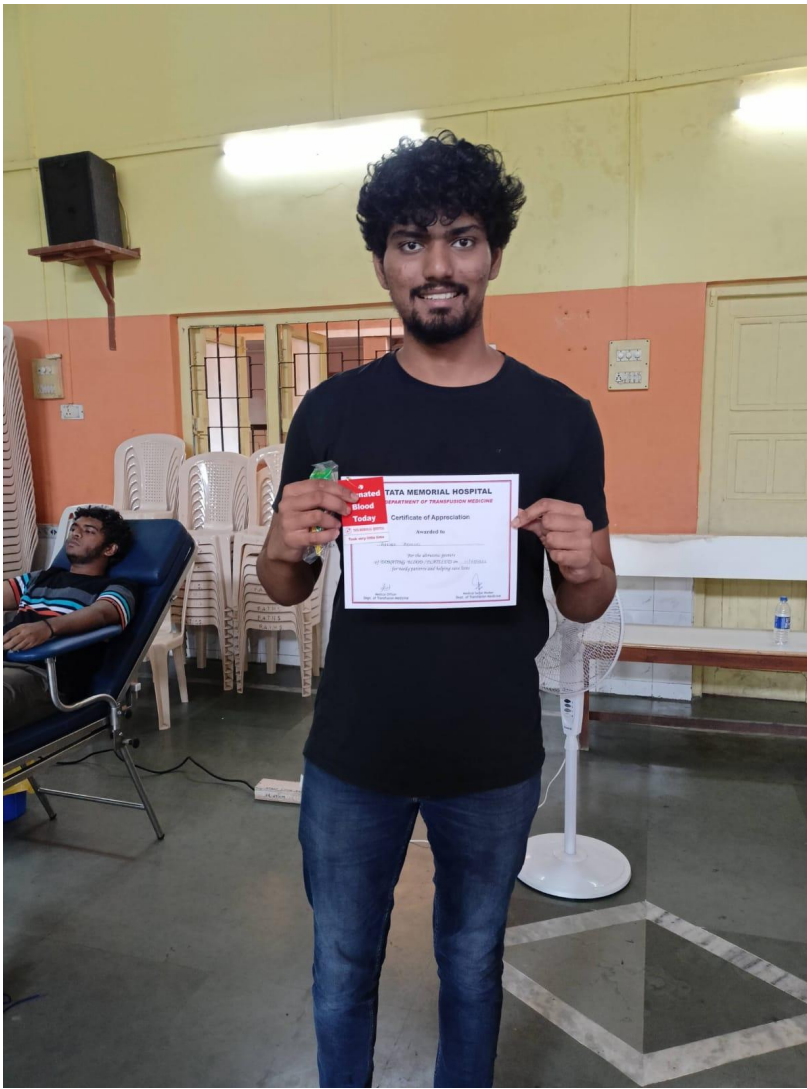
IIIE CRCE conducted a session on Entrepreneurship Development Phases on 15th January 2022. Total 67 students attended the session where many aspects of entrepreneurship and start-ups were discussed with the students.



NSS CRCE organizes a Blood Donation Camp every year to stress the importance of blood donation. This year it was successfully scheduled on 17th February 2022. Students were encouraged to donate blood.







On 12th February 2022, the Rotaract Club of CRCE organized a trek amidst nature called” FootSlog” to Kothiya, Karjat. There were 200 trekkers who participated in Foolslog. The trek was 8.2 km long and took around 6 hours to complete the trail.



rotaract_crce



152 likes

rotaract_crce 🌟 "Look deep into nature and you will understand life better." 🌟... more

[View all 15 comments](#)

31 January





Team CRCE Formula racing participated in the Formula Bharat event and stood 12th overall nationally. Team CFR has 35 students from different disciplines who come together to build a formula racing car from scratch. Each student brings instrumental skills to the team, the union between diverse skill and strong teamwork forms the core of our team. Students work in different department like chassis, components, vehicle dynamics, fabrication, etc essential having a holistic development in terms of theoretical and practical knowledge and team management.

FORMULA BHARAT COMBUSTION VEHICLE VIRTUALS 2021-2022

-  Overall Rank **12th**
-  Business plan Rank **5th**
-  Engineering design Rank **17th**

#rattlerumbleroar

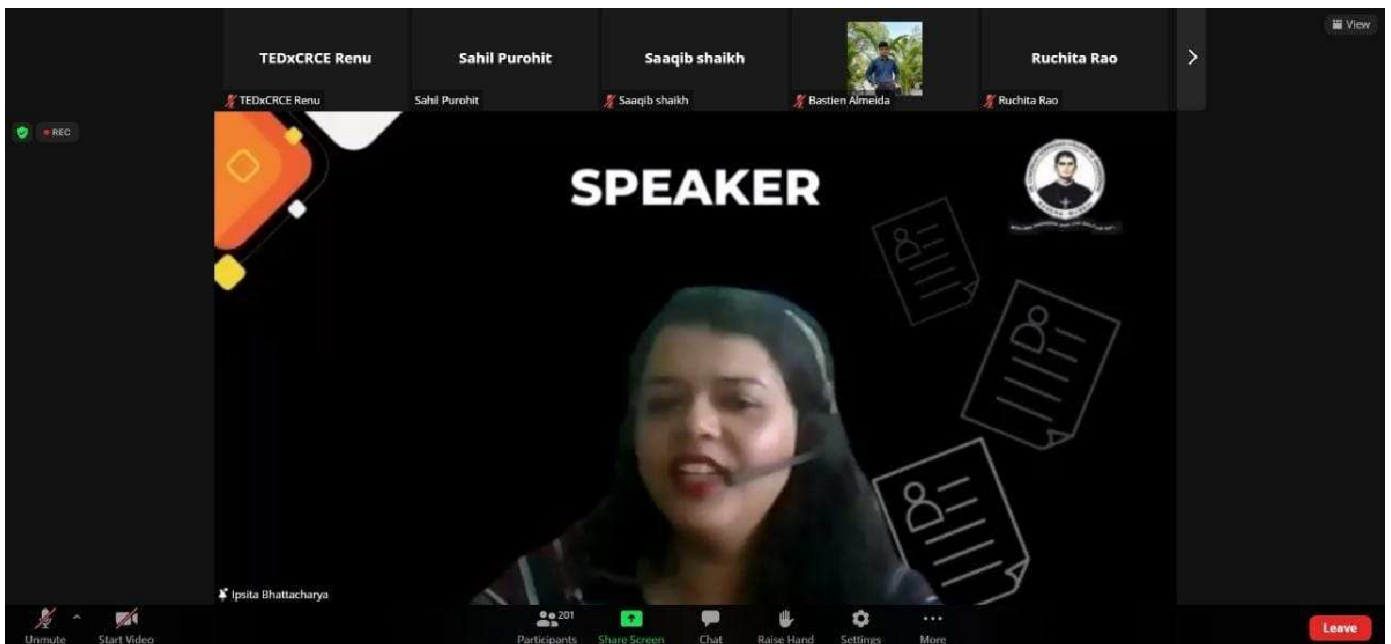




teamcfr
Fr. Conceicao Rodrigues College of Engineering



TedxCRCE organized a Resume Building Workshop on 17th January 2022 by Mrs. Ipsita Bhattacharya, an HR Project Manager at JP Morgan Chase and Co. 225 students across all branched participated in the event.



| File Description | Document |
|--|-------------------------------|
| Any other relevant information | View Document |
| Appropriate web in the Institutional website | View Document |

5. CONCLUSION

Additional Information :

Fr. CRCE has an excellent Alumni network with Alumni placed in prominent positions across

1. the globe. The Fr. CRCE Alumni Association comprises of approximately 10000 students and is managed by the Alumni Committee. The Alumni activities are conducted throughout the year and include talks, workshops and other such initiatives to connect Alumni and present students. Alma-connect- the Alumni portal keeps track of all Alumni-related engagement. In the past, several Alumni have made financial contributions to student projects, laboratory infrastructure, etc.
2. Fr. CRCE has always had a consistently high faculty retention ratio across all the programs. This is a reflection of the overall working environment which each faculty enjoys, be in terms of freedom to plan their course, engage in self-learning or involve in research activities.
3. The Institute ensures there is a regular engagement with parents as they are important stakeholders. Parents are regularly updated about the performance of their wards (attendance as well as academic performance). Faculty mentors keep in touch with parents, especially in cases of weak/ irregular students.
4. Academic audits form an important part of the quality improvement process. Audits are conducted regularly by the Department Quality assurance Committee (DQAC) to monitor the conduct of subject courses as well as oversee teaching methods used and measure the impact. DQAC also supervises the quality of the test papers/ assignments/quizzes, etc. Furthermore, these reports are conveyed to the Institute Quality assurance Committee (IQAC).

Concluding Remarks :

With dedicated efforts of more than three decades, Fr Conceicao Rodrigues College of Engineering has created a brand name in engineering education. College is progressing in a direction to full-fill its Vision by ensuring effective execution of policies. Fr CRCE strives to maintain its pre-eminent position by building purposive partnerships with the industry, bolstering its wherewithal continually and adapting emerging programmes consistent with changing times.

College ensures a good learning experience for students. College conducts orientation program for first year students to help students so that they feel excited about starting college and smooths the transition to campus life. Further, handholding is ensured through various planned activities and effective implementation of those activities. Advanced planning of academic calendar, skill-based lab exercises, engaging methods of content delivery, innovative assessment tools, project-based learning and many extra-curricular & cocurricular activities are conducted by faculty. Faculty members are qualified, well-experienced, dedicated, enthusiastic, and research-oriented. Management, Principal, HoDs, Faculty members, and staff are working together as one team and are focused on improving the institution's standard.

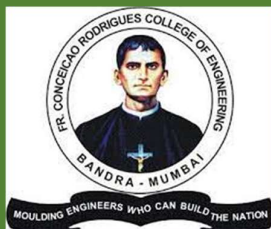
College has revised academic and administrative policies to encourage faculty in research and innovation. College is proactively taking steps to create an ecosystem of innovation and incubation in the campus. College has shown exemplary performance in attainment of learning outcomes which is demonstrated through placement data, academic results and student achievements in various competitions. Based on the information, supporting data sheets in each criterion, it is concluded that the institute has put in systematic efforts in all

facets of technical education in the last five years. Institute has put in tremendous efforts in holistic development of Students and creating responsible citizens of the country.

College continuously tried to bring positive changes in academics as well as administration since last accreditation and thus observed a significant change in various criteria. To further strengthen the academics and also for implementation of NEP-2020, college faculty is motivated to adopt autonomy. Institute has put in honest efforts to improve all the relevant dimensions of technical education and believe that the Accreditation committee will find the institute suitable for the highest level of accreditation.



National Board of Accreditation
SELF ASSESSMENT REPORT (SAR)
UNDERGRADUATE ENGINEERING
PROGRAMS (TIER-II)



Department of Computer Engineering
Fr. Conceicao Rodrigues College of Engineering,
Bandra (W),
Mumbai-400050
www.frcrce.ac.in

INDEX

| Serial Code & Link to the Item | Item | Page No. |
|-----------------------------------|--|----------|
| PART A | Institutional Information | 1 |
| PART B | Criteria Summary | |
| | Program Level Criteria | |
| 1 | Vision, Mission and Program Educational Objectives | 7 |
| 2 | Program Curriculum and Teaching – Learning Processes | 14 |
| 3 | Course Outcomes and Program Outcomes | 42 |
| 4 | Students’ Performance | 71 |
| 5 | Faculty Information and Contributions | 109 |
| 6 | Facilities and Technical Support | 137 |
| 7 | Continuous Improvement | 144 |
| | Institute Level Criteria | |
| 8 | First Year Academics | 153 |
| 9 | Student Support Systems | 164 |
| 10 | Governance, Institutional Support and Financial Resources | 176 |
| Annexure - I | Program Outcomes (POs) & Program Specific Outcomes (PSOs) | 191 |
| PART C | Declaration by the Institution | 193 |

Part A Institutional Information

1 Name and Address of the Institution

FR. CONCEICAO RODRIGUES COLLEGE OF ENGINEERING,
FR. AGNEL ASHRAM BANDSTAND, BANDRA (W)

2 Name and Address of Affiliating University

UNIVERSITY OF MUMBAI

3 Year of establishment of the Institution:

1984

4 Type of the Institution:

| | |
|--|--|
| <input type="checkbox"/> University | <input type="checkbox"/> Autonomous |
| <input type="checkbox"/> Deemed University | <input checked="" type="checkbox"/> Affiliated |
| <input type="checkbox"/> Government Aided | |

5 Ownership Status:

| | |
|---|---|
| <input type="checkbox"/> Central Government | <input checked="" type="checkbox"/> Trust |
| <input type="checkbox"/> State Government | <input type="checkbox"/> Society |
| <input type="checkbox"/> Government Aided | <input type="checkbox"/> Section 25 Company |
| <input type="checkbox"/> Self financing | <input type="checkbox"/> Any Other (Please Specify) |

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

| Name of the Institution | Year of Establishment | Programme of Study | Location |
|---|------------------------------|---------------------------|---------------------|
| Fr. Agnel School | 1957 | English Medium School | Bandra, Mumbai |
| Agnel Technical College | 1969 | Polytechnic | Bandra, Mumbai |
| Agnel Industrial Training Institute | 1969 | ITI | Bandra, Mumbai |
| Fr. Agnel Polytechnic | 1982 | Polytechnic | Vashi, Navi Mumbai |
| Fr. Agnel Jr. College | 1982 | Junior College | Vashi, Navi Mumbai |
| Fr. Agnel Technical School | 1982 | English Medium School | Vashi, Navi Mumbai |
| Fr. Conceicao Rodrigues Institute of Technology | 1994 | Engineering College | Vashi, Navi Mumbai |
| Fr. Conceicao Rodrigues Institute of Management studies | 2001 | Management Institute | Vashi, Navi Mumbai |
| Fr. Agnel Industrial Training Centre | 2012 | ITI | Vashi, Navi Mumbai |
| Fr. Agnel Multi-purpose School | 2001 | School | Ambernath, Thane |
| Fr. Agnel Junior College | 1982 | Junior College | Ambernath, Thane |
| Agnel Vocational Training Institute | 1978 | ITI | Goa |
| Agnel Institute of Food crafts And Culinary sciences | 1979 | Vocational Training | Goa |
| Agnel Polytechnic | 1981 | Polytechnic | Goa |
| Padre Conceicao College of Engineering | 1997 | Engineering College | Goa |
| Agnel Entrepreneurship Development Institute | 2000 | - | Goa |
| Agnel Institute of Technology And Design Centre of Incubation and Business Acceleration | 2013 | Engineering College | Goa |
| Fr. Agnel Vidyankur School | 2002 | School | Pune |
| Fr. Agnel Polytechnic | 1994 | Polytechnic | Noida |
| Fr. Agnel School | 1979 | School | Gautam Nagar, NOIDA |
| Fr. Agnel Polytechnic | 1994 | Polytechnic | Gautam Nagar, NOIDA |

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

| Name of Program | Program Applied level | Start of year | Year of AICTE approval | Initial Intake | Intake Increase | Current Intake | Accreditation status | From | To | Program for consideration | Program for Duration |
|--|-----------------------|---------------|------------------------|----------------|-----------------|--------------------------|---|------|------|---------------------------|----------------------|
| Bachelor of Engineering in Computer Engineering | UG | 1991 | 1991 | 60 | Yes | 120 | Granted accreditation for 3 years for the period (specify period) | 2017 | 2020 | Yes | 4 |
| Sanctioned Intake for Last Five Years for the Bachelor of Engineering in Computer Engineering | | | | | | | | | | | |
| Academic Year | | | | | | Sanctioned Intake | | | | | |
| 2022-23 | | | | | | 120 | | | | | |
| 2021-22 | | | | | | 120 | | | | | |
| 2020-21 | | | | | | 120 | | | | | |
| 2019-20 | | | | | | 120 | | | | | |
| 2018-19 | | | | | | 60 | | | | | |
| 2017-18 | | | | | | 60 | | | | | |

8 Programs to be considered for Accreditation vide this application:

| S No | Level | Discipline | Program |
|------|----------------|--------------------------|----------------|
| 1 | Under Graduate | Engineering & Technology | Computer Engg. |

9 Total number of employees in the institution:

A. Regular* Employees (Faculty and Staff):

| Items | | CAY (2022-23) | | CAYm1 (2021-22) | | CAYm2 (2020-21) | |
|--|---|---------------|-----|-----------------|-----|-----------------|-----|
| | | Min | Max | Min | Max | Min | Max |
| Faculty in Engineering | M | 19 | 20 | 20 | 21 | 22 | 22 |
| | F | 32 | 32 | 31 | 31 | 31 | 31 |
| Faculty in Maths, Science & Humanities | M | 8 | 8 | 7 | 7 | 7 | 7 |
| | F | 2 | 2 | 2 | 2 | 2 | 2 |
| Non-teaching staff | M | 35 | 35 | 36 | 35 | 38 | 36 |
| | F | 11 | 11 | 11 | 11 | 11 | 11 |

B. Contractual* Employees (Faculty and Staff):

| Items | | CAY (2022-23) | | CAY _{m1} (2021-22) | | CAY _{m2} (2020-21) | |
|--|---|---------------|-----|-----------------------------|-----|-----------------------------|-----|
| | | Min | Max | Min | Max | Min | Max |
| Faculty in Engineering | M | 2 | 2 | -- | -- | -- | -- |
| | F | -- | -- | 4 | 4 | -- | -- |
| Faculty in Maths, Science & Humanities | M | -- | -- | -- | -- | -- | -- |
| | F | -- | -- | 2 | 2 | 1 | 1 |
| Non-teaching staff | M | 2 | 2 | 2 | 2 | 2 | 2 |
| | F | -- | -- | -- | -- | -- | -- |

10 Total number of Engineering Students:

| | | |
|---|--|---------------------------------|
| Engineering and Technology- UG | <input checked="" type="checkbox"/> Shift1 | <input type="checkbox"/> Shift2 |
| Engineering and Technology- PG | <input checked="" type="checkbox"/> Shift1 | <input type="checkbox"/> Shift2 |
| Engineering and Technology- Polytechnic | <input type="checkbox"/> Shift1 | <input type="checkbox"/> Shift2 |
| MBA | <input type="checkbox"/> Shift1 | <input type="checkbox"/> Shift2 |
| MCA | <input type="checkbox"/> Shift1 | <input type="checkbox"/> Shift2 |

Engineering and Technology- UG Shift-1

| Item | CAY 2022-23 | CAY _{m1} 2021-22 | CAY _{m2} 2020-21 |
|-----------------------|----------------|------------------------------|------------------------------|
| Total no. of boys | 1033 | 1004 | 970 |
| Total no. of girls | 291 | 271 | 279 |
| Total no. of students | 1324 | 1275 | 1249 |

Engineering and Technology- PG Shift-1

| Item | CAY 2022-23 | CAY _{m1} 2021-22 | CAY _{m2} 2020-21 |
|-----------------------|----------------|------------------------------|------------------------------|
| Total no. of boys | 1 | 2 | 1 |
| Total no. of girls | 1 | 1 | 1 |
| Total no. of students | 2 | 3 | 2 |

11 Vision of the Institution:

"Moulding Engineers who can build the Nation"

Fr. Conceicao Rodrigues College of Engineering (CRCE) will be a Center-of-Excellence in Engineering Education, moulding engineers with state-of-the art technologies, innovative skills and human values, matching with the growing expectations of the corporate and the society and thus play an effective role in nation building.

12 Mission of the Institution:

- Create an excellent scholastic ambience for students and faculty, by providing facilities with state-of-the-art technologies and continuously updating based on the needs of user organizations.
- Attract, develop and retain teaching faculty of academic excellence, dedication and commitment.
- Design the academic administration system to ensure effective teaching-learning process facilitating participation from students & teachers; enabling continuous improvement through evaluation and feedback.
- Provide avenues for holistic development of students to become competent engineers with interpersonal skills, leadership qualities and social concern.
- Maintain economic discipline; continuously work for optimal utilization of resources and resource generation through consultancy to make quality education affordable.
- Inculcate ethical values and integrity by observing fairness and transparency in all dealings.

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

| Head of the Institution | |
|--------------------------------|-------------------------------|
| Name | Dr. Surendrasingh Rathod |
| Designation | Principal |
| Mobile No. | 9920228275 |
| Email ID | principal.crce@fragnel.edu.in |

NBA Coordinator, If Designated

| | |
|-------------|----------------------|
| Name | Dr. Sunil Surve |
| Designation | Professor |
| Mobile No. | 9167635546 |
| Email ID | surve@fragnel.edu.in |

PART B: Criteria Summary

| Criteria No. | Criteria | Total Marks | Institute Marks |
|---------------------|---|--------------------|------------------------|
| 1 | VISION, MISSION AND PROGRAM EDUCATIONAL OBJECTIVES | 60 | 56.00 |
| 2 | PROGRAM CURRICULUM AND TEACHING - LEARNING PROCESSES | 120 | 109.00 |
| 3 | COURSE OUTCOMES AND PROGRAM OUTCOMES | 120 | 117.00 |
| 4 | STUDENTS' PERFORMANCE | 150 | 132.50 |
| 5 | FACULTY INFORMATION AND CONTRIBUTIONS | 200 | 154.40 |
| 6 | FACILITIES AND TECHNICAL SUPPORT | 80 | 69.00 |
| 7 | CONTINUOUS IMPROVEMENT | 50 | 46.00 |
| 8 | FIRST YEAR ACADEMICS | 50 | 46.18 |
| 9 | STUDENT SUPPORT SYSTEMS | 50 | 44.00 |
| 10 | GOVERNANCE, INSTITUTIONAL SUPPORT AND FINANCIAL RESOURCES | 120 | 117.00 |
| | Total | 1000 | 890 |

Part B

1 VISION, MISSION AND PROGRAM EDUCATIONAL OBJECTIVES (60) Total Marks 56.00

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

Total Marks 5.00

Institute Marks : 5.00

| | | |
|---------------------------|--|--|
| Vision of the institute | <p style="text-align: center;">"Moulding Engineers who can build the Nation"</p> <p>Fr. Conceicao Rodrigues College of Engineering (CRCE) will be a Center-of-Excellence in Engineering Education, moulding engineers with state-of-the art technologies, innovative skills and human values, matching with the growing expectations of the corporate and the society and thus play an effective role in nation building.</p> | |
| Mission of the institute | <ul style="list-style-type: none"> • Create an excellent scholastic ambience for students and faculty, by providing facilities with state-of-the-art technologies and continuously updating based on the needs of user organizations. • Attract, develop and retain teaching faculty of academic excellence, dedication and commitment. • Design the academic administration system to ensure effective teaching-learning process facilitating participation from students & teachers; enabling continuous improvement through evaluation and feedback. • Provide avenues for holistic development of students to become competent engineers with interpersonal skills, leadership qualities and social concern. • Maintain economic discipline; continuously work for optimal utilization of resources and resource generation through consultancy to make quality education affordable. • Inculcate ethical values and integrity by observing fairness and transparency in all dealings. | |
| Vision of the Department | To be a center of excellence in Computer Engineering education that will produce self-motivated, and globally competent individuals through holistic development. | |
| Mission of the Department | Mission No | Mission Statements |
| | M1 | Build state-of-the-art infrastructure that can accommodate cutting-edge technology and is constantly updated in response to the needs. |
| | M2 | To emphasize experiential learning to pursue academic excellence and inculcate research aptitude through high-quality research publications. |
| | M3 | Enable the students to foster innovative ideas in pace with emerging technologies. |

| | | |
|--|----|--|
| | M4 | Encourage faculty members to pursue higher education/research and stay abreast with the latest technology. |
|--|----|--|

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

Total Marks 5.00

Institute Marks: 5.00

| PEO No. | Program Educational Objectives Statements |
|---------|--|
| PEO1 | Apply Computer Science principles and techniques to develop engineering projects in order to achieve client business objectives and/or to conduct fruitful research. |
| PEO2 | Demonstrate excellent interpersonal skills and leadership qualities in their workspace and in the society. |
| PEO3 | Successfully work in diverse and multidisciplinary teams, communicate effectively, and find innovative solutions to problems. |

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

Total Marks 10.00

Institute Marks: 10.00

The Vision, Mission, and PEOs are published at

1. Department web page (<http://frcrce.ac.in/comp/>)
2. Department floor lobby
2. Notice boards
3. Laboratories
4. Staff room
5. Student journals
6. Project Log Book
7. During the Induction Program of FE
8. During awareness programs conducted for students regarding NBA, Vision, Mission, etc.
9. Social media handles like LinkedIn, Instagram, etc.
10. E-mail communication

Apart from this, Mission, Vision, and PEOs are disseminated to all the stakeholders of the programs through faculty meetings, student induction program, student awareness lectures, Department Advisory Board meetings, etc.

1.3 State the process for defining the Vision and Mission of the Department, and PEOs of the program (25) Total Marks 24.00

Institute Marks: 24.0

Process to define Vision and Mission of the Department:

Vision and mission statement is defined through direct engagement of all the faculty members, the Department Quality Assurance Cell (DQAC), and the Department Advisory Board (DAB). Also, few students and alumni are included in the process directly or indirectly. Following process is used for defining Vision, Mission of the department and PEOs of program:

- Programme Coordinator (PC) initiates the process of defining/redefining statements at the appropriate time (end of the lifecycle of statements).
- At the beginning, DQAC drafts vision and mission statements. The institute's vision and mission statement, current statements (in second iteration onwards), career accomplishments of the graduates, strengths, and weaknesses of the department, graduate exit surveys, requirements of industries, feedback from various stakeholders, etc. are considered for the formulation of statements.
- PC organizes faculty meetings to discuss the draft. DQAC refines the statements using the feedback in the faculty meeting.
- PC organizes meetings of various stakeholders to discuss refined statements or takes feedback through surveys of selected students, alumni, and other stakeholders like industry representatives, parents, management, etc. DQAC refines the statements based on the inputs.
- The refined statement is discussed in the DAB meeting. Based on the feedback, DQAC finalizes the vision and mission statements.

The process of Defining/redefining the vision and mission is shown in the figure 1.4a.

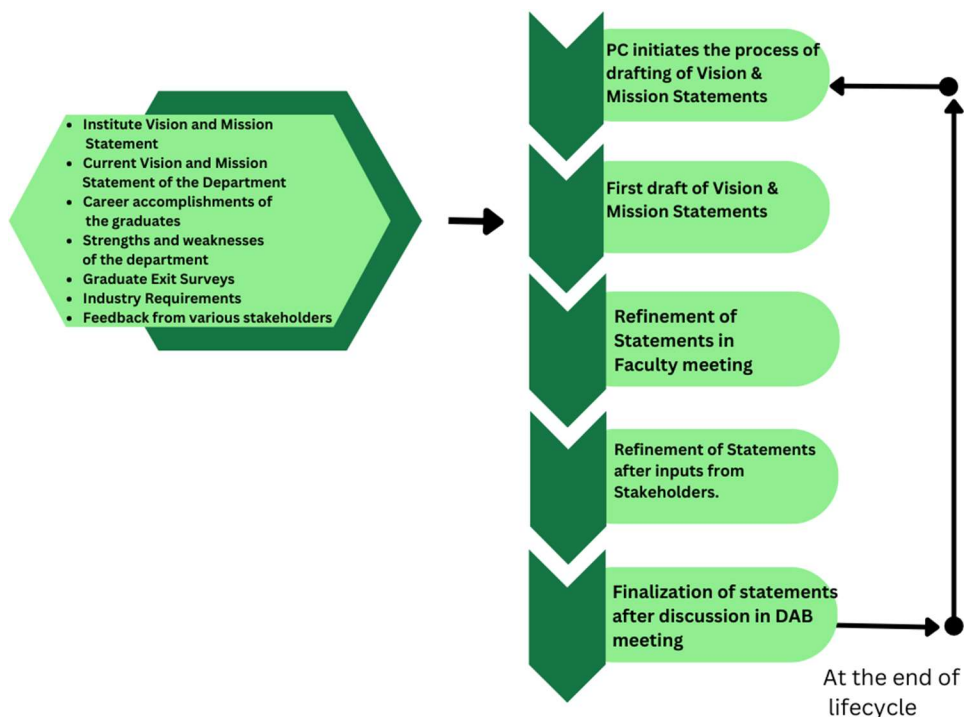


Figure 1.4a: Process for Defining/redefining the Vision-Mission of the Computer Department.

Process to define Program Educational Objectives (PEO) of Program:

Vision and mission statement is defined through direct engagement of all stakeholders. The process of defining PEO statements is as follows:

- Programme Coordinator (PC) initiates the process of defining/redefining PEO statements at the appropriate time (end of the lifecycle of statements).
- At the beginning, DOAC drafts programme educational objectives. The department vision and mission statement, current statements (in the second iteration onwards), graduate attributes, review of PEOs of other institutes, etc. are considered for the formulation of statements.
- DQAC organizes the faculty meeting to discuss the draft version. DQAC refines the statements as per the suggestions in the meeting.
- DQAC organizes meetings of various stakeholders to discuss refined statements or takes feedback through surveys of selected students, alumni, and other stakeholders like industry representatives, parents, management, etc. DOAC refines the statements based on the inputs.
- DAB discusses the refined statement DAB meeting. Based on the feedback, DQAC finalizes the vision and mission statements.

The process for defining/redefining the Program Educational Objectives (PEOs) is shown in Fig. 1.4b

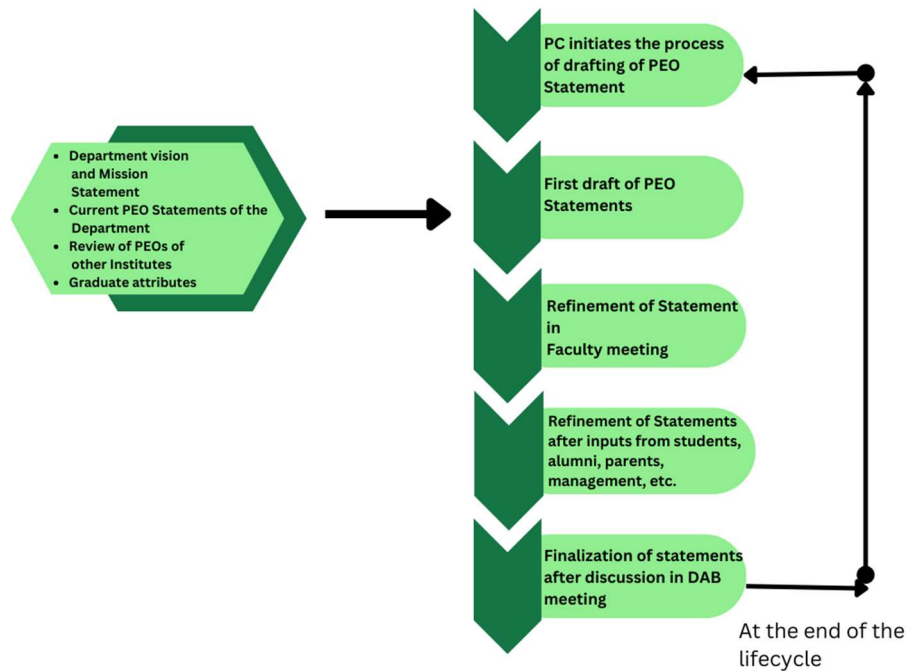


Figure 1.4b: Process for Defining/redefining of Program Educational Objectives.

1.1 Establish consistency of PEOs with Mission of the Department (15) Total Marks 12.00

Institute Marks : 12.00

The Mission of the department is:

- **M1:** Build state-of-the-art infrastructure that can accommodate cutting-edge technology and is constantly updated in response to the needs.
- **M2:** Emphasize experiential learning and holistic development in order to pursue academic excellence, and inculcate research aptitude through high-quality research publications
- **M3:** Enable the students to foster innovative ideas in pace with the emerging technologies
- **M4:** Encourage faculty members to pursue higher education/research and stay abreast with the latest technology.

PEOs of Program:

- **PE01:** Apply Computer Science principles and techniques to develop engineering projects in order to achieve client business objectives and/or to conduct fruitful research.
- **PE02:** Demonstrate excellent interpersonal skills and leadership qualities in their workspace and in the society.
- **PE03:** Successfully work in diverse and multidisciplinary teams, communicate effectively,

and find innovative solutions to problems.

Mapping Justification:

M1-PEO1:

Students need to learn cutting-edge technologies to develop projects which will achieve business objectives or carry out research work. The infrastructure needs to be developed and upgraded to support cutting-edge technologies. The good infrastructure facilitates students to improve their skills and apply principles for the development of applications. Thus, PEO1 supports M1.

Cutting –edge technologies include ML, Blockchain, NLP, Deep Learning, Robotics (Honors) Cyber security, Quantum Computing, IoT etc.

M2-PEO1:

Students are encouraged to use computational techniques in their project. It suggests that educational approach not only includes theoretical knowledge but also practical, hands-on experience (experiential learning). Additionally, it emphasizes holistic development of student.

M3-PEO1:

Students require to learn emerging technologies to develop projects using innovative ideas. The good infrastructure facilitates students to learn emerging technologies to conduct fruitful research. Thus, PEO1 supports M3.

M4-PEO1:

Faculty members are required to work on research projects continuously in their careers. Faculty members stay abreast with the latest technologies that they use in their research work. Thus, PEO1 supports M4.

M2-PEO2:

Through project-based learning i.e. experiential learning, students develop interpersonal skills and leadership qualities. Further students publish their research work along with the faculty mentor in high-quality journals. Thus, PEO2 strengthens M2.

M3-PEO2:

By emphasizing the role of interpersonal skills and leadership students can achieve the goal of fostering innovative ideas by using emerging technologies while developing solutions for real world challenges.

M1-PEO3:

The good infrastructure facilitates students to improve their skills and apply innovative ideas for the development of projects by working in diverse and multidisciplinary teams. Thus, PEO3 strengthens M1.

M2-PEO3:

Working on Projects in diverse and multidisciplinary teams enables the holistic development of the students. Students learn to develop innovative solutions to real-life problems and may publish their

work in high-quality journals along with their faculty mentor. Thus, PEO3 strengthens M2.

M3-PEO3:

While working in diverse and multidisciplinary teams to develop projects, students use innovative ideas and learn emerging technologies. Thus, PEO3 will strengthen M3.

M4-PEO3:

Encouraging faculty members to pursue higher education can help students acquire specialized knowledge and skills making them better equipped to contribute effectively in multidisciplinary teams and find innovative solutions to problems.

| PEO Statements | M1 | M2 | M3 | M4 |
|--|-----------|-----------|-----------|-----------|
| Apply Computer Science principles and techniques to develop engineering projects in order to achieve client business objectives and/or to conduct fruitful research. | 3 | 2 | 2 | 1 |
| Demonstrate excellent interpersonal skills and leadership qualities at their workspace and in society. | -- | 2 | 2 | -- |
| Successfully work in diverse and multidisciplinary teams, communicate effectively, and find innovative solutions to problems. | 1 | 3 | 2 | 1 |

2 PROGRAM CURRICULUM AND TEACHING - LEARNING PROCESSES (120)

Total Marks 109.00

2.1 Program Curriculum (20)

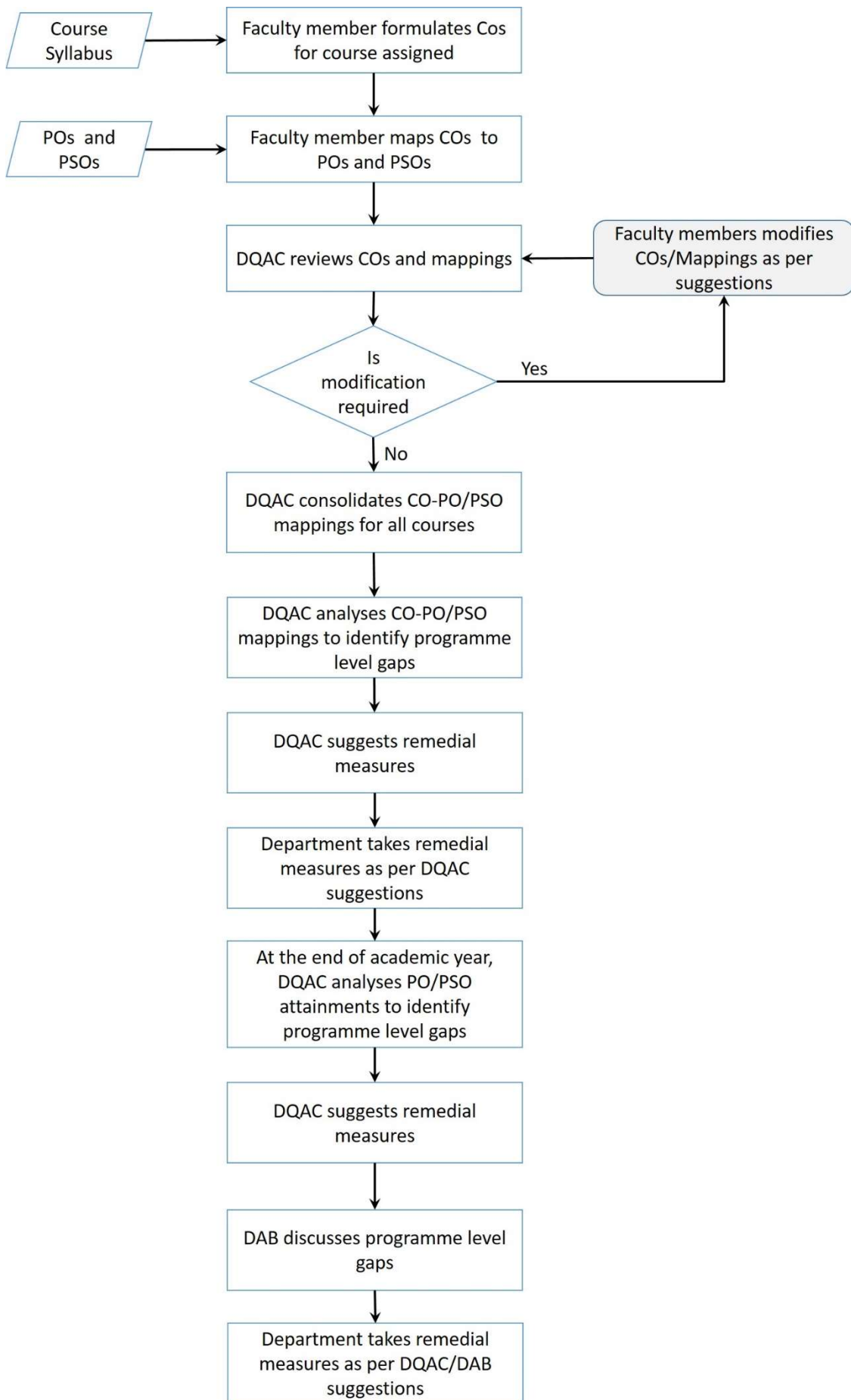
Total Marks 17.00

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

Institute Marks: 9.00

We use following process to identify extent of compliance of university curriculum for attaining the Program Outcomes and Program Specific Outcomes.

- Faculty member formulates Course Outcomes (COs) and maps to POs and PSOs for the course assigned before commencement of the semester and submits to DQAC for review.
- Department Quality Assurance Committee (DQAC) reviews COs and mappings and gives feedback to concerned faculty member.
- Faculty member refines or changes COs and mappings if required based on DQAC feedback.
- DQAC consolidates all CO-PO/PSO mappings of all courses and analyses the mappings to identify deficiencies in the University curriculum and program level gap (i.e., a course needs to be included in curriculum or any activities need to be organized).
- Faculty members analyze course syllabus to identify course level gap (i.e., a particular topic needs to be included in a course).
- Faculty members uses their observations and/or looks for future data to identify course/curriculum gap if any.
- Faculty member takes remedial measure if any course level gap is identified.
- DQAC analyzes PO and CO attainment levels to identify program level curriculum gap or course level gap.
- DQAC suggests remedial measures to bridge program level gaps
- Further, PC takes feedback from Departmental Advisory Board (DAB), Experts from Industry, Academia to figure out the gap in the curriculum for attaining POs and PSOs.



Identified Gaps:

2021-2022: (Program Level Gaps)

1. Syllabus does not include any course which addresses concerns related with professional engineering practices used to evaluate societal, health, safety, legal, and cultural issues.
2. None of the essential course addresses understanding the impact of professional engineering solutions on society and the environment, as well as the need for sustainable development to an adequate extent.
3. Essential curriculum does not cover ethics and accountabilities for engineering practices.
4. The Programme includes minimal multidisciplinary approach and coverage of financial management.
5. Internship which promotes life-long learning is not emphasized in the curriculum.

2021-2022: (Course Level Gaps)

1. Concepts of 'Data Mining Trends and Research frontiers' in course of Data warehousing and Mining.
2. Concepts of 'Development of Platform Independent Mobile Application' in course of Web Technology.
3. Introduction to " Fundamentals of Digital Communications and Tools for digital communications" in course of Computer Networks.
4. Introduction to "Distributed Database and database architectures concepts" in course of Database Management Systems.

2020-2021: (Program Level Gaps)

1. Syllabus does not include any course which addresses concerns related with professional engineering practices used to evaluate societal, health, safety, legal, and cultural issues.
2. None of the essential course addresses understanding the impact of professional engineering solutions on society and the environment, as well as the need for sustainable development to an adequate extent.
3. The essential curriculum does not cover ethics and accountabilities for engineering practices.
4. The Programme includes minimal multidisciplinary approach and coverage of financial management.
5. Internship which promotes life-long learning is not emphasized in the curriculum.

2020-2021: (Course Level Gaps)

1. Concept of 'NP-Complete problems and Approximation algorithms' in the course of Advance Algorithms
2. Concept of 'Machine Learning Using Python' in the course of Python Programming
3. Concept of 'Model of Distributed Computing -CORBA' in the course of Distributed Computing
4. Concept of 'Project and Innovative Experiment' in the course of Mobile Communication and Computing.

2019-2020: (Program Level Gaps)

1. Syllabus does not include any course which addresses concerns related with professional engineering practices used to evaluate societal, health, safety, legal, and cultural issues.
2. None of the essential course addresses understanding the impact of professional engineering solutions on society and the environment, as well as the need for sustainable development to an adequate extent.
3. The essential curriculum does not cover ethics and accountabilities for engineering practices.
4. The Programme includes minimal multidisciplinary approach and coverage of financial management.

5. Internship which promotes life-long learning is not emphasized in the curriculum.

2019-2020: (Course Level Gaps)

1. Concepts of Database System Architectures identified in course of Database Management Systems.
2. Introduction to latest trends in web technologies identified in course of Web Technology.
3. Design and development of Android applications in course of Mobile Computing and Communications.
4. Concepts of "NP-Complete problems and Approximation algorithms' in course of Advance Algorithms.

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

Institute Marks: 8.00

In order to bridge the gap and attain programme outcomes more effectively, the Computer department has provided inputs and suggestions to the Affiliating University regarding curricular gaps and the possible addition of new content/add-on courses in the curriculum. The Department of Computer Engineering has sent letters regarding this to the Board of Studies (BOS) over the time. Further, Faculty members are involved in Syllabus setting committee. They give inputs in the syllabus setting meetings.

The various steps are taken to overcome identified gaps. Few steps are as mentioned below:

- Additional content is taught in class to bridge the course level gaps.
- Guest lectures are arranged to bridge the course level gaps.
- Student development workshops, seminars are organized to bridge program level gaps.
- Various curricular and co-curricular activities are organized to bridge program level gaps.
- Students are encouraged to participate in various technical and non-technical competitions.
- Students are encouraged to become members of various councils, project teams, etc.

2021-22

| S. No | Gap | Action Taken | Date- Month- Year | Resource Person with Designation | % of students | Relevance to POs, PSOs |
|-------|---|---|-------------------------|--|------------------|------------------------------|
| 1 | Only few students have a solid foundation of theoretical and practical knowledge of science and mathematics, which they correlate and apply in their projects and | Students motivated to participate in online courses | 01/07/2021 | Swayam, NPTEL, MOOCs etc | 10 | PO1 |

| | | | | | | |
|---|---|---|------------|---|----|-----------------------------------|
| | research. | | | | | |
| 2 | Need to improvise research-based attitude among the students | Alcoholic 1.0 | 19/09/2021 | Prof. Roshni Padate, Asst. Prof. CRCE | 23 | PO8, PO9, PO10, PO11, PO12, PSO1, |
| 3 | Promote more students to find solutions to societal and environmental issues. | Webinar on Design Thinking, Critical Thinking and Innovation Design | 22/10/2021 | Mr. Kashyap Sheth, Member of IIC | 17 | PO3 |
| 4 | Need to encourage more students towards innovations, research based projects, technical paper writing and IPR | CRESEND O -Innolette 2022 | 05/03/2022 | Internal Faculty members of CRCE | 5 | PO4 |
| 5 | Requirements of more students exposure towards advanced tool and resources usage to meet the industry standards and research. | Workshop on Game Development using Java and Unreal Engine | 04/12/2021 | Mr. Santo Sunny, Mr. Sahil Bane, Ms. Charmi Tank Students of CRCE | 10 | PO5 |
| 6 | None of the course addresses the need for sustainable development | Marine Ecosystem by United Way Mumbai | 13/10/2021 | United Way Mumbai | 14 | PO7,PO8 |
| 7 | Need to promote ethics and accountabilities for engineering practices among the students | Webinar on Start-up and Legal & Ethical Steps | 28/04/2022 | Prof. Swati Ringe, Asst. Prof. CRCE | 13 | PO8,PO9,PO10,PO11,P O12 |
| 8 | There is an exigency of effective communication | Fr.Conceicao Rodrigues Memorial | 08/10/2021 | Brig. Ajit Shrivastav | 4 | PO8, PO9,PO10 |

| | | | | | | |
|----|--|--|------------|---|----|---------------------|
| | skills among the students. | Debate | | | | |
| 9 | Internship which promotes life-long learning is not emphasized in the curriculum | Internship Expo 2022 | 29/01/2022 | Participating companies; (1) Umeed NGO, (2) lprime, (3) Think technologies, (4) Reveation Labs (5) WEQ technologies and many more | 54 | PO6, PO8, PO9, PO12 |
| 10 | Syllabus doesn't cover "Data Mining Trends and Research frontiers" | Guest Lecture on "Role of Analytics from Placement perspective" | 18/10/2021 | Kartick Hariharan,- Quantiphi Analytics Solution Private Limited Designation:Machine Learning Engineer | 80 | PO12,PSO2 |
| 11 | Syllabus lacks "Development of Platform Independent Mobile Application" | Guest Lecture on "Development of Mobile App using Flutter" | 24/02/2022 | Mr. Surya Pratap Shahi, Full stack developer | 60 | PO5, PO12 |
| 12 | Fundamentals of Digital Communications not covered in the syllabus | Lecture on "Coverage of Multiplexing techniques, Data rates and Channel Utilization" | 28/07/2021 | Prof. Merly Thomas, Associate Professor, Fr. CRCE,. | 90 | PO1 |
| 13 | Familiarity with Networking Tools | Guest Lecture on "Packet Analysis using | 28/09/2021 | Dr. Vaishali Gaikwad, Assoc. Prof. | 85 | PO6 |

| | | | | | | |
|----|--|---|------------|---|-----|---|
| | | Wireshark” | | | | |
| 14 | Syllabus lacks concepts of “Distributed Database and database architectures concepts” to cover concepts of DWM | Lecture and Lab session on Distributed Database and database architectures concepts | 19/04/2022 | Dr. Sujata Deshmukh, Associate Professor, Fr.CRCE | 65 | PO12, PSO2 |
| 15 | High demand to improve interpersonal skills among students to work as a team. | Unscript Hackathon | 22/01/2022 | Gaurav Sen, Interviewready, Founder | 100 | PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12 |

2020-21

| S. No | Gap | Action Taken | Date-Month-Year | Resource Person with Designation | % of students | Relevance to POs, PSOs |
|-------|---|---|-----------------|--|---------------|--------------------------------|
| 1 | Only few students have a solid foundation of theoretical and practical knowledge of science and mathematics, which they correlate and apply in their projects and research. | Students motivated to participate in online courses | 01/07/2020 | Swayam, NPTEL, MOOCs etc | 13 | PO1 |
| 2 | NP-Complete problems and Approximation algorithms | Guest Lecture | 13/10/2020 | Prof. Archana Kale, TSEC, Bandra, Mumbai | 100 | PO2, PSO1 |
| 3 | Machine Learning Using Python | Guest Lecture | 01/05/2021 | Mr. Yogendra Yatnalkar, Machine Learning Engineer, Quantiphi Analytics | 85 | PO1 , PO5, PSO1 |
| 4 | Model of Distributed Computing -CORBA | Case Study and Seminar | 17/04/2021 | Students of the class | 55 | PO12 |
| 5 | Real time application w.r.t. Mobile Computing and Communications | Mini projects | 02/04/2020 | Prof. Monali Shetty, Asst. Prof. CRCE | 100 | PO1, PO3, PO5, PO9, PO10, PSO1 |

2019-20

| S. No | Gap | Action Taken | Date-Month-Year | Resource Person with Designation | % of students | Relevance to POs, PSOs |
|-------|---|---|-----------------|--|---------------|--------------------------------|
| 1 | Only few students have a solid foundation of theoretical and practical knowledge of science and mathematics, which they correlate and apply in their projects and research. | Students motivated to participate in online courses | 01/07/2019 | Swayam, NPTEL, MOOCs etc | 12 | PO1 |
| 2 | Design and development of Android applications | Mini Projects and Lab experiment | 24/09/2019 | Prof. Monali Shetty Assistant Professor, Fr. CRCE. | 100 | PO1, PO3, PO5, PO9, PO10, PSO1 |
| 3 | Lack of concepts of "Introduction to Database System Architectures" to understand DWM | Lecture and Lab session | 13/10/2019 | Dr. Sujata Deshmukh, Associate Professor, Fr. CRCE | 60 | PO12, PSO2 |

2.2 Teaching - Learning Processes (100)

Total Marks 92.00

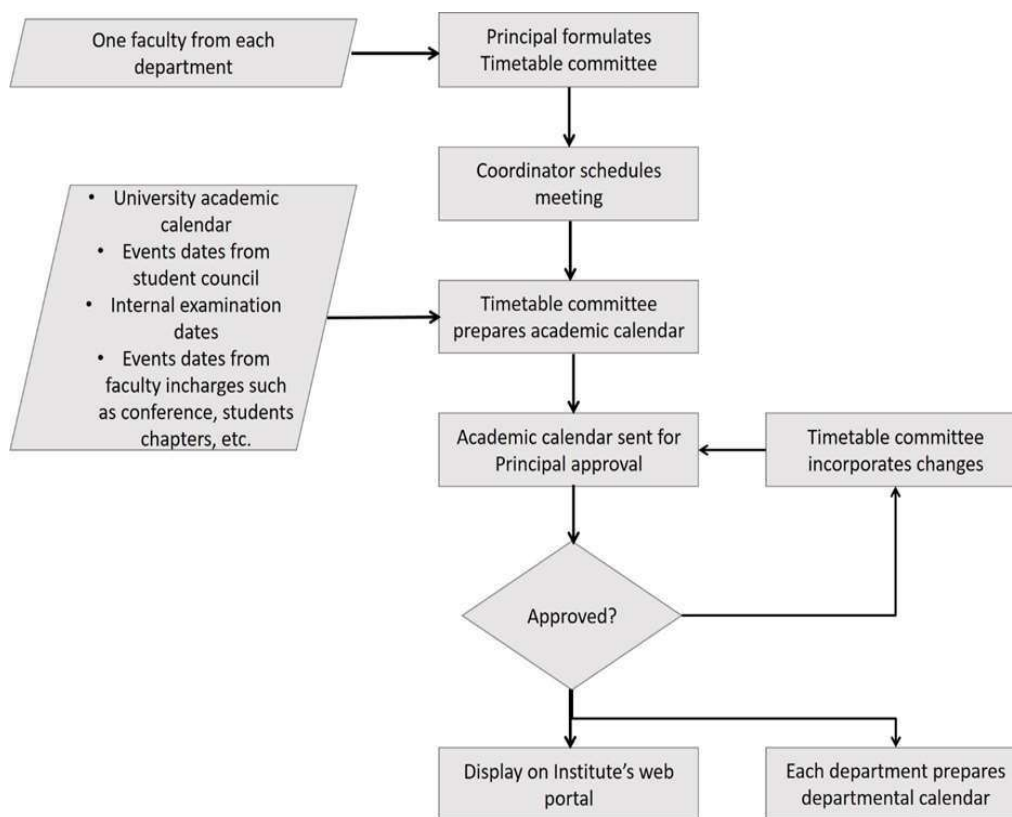
2.2.1 Describe processes followed to improve quality of Teaching & Learning (25)

Institute Marks: 23.00

The Institute follows various processes to ensure delivery of good quality of Teaching learning. The processes are listed below.

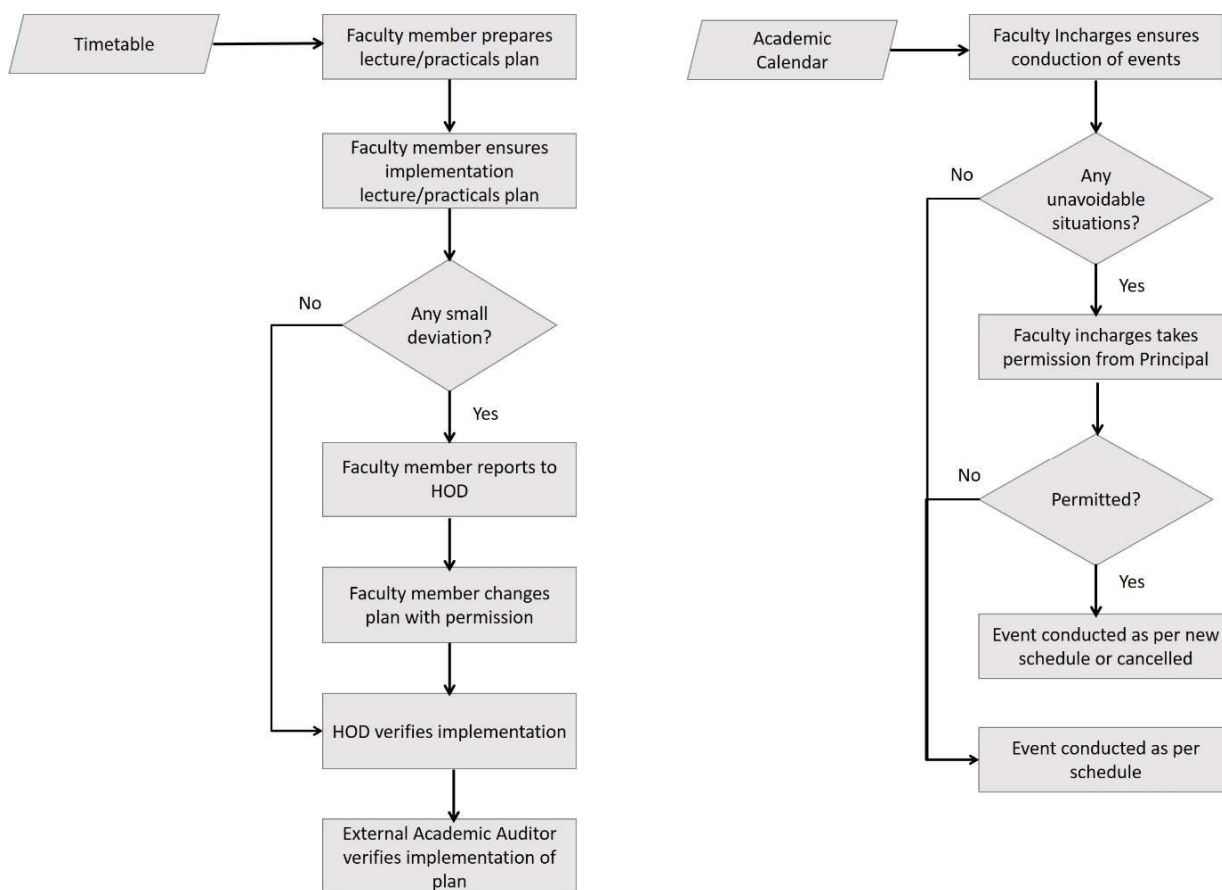
A. i. Process to prepare academic calendar

1. Principal formulates Timetable committee which includes at least one member from each department.
2. Coordinator schedules meeting for preparation of time table and academic calendar.
3. Timetable committee collects data from concerned faculty in charges, office, examination cell, etc.
4. Timetable committee prepares Institute academic calendar.
5. Coordinator sends academic calendar to Principal for approval.
6. If any suggestions given by Principal, timetable committee modifies the academic calendar.
7. Coordinator ensures publication of academic calendar on Institute portal.
8. Each department prepares departmental calendar based on Institute academic calendar.



A. ii. Process to ensure adherence to Academic Calendar

- Faculty member plans lectures/practicals based on the time table.
- Faculty members ensures conducting lectures/practicals as per the plan
- In case of small deviation, faculty member reports to Head of the Department and with permission, faculty member make the changes in the plan.
- External academic auditor verifies the implementation of the lecture/practical plan.
- Faculty in-charges ensure conduction of the events as per the academic calendar.
- In case of unavoidable circumstances, faculty in-charges make the changes in the event date with prior permission of the principal
- Head of the Department verifies the implementation of lecture/practical plan.



B. Use of Various Instructional Methods and Pedagogical Initiatives

All our faculty members make the best efforts to deliver the subject courses assigned to them, using the best practices of teaching. In order to make the teaching-learning process more effective and interactive, all the faculty members prepare themselves before the beginning of the semester by designing the course delivery and assessment methods as follows:

- Lesson plan
- The content of teaching
- Teaching strategies
- Various instructional methods to be used
- Activities/tasks to be done by students
- Appropriate Assessment Methods
- Course Evaluation Process

During the course of delivery, our faculty member explains the Course learning objectives and encourages the students to ask questions that help them to understand and solve the problems not only in the course learning, but also in their practical lives. Following are the various instructional methods used to enhance learning experience for the students.

- **Interactive class sessions:** Faculty members insist on an interactive teaching- learning process that encourages students to participate in class-room sessions through Group Discussions, Question-Answer sessions.
- **Presentation Techniques:** Faculty members use modern presentation techniques/on-line

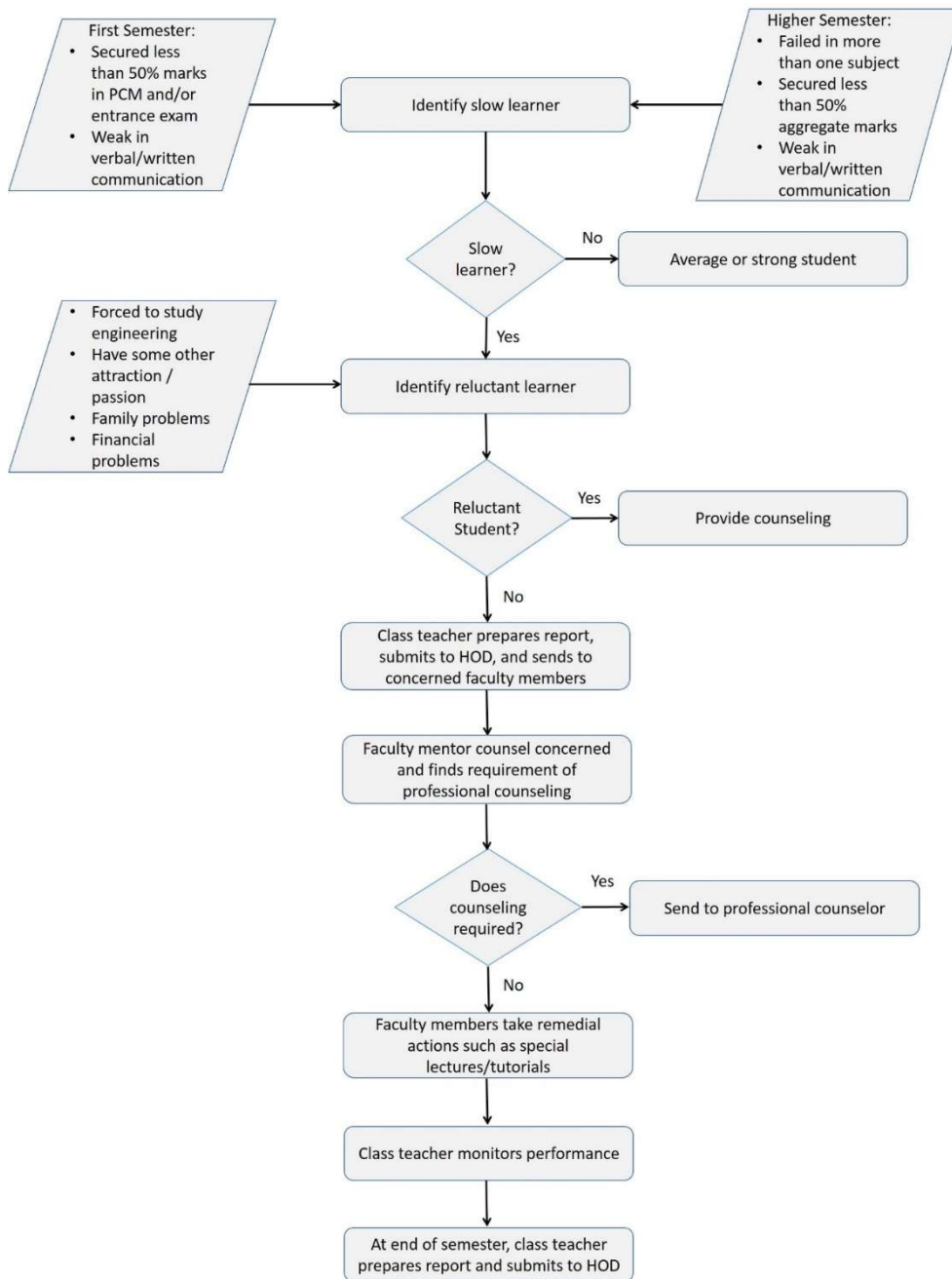
videos (eg. NPTEL) to enhance the quality of lecture delivery. It helps students to visualize complex engineering concepts and theories.

- **Real-life examples:** Emphasis is given not only on explaining various engineering concepts and theories but also on the real-life implications and industrial applications. It helps students to understand the concepts they learn and can correlate theory to actual practices.
- **Seminars:** Faculty members and industry experts share their practical knowledge with students through various seminars. This activity contributes to bridge the gap between academics and industry.
- **Case Studies:** Case studies are discussed with students, which is a very effective tool for gaining in depth understanding of the concept.
- **Assignments and quizzes:** Assignment and quizzes are prepared by the faculty members that will help students to:
 - understand and apply the concepts to solve problems
 - train students to reason
 - evaluate their decision
 - increase their learning abilities
 - defend their conclusions
- **Mini Projects:** Mini projects are assigned to students as a part of their term- work wherein they apply their knowledge to solve simple engineering problems and, in the process, improve their understanding.
- **Online Course Creation:** During the Covid -19 pandemic, few teachers videotaped their lectures on YouTube as web-based instruction. Some of the Faculty have also have created YouTube Links for some of the subjects like TCS
- **Virtual Teaching platform:** Virtual teaching Platform used are Google Meet, Google classroom. Lecture materials, Assignments, Quiz questions, recorded lecture video links are posted on the Google classroom. Many faculty members are using Google Classroom, Moodie for organising and managing online classes.
- **Study of Research Papers:** Faculty shares the research papers in their respective subject domain, and the students read the paper, present their findings through presentations.
- This activity improves scientific literacy, critical thinking abilities, and knowledge of scientific facts among students.
 - **Flipped Classroom:** Some of the faculty use Flipped classroom activity for few Modules of the subject. In this activity Faculty shares the lecture videos with the students on Google classroom in advance and assess the students' knowledge, understanding on the Topic, through Quiz, Group discussion. This Inculcates the habit of self- reasoning, self-exploration of the subject Topic in the students.
- **Animations:** Some of the faculty use Animations in their subject Presentations. Animation deepens visual understanding much more than traditional diagrams, makes it possible to turn abstract concepts and processes into something tangible and relatable.

C. i. **Process to identify weak learners**

- Beginning of first semester. identify weak learners using following criteria:
 - < 50% aggregate marks in PCM
 - < 50 percentiles in entrance exam
 - Weak in verbal and/or written communication (by observations)

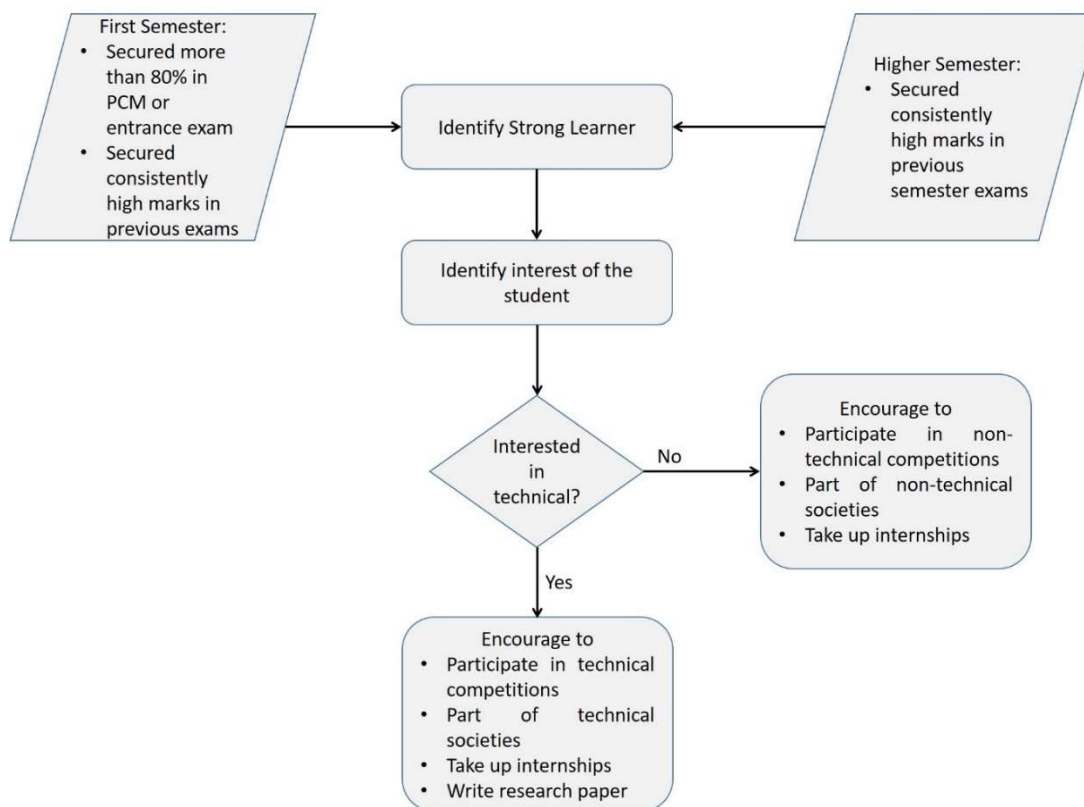
- Identify whether the student is a reluctant student or not by finding following information:
 - Forced to study engineering
 - Have some other attractions
 - Have some family problems
 - May have to work and study
- From second semester onwards, identify weak learners using following criteria:
 - Failed in more than one subject
 - Secured < 50% aggregate marks in previous examination
 - Weak in verbal and/or written communication
- The class teacher prepares the report of the weak students and submits to HOD.
- HOD sends report to concerned faculty members.
- Subject teachers identify the weak students in respective course and takes remedial actions.
- Organize special classes/tutorials for weak students
- Monitor progress of the weak students
- Provide counseling if required
- If student performance does not improve, find the reason and identify the different method to improve learning



C. II. Process to identify Strong Learners

- Identify strong students based on following criteria:
 - During first semester:
 - Secured more than 80% in PCM or entrance exam
 - Secured consistently high marks in previous exams
 - At higher semester
 - Secured consistently high marks in previous semester exams
- Identify interest of the students
- If student is interested in technical aspects, encourage student to
 - Participate in technical competitions
 - Part of technical societies
 - Take up internships
 - Write research paper

- If student is interested in non-technical aspects, encourage student to
 - Participate in non-technical competitions
 - Part of non-technical societies
 - Take up internships



D. Every classroom is provided with an LCD projector and 24 x 7 Internet connection. The faculty member can use a blackboard/ LCD projector judiciously during the lecture. Faculty members strive to enhance the learning experience for students by

- Ensuring quality of the content taught in classroom sessions.
- Observing individual students understanding during classroom sessions through question/ answers sessions, quizzes. Inculcating the habit of reasoning in students which help them in continuous self-learning.
- Faculty of the department have taken few initiatives in Making classroom sessions interactive and maintaining the environment

E. Lab Experience:

Faculty members strive to enhance quality of laboratory experience for students by:

- Keeping updated laboratory manuals which provides proper guidelines for conducting experiments
- Explaining the concept or theory supporting the experiment.
- Explaining and demonstrating the experiment to every student in a batch
- Ensuring that every individual performs experiments, records the observation analyses results
- Regularly updating the softwares used in respective laboratories to ensure quality of

experiments.

- Project based learning: some of the faculty ensures that students do Mini Projects as a part of Laboratory requirement. This engages the students in solving a real-world problem, answering a complex question. In return, students acquire a deeper knowledge of the subject through active exploration of real-world challenges and problems.

F. Continuous Assessment in the Laboratory

Faculty members ensure timely and continuous assessment of laboratory work. Emphasis is given on every individual student conducting the experiment and analyzing the result. Students' performance during laboratory sessions is recorded and is one of the important tools used for internal assessment. This performance is accounted in term- work evaluation and course outcome calculations.

G. Student feedback of teaching learning process and actions taken

Student feedback of teaching-learning process is collected as follows:

Course Exit Survey: Faculty members collect students' feedback for every course at the end of semester through course exit surveys. Students rate their understanding of various topics on a scale of 1 to 5 and also provide comments or improvement needed, if any. Faculty members can evaluate the teaching learning process based on this survey and work towards improving the same.

Student Feedback on Portal: Students are supposed to fill online feedback form on college portal at the end of each semester. This activity is carried out on at the Institute level and the summary of student's feedback is then shared with departments and individual faculties. Faculties are expected to work on the feedback in order to improvise the teaching- learning process. The actions taken on the student's feedback are discussed in the faculty performance appraisal.

Mid-Semester feedback: From the academic year 2016-17, a mid-semester feedback is taken from a set of students each class to gauge the progress of each course by the Head of the Department and the feedback is used for corrective action, if required.

Graduate Exit Survey: This survey conducted every year collects feedback from students completing the program and the feedback is used for improving the teaching learning process.

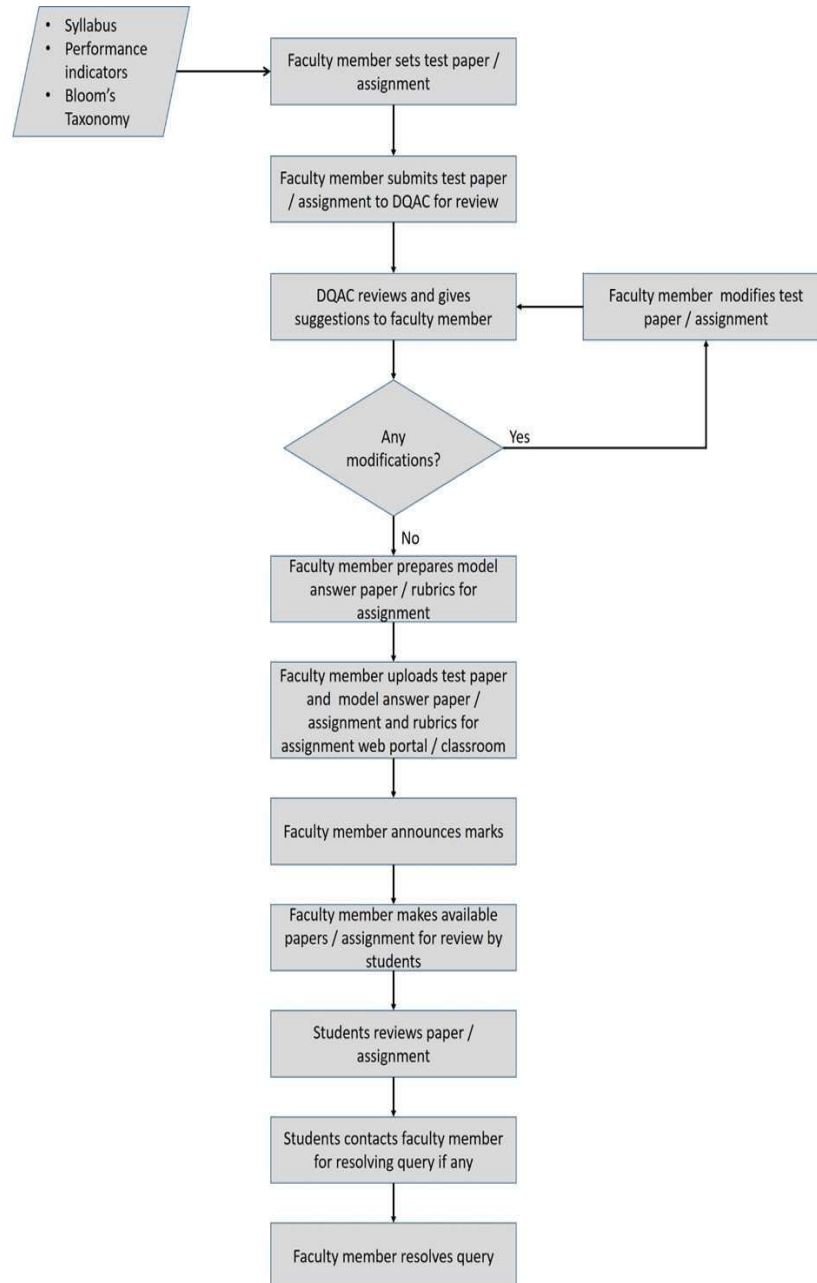
2.2.2 Quality of internal semester Question papers, Assignments and Evaluation (20)

Institute Marks: 18.00

Following process is followed to ensure quality question papers and assignments along with their evaluation:

- Faculty member sets unit test paper/assignment based on syllabus considering performance index, Bloom's taxonomy, COs, etc.
- Faculty member submits test paper/assignment to DQAC for review.
- DQAC reviews test paper/assignment and gives feedback to faculty member.
- Faculty member prepares model answer paper and marking scheme for test paper, and rubrics for assignment.

- Faculty member uploads test paper/assignment and model answer paper on web portal/classroom.
- Faculty member corrects test paper/assignment as per the marking scheme/rubrics.
- Faculty members announce marks and makes available answer paper/assignment for review by students.
- Student contact faculty member if they have any query.
- Faculty member clears the query raised by student.



2.2.3 Quality of student projects (25)

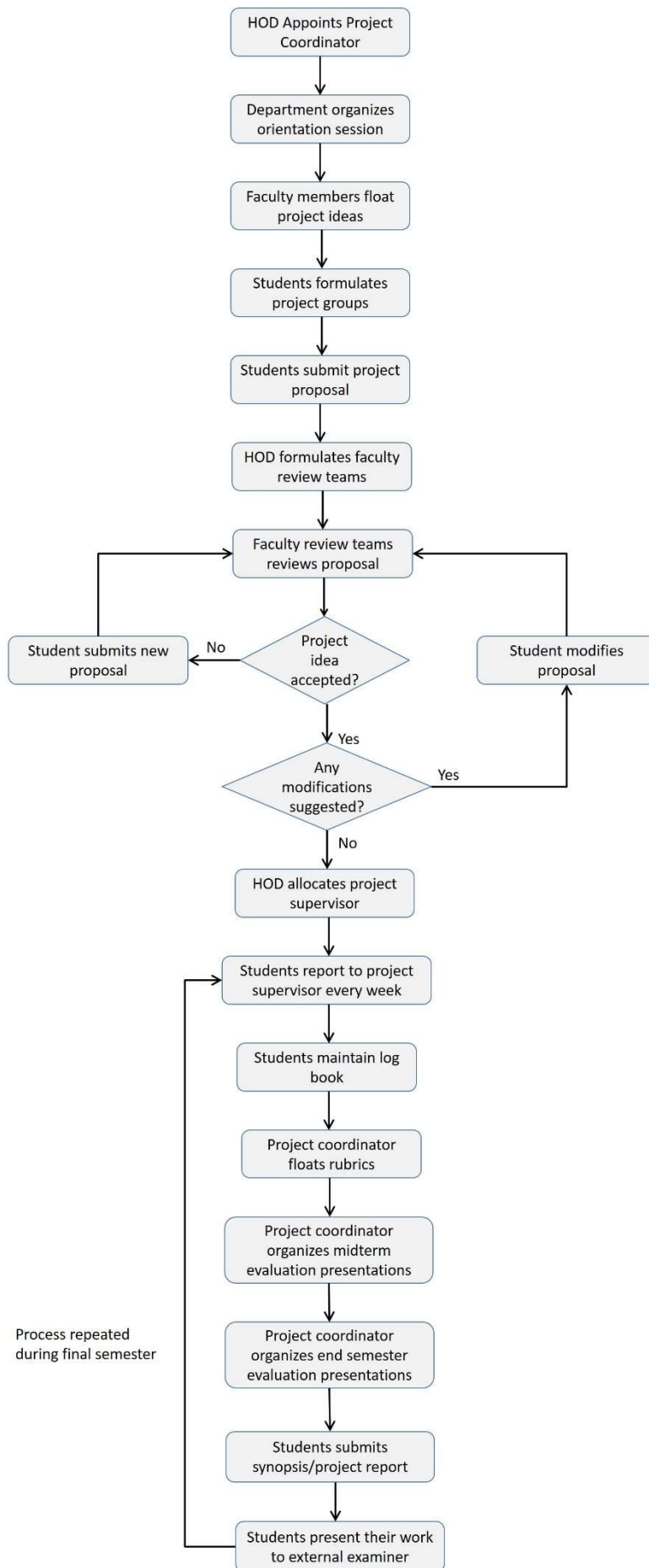
Institute Marks: 23.00

We follow rigorous process to maintain the quality of the projects. The faculty members float project ideas. Also, students are having freedom to propose their project. During project selection process, emphasis is given to different criteria such as idea, feasibility, cost, etc. Also, rubrics are prepared for selection, evaluation and given to students in advance. In preparation of rubrics, the weightage is given to various factors such as ethics, communication (presentation, report writing, etc.), environment, etc.

Projects are mapped with POs and PSOs based on the tools used for assessment, rubrics prepared for assessment. Assessment of project is done continuously as mentioned the process below.

Following is the process followed for life-cycle of project.

1. The Head of the Department appoints the project coordinator.
2. At the start of semester, the department organizes orientation session for project selection.
3. Faculty members float their project ideas.
4. Student formulates project group as per the University guidelines.
5. Student select project from ideas float by department or propose their own idea.
6. At the beginning of the semester, students submit project proposal in prescribed format.
7. HOD and project coordinator formulates faculty teams to review project ideas.
8. The project coordinator organizes session for reviewing project ideas.
9. Faculty teams reviews the project ideas based on feasibility, innovations, etc.
10. Based on panel reviews; If project idea is not accepted, student need to propose new idea.
11. Based on panel reviews; If project idea is accepted, but need modifications, student need to modify proposal and resubmits for review.
12. HOD allocates project supervisor based on the project domain and faculty expertise.
13. Student reports to project supervisor every week and appraise and discuss about progress of the project.
14. Project coordinator floats project evaluation rubrics.
15. Project coordinator organizes progress review session at the mid of the semester.
16. Project coordinator organizes pre-final progress review session at the end of the semester.
17. Student submit synopsis/project report and logbook.
18. During end semester, student present their project work to external examiner.
19. Steps 13-18 repeated in next semester.



2.2.4 Initiative related to industry interaction (15)

Institute Marks: 13.00

• **MOU:** The department always strives to impart quality education to meet the needs of growing industry, society and environment. To establish a strong Industry interaction with the students, the Department has taken the initiative to sign Multiple MOU with Industry and professional Bodies. These MOU will provide research backed Knowledge and impart Practice oriented Skills in various fields like Blockchain, Cyber security, Linux, Artificial Intelligence, Web Services (AWS), Design Thinking. The MOU will enhance the knowledge of students and faculty by exchange of information and academic materials, distant or virtual training workshops, joint research activities, and publications. There are 26 MOUs signed by institute with industries/institutes/university. Few examples are mentioned below:

| Sr. No | MOU | Date of Agreement | Purpose and Outcome | Impact |
|--------|--|-------------------|---|---|
| 1 | Indian Institute of Remote Sensing (IIRS) Outreach Programme | 11/08/2022 | Fr. Conceicao Rodrigues College of Engineering is the Nodal Center for IIRS-ISRO outreach programme for Online, Offline, Live & Interactive Courses offered by IIRS-ISRO Dehradun from 15th August 2022. To give the students an opportunity to enroll in various certification courses in Remote Sensing and geo-spatial technology. | Many students have enrolled in this course. |
| 2 | Crypto University | 8/8/2022 | As a part of Industry Academia interaction.it helps the students to get insights into the fast growing fields of Blockchain, Metaverse and Digital Landscape by imparting real time hands -on and industry driven skills and knowledge. This thereby enhances the career opportunities for Students in the field of Blockchain. | Expert session Conducted to make the students aware about the skills required for Blockchain Developers, Job opportunities in Blockchain. Encourages students to do Projects/Research activity in the field of Block Chain. |

| | | | | |
|---|--------------------------------------|------------|---|--|
| 3 | EC Council /Academia | 20/08/2021 | Industry Awareness Webinars to engage student community on Cyber Awareness Sessions for Students knowledge advancement in the field of cybersecurity education. This MOU will help the students in their Research activity, further studies and Career in the field of Cyber security | Students completed Certification course offered by EC council. |
| 4 | Linux Professional Institute, Canada | 8/03/2021 | To encourage students to use Linux for software-based activities and provides Job oriented training on Linux. | |
| 5 | AWS | 13/08/2018 | <p>The MOU is signed with AWS Academy with the aim of empowering students of Fr. CRCE with industry recognized certification, which will provide the students with career opportunity in the field of cloud. The MOU is signed for bridging the gap between industry and academia.</p> <p>As cloud technologies continue to help organizations transform at a rapid pace, employees with the necessary cloud skills are in high demand.</p> | <p>With the help of AWS Academy MOU, The institute provides with a free, ready to teach cloud computing curriculum, that prepares students to pursue industry-recognized certifications and in-demand cloud jobs. It also helps faculty stay at the forefront of AWS Cloud innovation so that they can equip students with the skills they need to get hired in one of the fastest growing industries.</p> |
| 6 | TCS (Academic Interface Program) | 01-04-2018 | Workshops are conducted for students in various domains like Machine Learning, Deep Learning, Design Thinking etc. | Students have used the knowledge gained from these workshops in their Projects, Participated in competitions like Hackathons. |

- **SDP and FDP:** Student Development Programs and Faculty Development Programs are organized by the Department in every academic year, in the form of seminars, workshops, expert lectures, by inviting experts from industry and academia through Professional Bodies. These SOP and FOP provide exposure to advanced technologies and impart Practical Training to the students. The following are the Student development Programs and Faculty Development Programs organized:

| Day | Time (IST) | Industry Expert | Topic |
|---------------------|------------------------|--|--|
| Day1 30/9/2022 | 1:00 p.m -4:00 p.m | Rocky Jagtiani BE(IS), PGDST (NCST), ME(IT) Head Training & Development Suven Consultants & Technology Pvt Ltd | NLP using Deep Learning |
| Day2 3/10/2022 | 1:00 p.m -4:00 p.m | Rocky Jagtiani BE(IS), PGDST (NCST), ME(IT) Head Training & Development Suven Consultants & Technology Pvt Ltd | NLP using Deep Learning |
| 13/10/2022 | 11:15 p.m 12:15 p.m | Karthick Hariharan Machine Learning Engineer Quantiphi Analytics Solution Pvt Ltd. | Role of Analytics from Placement Perspective |
| 28/01/2022 Day 1 | 10:00a.m- 12:00p.m | Mr. Thompson Naidu Senior Software Developer Quantiphi Analytics Solution Pvt Ltd. | Advance Cloud Computing Docker and Kubernetes |
| 29/01/2022 Day2 | 10:00a.m- 12:00p.m | Mr.Pranay Lobo SoftwareEngineer R&D Protegrity | Advance Cloud Computing Docker and Kubernetes |
| 28/08/2021 | 10:00a.m- 12:00p.m | Noel Joymon Conversational BoT Engineer, Quantiphi Analytics Solution Pvt Ltd. | ChatBot Designing |

| | | | |
|----------------------------------|----------------------|--|--|
| Day 1 (24/5/2020) Sunday | 11:00am 12:00pm | Mr. Swapnil Khetan Michael Page, Manger- Procurement & Supply Chain | How an interviewer assesses a potential candidate |
| | 12:00 pm 1:00 pm | Mr. Edwin Clement Software Engineer BrowserStack | Interview Preparation Checklist |
| | 2:00 pm - 3:00 pm | Mr. Karan Gohil Cloud Solutions Engineer, Google | Coding Skills Enhancement |
| Day 2 (25/5/2020) Monday | 10:00 am 11:00am | Mr. Mahendra Mehra PhD Scholar, Assistant Professor at Fr. CRCE, Certified Ethical Hacker, EC Council. Oracle Certified Cloud foundation Associate. Star Certified (CLOUD, DevOps, Ethical Hacking) Trainer | Linux based Interview Questions |
| | 12:00 pm 1:00 pm | Ms. Jenifer Reuben DevOps Engineer, BNP Paribas | DevOps Tools -Jenkins |
| | 2:00 pm-3:00 pm | Mr. Leon D'souza Software Developer, MSCI Inc. | Database Interview Questions |
| Day 3 (26/5/2020) Tuesday | 9:30 am -11:00 am | Mr. Aakash Palghadmal, Analytical Development Analyst, MSCI Inc. | OOPS Concept Part 1 OOPS Concepts part 2 (https://drive.google.com/file/d/1nOIQt87IP2tLemwK_R9oAUJIVz7x284/view?usp=sharing) |
| | 12:00 pm 1:00 pm | Dr. Khushbu Trehan Professor and Employability Skills Trainer. Dale Carnegie Certified Trainer. British Council Certified IELTS Trainer | HR Interview Questions |
| Day4 (27/5/2020) Wednesday | 10:00 am 11:00 am | Mr. Gaurav Shinde Software Engineer, JPMorgan Chase & Co. | Angular, JDBC Integration |
| | 12:00 am 1:00 pm | Mr. Melwyn Saldanha Software Engineer, People Interactive | Golang for Microservices |

| | | | |
|----------------------------------|----------------------|---|---|
| Day 5 (28/5/2020) Thursday | 10:00 am 11:00 pm | Mr. Gaurav Sen Software Engineer and YouTuber | System Design-Case Study GoToWebinar |
| | 12:00 am 1.00 pm | Mr. Ashley Lobo Programmer, Final Year Student, SIH 2019 Winner, ACM ICPC 2019 Regional Finalist | Competitive Coding (Hands-on) |
| 27/5/2020-31/5/2020 | 10.00a.m – 4.00 p.m | Mr. Pranav Shastri, CEO & Founder of programming Fiesta. | Ethereum Powered DAPP Deployment in Blockchain Technology |
| 25/01/2020 | 10.00a.m-11.00 p.m | Mr. Rathil Patel, Solution Engineer. Browser Stack | HTML, CSS and Bootstrap Workshop |
| Day 1 (30/5/2020) Saturday | 10:30 am 11:30am | Dr. Kalpesh Parikh MD &CEO Intellisense ITsys Pvt. Ltd, Gujarat | Keynote Speech Disruptive Technologies of Industry 4.0 |
| | 12:00 pm 1:00 pm | Mr. Dheeraj Anchan Principal Research Scientist, ISRO | Block Chain Technology for Industry 4.0 |
| Day 2 (31/5/2020) Sunday | 10:00 am 11:00am | Mr. Vaibhav Kohli Sr. Software Engineer, VMWARE, USA | Cloud Technology for Industry 4.0 |
| | 11:30am-12:30 pm | Mr. Pranit Raje AWS Cloud support Engineer, AWS Solutions, Mumbai | Amazon Web Services for Industry 4.0 |
| | 2:00 pm - 3:00 pm | Ms. Anisha Gharat Platform Engineer, Quantifi, Mumbai | Google Cloud Platform: Architecture, Case Study and Demonstration |
| | 10:00 am - 11:00am | Prof. Yogesh Pingle Assistant Professor at Vidya Vardhini College of Engg, Mumbai | Use of IoT for Industry 4.0 |
| | 11:30 am-12:30 pm | Mr. Apurva Godbole Co-Founder and CEO, Drona Aviation, Pune | Role of drones in industry post COVID19 |

| | | | |
|-----------------------------------|------------------------|---|---|
| Day 3 (01/6/2020) Monday | 2:00 pm- 3:00 pm | Mr. Mahendra Mehra PhD Scholar, Assistant Professor at Fr. CRCE, Certified Ethical Hacker, EC Council. Oracle Certified Cloud foundation Associate. Star Certified (CLOUD, DevOps, Ethical Hacking) Trainer | The path to Industry 4.0 through Cyber Security |
| Day4 (02/6/2020) Tuesday | 10:30 am - 12:00 pm | Mr. Mustafa Fatakawala Data Scientist, TCS, Mumbai | AI in Business 4.0 era |
| | 12:30 pm- 1:30 pm | Dr. Ramchandra Magrulkar Associate Professor, D.J. Sanghavi College of Engg, Mumbai | Data Handling and Visualization using Python |
| | 2:00pm- 3:00pm | Mr. Dhaval Sonawane Cognitive Software Engineer, IBM, USA | Data science and Industry 4.0 |
| Day 5 (03/6/2020) Wednesday | 10:00 am - 12:00 am | Ms. Ketaki Joshi PhD Scholar, Assistant Professor at Fr. CRCE Mr. Bharat Kumavat Technical Chief and Founder. Triaro & co., Mumbai | Additive Manufacturing - Technology enabler for Industry 4.0 |
| | 2:00 pm- 3.00 pm | Mr. Swapnil Khetan Manager- Procurement & Supply Chain Practice at Michael Page, Mumbai. | Recognizing People Skills in the age of automation |
| 02/08/2020 | 2:00pm- 3:00pm | Mr. Rathil Patel, Solution Engineer. Browser Stack | Web Design Lab: Webinar on Responsive Web Based Resume Making Using Bootstrap |
| 5/01/2020 | 10:00 am - 12:00 am | Mr. Rathil Patel Solution Engineer, Browser Stack | HTML, CSS and Bootstrap Workshop for FIRST YEAR Students |
| 3/08/2019 | 10:00 am - 12:00 am | Mr. Thompson Naidu Analyst Software Developer TIAA | Web Technology Lab - "Node Js and mango db" |

| | | | |
|--------------------------------|---------------------|--|---|
| 02/12/2019 To 06/12/2019 | 1:00 pm 4:00 p.m | Bennett University and in association with Industry Partners NVIDIA | Advanced AI And Deep Learning workshop |
|--------------------------------|---------------------|--|---|

- **Industrial Visits:** For understanding work environment in the industries, industrial visits are organized once in a year.
- **Industrial Internships:** At department and institute level, the department encourages the students to undergo internships/summer training. Some students Participate in NPTEL certification courses and Various National Level Competitions (e-yantra, eYRC),and get the opportunity to intern at their reputed Institutes like IIT Mumbai ,IIT Indore. Following is the total count of students completed Internships.

2019-2020: 53

2020-2021: 99

2021-2022: 69

- **Training and Placement:** Training and placement office interacts with industries to know their job requirement and the placement officer acts as a liaison officer between the companies and college management. Companies like TCS, Accenture, L & T InfoTech, JP Morgan, Quantiphi, Browser Stack,are invited for campus recruitment. Almost all eligible students get placement in campus. Department also take feedback from recruiting companies and strives to improvise. The training and placement Cell takes the initiative to organize multiple Training Programs. This initiative imbibes professionalism, ethics and keeps the student aware of Industry expectations, promotes career counseling by organizing guidance lectures by senior corporate personnel.
- **Alumni:** The alumni play a major role in contributing to the development of the Department by providing their expert view in their respective fields. The involvement of Alumni are seen through their participation as guest lecturers, Department Advisory Board meetings and collaborative partners in technical teams like ROBOCON, VAYUSHASTRA. Following is the list attached showing few evidences of Alumni Interaction with the students.

| | Year | Name of Event | Resource Person | Designation |
|---|---------|-------------------------|-------------------|-----------------------------------|
| 1 | 2019-20 | Alumni Speak-Up Program | Farhan Shaikh | Senior Manager - Capgemini Invent |
| 2 | 2019-20 | Alumni Speak-Up Program | Kushan Sen | Lead Software Engineer - Cimpres |
| 3 | 2019-20 | Alumni Speak-Up Program | Gaurav Sen | CEO - InterviewReady |
| 4 | 2019-20 | Alumni Speak-Up Program | Aditya Joshi | Senior Director - Western Digital |
| 5 | 2019-20 | Alumni Speak-Up Program | Abhishek Kateliya | Founder - Third Block Community |

| | | | | |
|-----|------------|--|---|---|
| 6 | 19/11/2020 | Panel Discussion - How to Equip Yourself for Further Studies | 1. Slavvy Coelho 2. AchalShah 3. Mariya Ali 4. Janhavi Powale | 1. Data Scientist - Geotab Inc. 2. Associate - McKinsey & Company 3. Product Manager - Microsoft 4. Product Manager - Vestcom |
| 7 | 20/11/2020 | Panel Discussion - Explore the start-up dream:Plan to Execution | 1. Parag Doshi 2. Girish Batra 3. Subash Bishnoi 4. Sayli Potdar | 1. Director - Chenoa Information & Software Services Pvt. Ltd. 2. Co-Founder - Sarthy Venture Investment Partners 3. Co-Founder - Kitabeli 4. Founder - The Topsy Canvas |
| 8 | 27/02/2021 | Resume Building Workshop | Gopesh Rajderkar | Software Developer - TCS |
| 9. | 17/07/2022 | Alumni Mentorship Program - Quantiphi | 1. Nishant Seth 2. Yogendra Yatnalkar 3. Mareena Fernandes | 1. Marketing Specialist - Quantiphi 2. Sr. ML Engineer - Quantiphi 3. Business Analyst - Quantiphi |
| 10. | 29/07/2022 | Optimised Approach Towards Reallime Application using Industry 4.0 | Chinmay Kolhatkar | Founder-Technode |
| 11. | 27/07/2022 | Hackathon Preparation: Tips and Tricks to Excel | 1. Vedant Sahai 2. Princeton Saretto | 1. AI Product Manager - Plexflo 2. Software Developer Engineer - BrowserStack |
| 12. | 25/09/2022 | How to Equip Yourself for Further Studies - II | 1. Abhishek Kateliya 2. Ryan D'silva | 1. Entrepreneur - ThirdBlockCom 2. Graduate Teaching Assistant- Purdue University |

Hackathons:

- Every year more than 50% of the students Participate in the Hackathon organized at Institute

Level. These students get the opportunity to interact with the Industry Mentors, which helps in the technical skill development.

- Students also participate in Industry initiated Hackathons like TIAA, JP Morgan, eventually get the opportunity to intern and few of them get Placement offers in the same company.
- Students participating in Smart India Hackathon get an opportunity to interact with the Industry Mentors.

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

Institute Marks: 15.00

- Mentors Encourage the students to go for industrial internship.
- Support provided by the institute for getting internship at the industry:
 - **Internship Expo:** TED-x CRCE organizes Internship Expo every year, where many Technical and Non-Technical companies visit the Campus. The expo gives the students an opportunity to have a close interaction with the employers of the industry, and understand the various technical skills required by the industry. The students are then interviewed and successful candidates get an opportunity to intern at these Industries.
 - Students are encouraged to Participate in various company-initiated Hackathons like JP Morgan, TIAA and eventually students who successfully compete in these Hackathons, get the opportunity to Intern at these Industries, few of them also get placement offers in the same company.
 - Students have used the Knowledge, technical and non-technical skills gained from the Internships in their respective Project implementation, Participation in Competitions, Hackathons. This eventually has benefited the students in getting good Placement offers in Reputed companies and admission for Post Graduate Programs.

| Year | Number of Students Completed Internship | Number of Internships |
|-------------|--|------------------------------|
| 2019-2020 | 59 | 64 |
| 2020-2021 | 91 | 99 |
| 2021-2022 | 56 | 69 |

3 COURSE OUTCOMES AND PROGRAM OUTCOMES (120)

Total Marks
117.00

Define the Program specific outcomes

3.1 Establish the correlation between the courses and the Program Outcomes (POs) and Program Specific Outcomes (PSOs) (20) Total Marks 20.00

| | |
|-------------|---|
| PSO1 | Apply fundamental computer science knowledge to solve real world problems. |
| PSO2 | Design and Implement software systems of varying complexity in multidisciplinary scenarios that meet specified requirements with appropriate consideration to architectural, algorithmic and security aspects |

3.1.1 Course Outcomes (COs)(SAR should include course outcomes of one course from each semester of study, however, should be Prepared for all courses and made available as evidence, if asked) (5)

Institute Marks: 05

Note: Number of Outcomes for a Course is expected to be around 6.

| | | | |
|---------------------|--------------|----------------------|------------------|
| Course Name: | C2 01 | Course Year : | 2021-2022 |
|---------------------|--------------|----------------------|------------------|

| Course Name | Statements |
|--------------------|--|
| C2 01.1 | Implement geometric output primitive's algorithm |
| C2 01.2 | Apply the appropriate filling algorithm for the given objects. |
| C2 01.3 | Explain viewing and Modelling techniques in 2D and 3D. |
| C2 01.4 | Apply transformations on graphical objects in two and three dimensions |
| C2 01.5 | Develop real world computer Graphics based project in a Team. |

| | | | |
|---------------------|-------------|---------------------|------------------|
| Course Name: | C202 | Course Year: | 2021-2022 |
|---------------------|-------------|---------------------|------------------|

| Course Name | Statements |
|--------------------|---|
| C2 02.1 | Apply the methods for analyzing the complexity of the algorithms. |
| C2 02.2 | Analyze different techniques of algorithm design. |
| C2 02.3 | Analyze different String matching techniques. |
| C2 02.4 | Implement algorithms using different designing techniques |

| | | | |
|----------------------|--------------|----------------------|----------------|
| Course Name : | C3 01 | Course Year : | 2021-22 |
|----------------------|--------------|----------------------|----------------|

| Course Name | Statements |
|--------------------|--|
| C3 01.1 | To identify requirements & assess the process models |
| C3 01.2 | Plan, schedule and track the progress of the projects |
| C3 01.3 | Design the software projects. |
| C3 01.4 | Do testing of software project |
| C3 01.5 | Identify risks, manage the change to assure quality in software projects |

| | | | |
|----------------------|-------------|----------------------|----------------|
| Course Name : | C302 | Course Year : | 2021-22 |
|----------------------|-------------|----------------------|----------------|

| Course Name | Statements |
|--------------------|---|
| C3 02.1 | Identify basic concepts and principles of mobile computing and cellular architecture. |
| C3 02.2 | Describe the components and functioning of GSM and CDMA architecture. |
| C3 02.3 | To classify variety of security techniques in mobile network |
| C3 02.4 | Describe and apply the concepts of WLAN for local as well as remote applications. |
| C3 02.5 | Describe Long Term Evolution (LTE) architecture and its interfaces. |
| C3 02.6 | Develop and demonstrate mobile applications using various tools |

| | | | |
|----------------------|--------------|----------------------|------------------|
| Course Name : | C4 01 | Course Year : | 2021-2022 |
|----------------------|--------------|----------------------|------------------|

| Course Name | Statements |
|--------------------|--|
| C4 01.1 | Identify the appropriate Artificial Intelligence and Soft Computing techniques for solving problems in hand. |
| C4 01.2 | Choose appropriate search algorithm for problem in hand. |
| C4 01.3 | Analyze the strength and weakness of AI approaches to knowledge representation, reasoning and planning. |
| C4 01.4 | Construct supervised and unsupervised ANN for real world applications. |
| C4 01.5 | Design fuzzy controller system. |
| C4 01.6 | Apply Hybrid approach for expert system design. |

| | | | |
|----------------------|-------------|----------------------|------------------|
| Course Name : | C402 | Course Year : | 2021-2022 |
|----------------------|-------------|----------------------|------------------|

| Course Name | Statements |
|--------------------|---|
| C4 02.1 | Demonstrate knowledge of the basic elements and concepts related to distributed systems & technologies |
| C4 02.2 | Illustrate the middleware technologies that support distributed applications such as RPC, RMI and Object based middleware |

| | |
|---------|--|
| C4 02.3 | Analyse the various techniques used for clock synchronization and mutual exclusion |
| C4 02.4 | Demonstrate the concepts of Resource and Process management, and Fault Tolerance techniques |
| C4 02.5 | Assess the significance of Consistency and Replication Management models |
| C4 02.6 | Apply the knowledge of Distributed File System to analyse various file systems like NFS, AFS and the experience in building large-scale distributed applications |

3.1.2 CO-PO matrices of courses selected in 3.1.1(Six matrices to be mentioned; one per semester from 3rd to 8th semester) (5) Institute Marks : 5.00

1 . course name : C201

| Course | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 |
|----------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| C201.1 | 3 ▾ | 3 ▾ | 2 ▾ | - ▾ | 2 ▾ | - ▾ | - ▾ | - ▾ | - ▾ | - ▾ | - ▾ | - ▾ |
| C201.2 | 3 ▾ | 3 ▾ | 2 ▾ | - ▾ | 2 ▾ | - ▾ | - ▾ | - ▾ | - ▾ | - ▾ | - ▾ | - ▾ |
| C201.3 | 3 ▾ | 3 ▾ | 2 ▾ | - ▾ | 2 ▾ | - ▾ | - ▾ | - ▾ | - ▾ | - ▾ | - ▾ | - ▾ |
| C201.4 | 3 ▾ | - ▾ | - ▾ | - ▾ | - ▾ | - ▾ | - ▾ | - ▾ | - ▾ | - ▾ | - ▾ | - ▾ |
| C201.5 | 3 ▾ | 3 ▾ | 3 ▾ | - ▾ | 3 ▾ | - ▾ | - ▾ | 1 ▾ | 3 ▾ | 3 ▾ | 1 ▾ | 2 ▾ |
| Average | 3.00 | 3.00 | 2.00 | 0.00 | 2.00 | 0.00 | 0.00 | 1.00 | 3.00 | 3.00 | 1.00 | 2.00 |

2 . course name : C202

| Course | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 |
|----------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| C202.1 | 3 ▾ | 2 ▾ | - ▾ | - ▾ | - ▾ | - ▾ | - ▾ | - ▾ | 1 ▾ | - ▾ | - ▾ | - ▾ |
| C202.2 | 3 ▾ | 3 ▾ | - ▾ | - ▾ | - ▾ | - ▾ | - ▾ | - ▾ | 1 ▾ | - ▾ | - ▾ | - ▾ |
| C202.3 | 3 ▾ | 3 ▾ | - ▾ | - ▾ | - ▾ | - ▾ | - ▾ | - ▾ | 1 ▾ | - ▾ | - ▾ | - ▾ |
| C202.4 | 3 ▾ | 3 ▾ | 3 ▾ | - ▾ | - ▾ | - ▾ | - ▾ | - ▾ | 1 ▾ | - ▾ | - ▾ | - ▾ |
| Average | 3.00 | 3.00 | 3.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 |

3 . course name : C301

| Course | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 |
|----------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| C301.1 | 1 ▾ | 1 ▾ | 3 ▾ | 3 ▾ | - ▾ | - ▾ | - ▾ | - ▾ | - ▾ | 1 ▾ | - ▾ | - ▾ |
| C301.2 | 1 ▾ | 3 ▾ | - ▾ | - ▾ | - ▾ | - ▾ | - ▾ | - ▾ | 3 ▾ | 3 ▾ | 3 ▾ | 2 ▾ |
| C301.3 | 1 ▾ | 1 ▾ | 3 ▾ | - ▾ | - ▾ | - ▾ | - ▾ | - ▾ | 3 ▾ | - ▾ | - ▾ | - ▾ |
| C301.4 | - ▾ | - ▾ | - ▾ | 2 ▾ | 2 ▾ | - ▾ | - ▾ | - ▾ | - ▾ | - ▾ | - ▾ | - ▾ |
| C301.5 | 1 ▾ | 2 ▾ | - ▾ | - ▾ | - ▾ | - ▾ | - ▾ | - ▾ | - ▾ | - ▾ | - ▾ | - ▾ |
| Average | 1.00 | 2.00 | 3.00 | 3.00 | 2.00 | 0.00 | 0.00 | 0.00 | 3.00 | 2.00 | 3.00 | 2.00 |

4 . course name : C302

| Course | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 |
|----------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| C302.1 | 2 | 1 | 1 | - | 2 | - | - | - | - | - | - | - |
| C302.2 | 2 | - | - | - | 2 | - | - | - | - | - | - | - |
| C302.3 | 2 | - | - | - | - | - | - | - | - | - | - | - |
| C302.4 | 2 | - | - | - | - | - | - | - | - | - | - | - |
| C302.5 | 2 | - | - | - | - | - | - | - | - | - | - | - |
| C302.6 | 2 | 3 | 3 | - | 3 | - | - | - | 2 | 1 | 1 | 1 |
| Average | 2.00 | 2.00 | 2.00 | 0.00 | 2.00 | 0.00 | 0.00 | 0.00 | 2.00 | 1.00 | 1.00 | 1.00 |

5 . course name : C401

| Course | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 |
|----------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| C401.1 | 3 | 2 | - | - | - | - | - | - | - | - | - | - |
| C401.2 | 3 | 2 | - | - | - | - | - | - | - | - | - | - |
| C401.3 | 3 | 2 | - | - | - | - | - | - | - | - | - | - |
| C401.4 | 3 | 2 | 3 | - | - | - | - | - | - | - | - | - |
| C401.5 | 3 | 2 | 3 | - | - | - | - | - | - | - | - | - |
| C401.6 | 3 | 2 | - | - | - | - | - | - | - | - | - | - |
| Average | 3.00 | 2.00 | 2.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

6 . course name : C402

| Course | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 |
|----------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| C402.1 | 3 | - | 2 | - | - | - | - | - | - | - | - | 2 |
| C402.2 | 3 | - | 2 | 2 | 2 | - | - | - | - | - | - | - |
| C402.3 | 3 | 2 | 2 | 2 | - | - | - | - | - | - | - | - |
| C402.4 | 3 | 3 | 2 | 2 | - | - | - | - | - | - | - | - |
| C402.5 | 3 | 3 | 2 | - | - | - | - | - | - | - | - | - |
| C402.6 | 3 | 3 | - | 2 | - | - | - | - | - | - | - | - |
| Average | 3.00 | 3.00 | 2.00 | 2.00 | 2.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.00 |

1 . Course Name : C201

| Course | PSO1 | PSO2 |
|----------------|-------------|-------------|
| C201.1 | 3 | - |
| C201.2 | 3 | - |
| C201.3 | 3 | - |
| C201.4 | 3 | - |
| C201.5 | 3 | - |
| Average | 3.00 | 0.00 |

2 . Course Name : C202

| Course | PSO1 | PSO2 |
|----------------|-------------|-------------|
| C202.1 | 2 ∨ | 2 ∨ |
| C202.2 | 2 ∨ | 2 ∨ |
| C202.3 | 2 ∨ | 2 ∨ |
| C202.4 | 2 ∨ | 2 ∨ |
| Average | 2.00 | 2.00 |

3 . Course Name : C301

| Course | PSO1 | PSO2 |
|----------------|-------------|-------------|
| C301.1 | 2 ∨ | 2 ∨ |
| C301.2 | 2 ∨ | 2 ∨ |
| C301.3 | 2 ∨ | 2 ∨ |
| C301.4 | 2 ∨ | 2 ∨ |
| C301.5 | 2 ∨ | 2 ∨ |
| Average | 2.00 | 2.00 |

4 . Course Name : C302

| Course | PSO1 | PSO2 |
|----------------|-------------|-------------|
| C302.1 | 2 ∨ | - ∨ |
| C302.2 | 2 ∨ | - ∨ |
| C302.3 | 2 ∨ | 1 ∨ |
| C302.4 | 2 ∨ | - ∨ |
| C302.5 | 2 ∨ | - ∨ |
| C302.6 | 2 ∨ | 2 ∨ |
| Average | 2.00 | 2.00 |

5 . Course Name : C401

| Course | PSO1 | PSO2 |
|--------|--------|--------|
| C401.1 | 3 ∨ | - ∨ |
| C401.2 | 3 ∨ | - ∨ |
| C401.3 | 3 ∨ | - ∨ |
| C401.4 | 3 ∨ | 2 ∨ |
| C401.5 | 3 ∨ | 3 ∨ |
| C401.6 | 3 ∨ | 1 ∨ |

| | | | | | | | | | | | | |
|-----------|---|---|---|---|---|---|---|---|---|---|---|---|
| CSDL502 | 3 | 0 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CSDL601 | 3 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CSDL602 | 3 | 3 | 3 | 0 | 3 | 0 | 0 | 0 | 3 | 3 | 0 | 3 |
| CSDL701 | 3 | 3 | 3 | 3 | 0 | 3 | 3 | 0 | 3 | 0 | 0 | 3 |
| CSDL801 | 3 | 3 | 3 | 2 | 3 | 3 | 0 | 0 | 2 | 3 | 2 | 3 |
| CSILO701 | 3 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | 2 |
| CSILO702 | 3 | 3 | 3 | 2 | 3 | 3 | 0 | 0 | 2 | 3 | 2 | 3 |
| CSILO801 | 3 | 3 | 3 | 3 | 3 | 0 | 0 | 3 | 3 | 3 | 3 | 3 |
| CSILO802 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| CSL304-A | 3 | 3 | 3 | 0 | 1 | 2 | 0 | 0 | 3 | 2 | 2 | 1 |
| CSL304-B | 3 | 3 | 3 | 0 | 1 | 2 | 0 | 0 | 3 | 2 | 2 | 1 |
| CSL405-A | 3 | 2 | 2 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 2 |
| CSL405-B | 3 | 2 | 2 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 2 |
| CSL504-A | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 3 | 3 | 0 | 0 |
| CSL504-B | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 3 | 3 | 0 | 0 |
| CSL605-A | 3 | 3 | 3 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| CSL605-A | 3 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| CSL803 | 3 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 1 |
| CSM301-w | 3 | 3 | 3 | 3 | 3 | 0 | 3 | 0 | 3 | 3 | 3 | 3 |
| CSM301-f | 3 | 3 | 3 | 3 | 3 | 0 | 3 | 0 | 3 | 3 | 3 | 3 |
| CSM401-w | 3 | 3 | 3 | 3 | 3 | 0 | 0 | 3 | 3 | 3 | 3 | 3 |
| CSM401-f | 3 | 3 | 3 | 3 | 3 | 0 | 0 | 3 | 3 | 3 | 3 | 3 |
| CSM501-w | 2 | 2 | 2 | 0 | 2 | 0 | 0 | 3 | 3 | 3 | 2 | 2 |
| CSM501-f | 2 | 2 | 2 | 0 | 2 | 0 | 0 | 3 | 3 | 3 | 2 | 2 |
| CSM601-w | 2 | 2 | 2 | 0 | 2 | 0 | 0 | 3 | 3 | 3 | 2 | 2 |
| CSM601-f | 2 | 2 | 2 | 0 | 2 | 0 | 0 | 3 | 3 | 3 | 2 | 2 |
| CSP705 | 3 | 3 | 3 | 0 | 3 | 2 | 0 | 2 | 3 | 3 | 2 | 2 |
| CSP805 | 3 | 3 | 3 | 0 | 2 | 0 | 0 | 0 | 3 | 3 | 3 | 3 |
| FEC101 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FEC102 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FEC103 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FEC104 | 3 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FEC105 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FEC201 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FEC202 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FEC203 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FEC204 | 3 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| FEC205 | 3 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FEC206 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| FEL103 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FEL105/2f | 1 | 0 | 1 | 0 | 1 | 2 | 0 | 0 | 2 | 0 | 0 | 0 |
| FEL203 | 3 | 1 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |

3.2 Attainment of Course Outcomes

Total Marks: 47.00

| Course | PSO1 | PSO2 |
|----------|------|------|
| CSC301-F | 0 | 0 |
| CSC301-E | 0 | 0 |
| CSC302-F | 2 | 2 |
| CSC302-E | 2 | 2 |
| CSC303-F | 3 | 2 |
| CSC303-E | 3 | 2 |
| CSC304-F | 1 | 0 |
| CSC304-E | 3 | 0 |
| CSC305-F | 3 | 3 |
| CSC305-E | 3 | 3 |
| CSC401-F | 0 | 0 |
| CSC401-E | 0 | 0 |
| CSC402-F | 2 | 2 |
| CSC402-E | 2 | 2 |
| CSC403-F | 3 | 3 |
| CSC403-E | 3 | 3 |
| CSC404-F | 3 | 0 |
| CSC404-E | 3 | 0 |
| CSC405-F | 2 | 0 |
| CSC405-E | 0 | 0 |
| CSC501-F | 3 | 3 |
| CSC501-E | 3 | 3 |
| CSC502-F | 3 | 3 |
| CSC502-E | 2 | 2 |
| CSC503-F | 3 | 0 |
| CSC503-E | 3 | 3 |
| CSC504-F | 3 | 3 |
| CSC504-E | 3 | 0 |
| CSC601-F | 1 | 1 |
| CSC601-E | 1 | 1 |
| CSC602-F | 3 | 1 |
| CSC602-E | 3 | 3 |
| CSC603-F | 2 | 3 |
| CSC603-E | 2 | 3 |
| CSC604-F | 3 | 3 |
| CSC604-E | 3 | 1 |
| CSC701 | 3 | 0 |
| CSC702 | 2 | 2 |
| CSC801 | 3 | 0 |
| CSC802 | 3 | 3 |
| CSDL501 | 3 | 3 |
| CSDL502 | 1 | 0 |

| | | |
|----------------------|---|---|
| CSDL601 | 0 | 0 |
| CSDL602 | 3 | 3 |
| CSDL701 | 3 | 3 |
| CSDL801 | 3 | 3 |
| CSILO701 | 3 | 0 |
| CSILO702 | 3 | 3 |
| CSILO801 | 3 | 3 |
| CSILO802 | 0 | 1 |
| CSL304-A | 2 | 1 |
| CSL304-B | 2 | 1 |
| CSL405-A | 3 | 3 |
| CSL405-B | 3 | 3 |
| CSL504-A | 0 | 0 |
| CSL504-B | 0 | 0 |
| CSL605-A | 3 | 0 |
| CSL605-B | 3 | 0 |
| CSL803 | 3 | 0 |
| CSM301- l | 3 | 3 |
| CSM301- e | 3 | 3 |
| CSM401- l | 3 | 0 |
| CSM401- e | 3 | 0 |
| CSM501- l | 2 | 2 |
| CSM501- e | 2 | 2 |
| CSM601- l | 2 | 2 |
| CSM601- e | 2 | 2 |
| CSP705 | 3 | 3 |
| CSP805 | 3 | 3 |
| FEC101 | 0 | 0 |
| FEC102 | 0 | 0 |
| FEC103 | 0 | 0 |
| FEC104 | 0 | 0 |
| FEC105 | 0 | 0 |
| FEC201 | 0 | 0 |
| FEC202 | 0 | 0 |
| FEC203 | 0 | 0 |
| FEC204 | 0 | 0 |
| FEC205 | 3 | 0 |
| FEC206 | 0 | 0 |
| FEL103 | 0 | 0 |
| FEL105/20 | 0 | 0 |
| FEL203 | 0 | 0 |

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

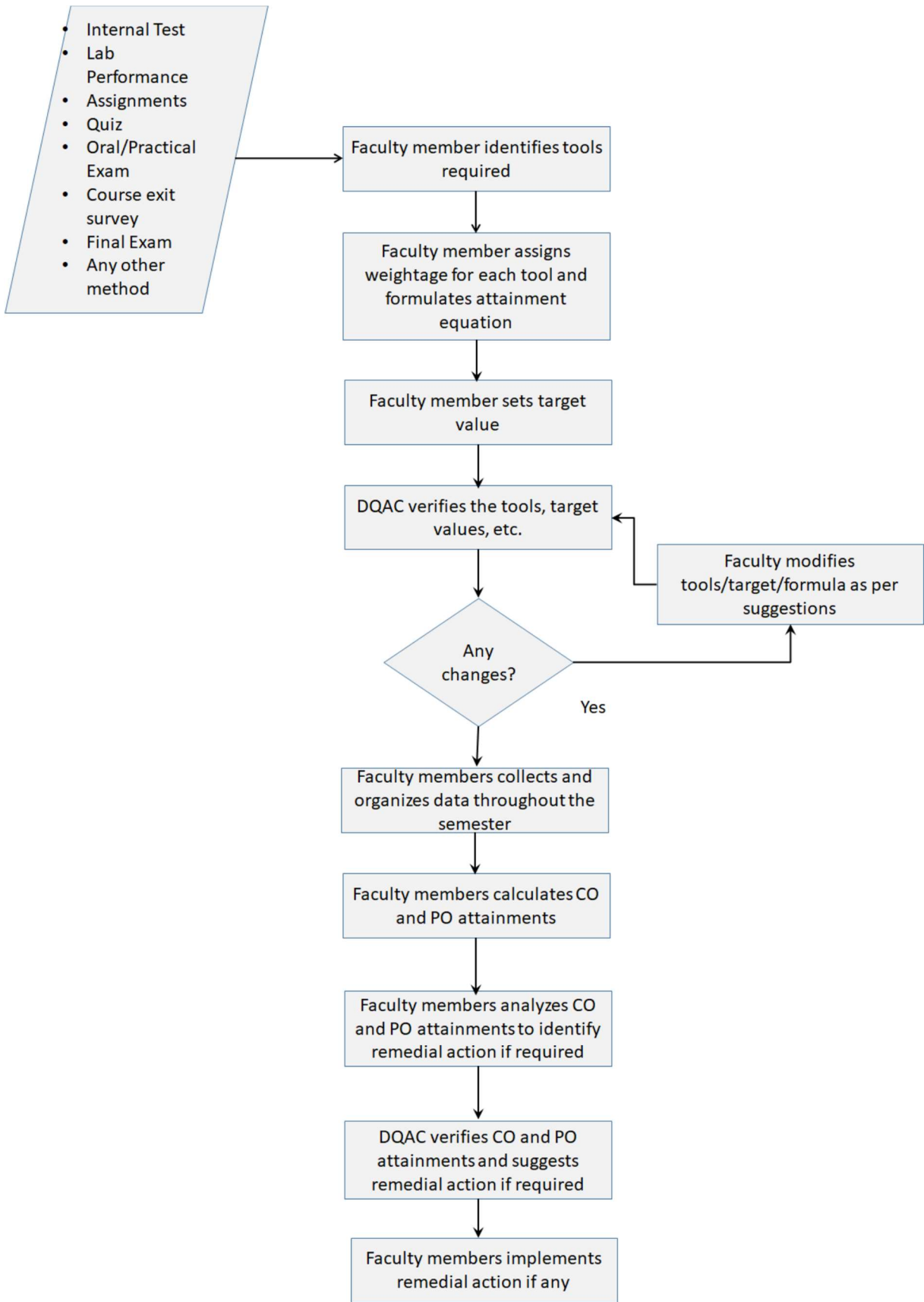
Institute Marks : 9.00

The following process is used to gather the data.

1. Lesson Plan is prepared by every faculty at the beginning of the semester. The Lesson plan includes Course Outcomes, mapping of CO with PO and PSO, CO Assessment plan that contain CO Assessment tools, Rubrics, CO Attainment Target.
2. PAC Reviews the CO's and assessment plan.
3. Every faculty gathers and compiles data throughout the semester as per the lesson plan.
 - a. Unit test data is compiled as per unit test schedule.
 - b. Course exit surveys are conducted at the end of semester.
 - c. Lab experiments are assessed regularly by individual faculty.
 - d. Assignments are assessed as per the schedule given in lesson plan.
 - e. Quizzes and presentations are organized as per the schedule given in lesson plan.
 - f. End semester examination results are compiled after declaration of results.
4. Faculty provides assessment data via Excel sheets. Faculty also provides copies of assessment instruments and graded student work. Copies are stored electronically.

Process to Measure CO attainment

- Faculty member identifies tools required to measure CO attainment for each CO.
- Faculty member assigns weightage for each tool.
- Faculty member formulates equation to calculate attainment.
- Faculty member sets target level for CO attainment.
- DQAC verifies the method/tools/target value of CO attainment calculation and suggests tools, target values, etc. if required.
- Based on feedback from DQAC, faculty member makes appropriate changes.
- Faculty member collects the data throughout semester as per the tools selected for measuring CO attainment.
- Faculty member organizes data.
- Faculty member calculates CO and PO attainments for said course.
- Faculty member analyzes CO attainment to identify remedial actions if necessary.
- DQAC verifies attainment and suggests remedial action.
- Faculty member implements remedial measures during following year to improve CO attainment or sets new target value.



Assessment tools used for CO attainment

- Unit Test: Two tests are conducted in each semester. The questions are set pertaining to the COs. The marks earned by the students are analyzed for the attainment of CO.
- Lab Experiments: Lab experiments are evaluated regularly according to rubrics designed. These rubrics are communicated to the students in advance.
- Assignments: Assignments are evaluated regularly according to rubrics designed. These rubrics are communicated to the students in advance.
- Quiz (Optional): Quiz is used to evaluate the CO. Generally, it is conducted online.
- Presentations (Optional): Students give presentations on topic assigned to them. Assessment of the presentation is done in accordance with rubrics provided.
- Mini Projects (Optional): Students design and implement small projects in a group or individually which is assessed based on the rubrics provided.
- End Semester Examination (Theory and Practical): End semester examination results are used.
- Course Exit Survey: At the end of semester course exit survey is conducted and analyzed. The result of analysis is used for calculation of attainment of CO.

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

Institute Marks: 38.00

Sample CO calculation:

CSC402.1: Apply methods for analyzing complexity of algorithms

Test1: 60% of students with minimum score 60% marks

Post Lab Marks of exp 1 -3: 60% of students with minimum score 60% marks

Assignment 1: 70% of students with minimum score 70% marks

Quiz 1: 60% of students with minimum score 60% marks

End Semester Examination: 60% of students with minimum score 70% marks

Direct Methods (80%):

Unit Test (UT), Assignments(A), PostLab (PL), Mini Project (MP), University Theory Exam (T) and University Practical Exam (P), Quiz (Q)

CSC402.1: Direct Methods(80%): Unit Test 1 + PostLab + Assignment 1+Quiz+UniExam

$$\underline{\text{CSC402.1}_{DM} = 0.2*UT + 0.1*PLab + 0.2*A + 0.2*Quiz + 0.3T}$$

$$\underline{\text{CSC402.1}_{DM} = 0.2*UT + 0.1*PL + 0.2*A + 0.2*T + 0.2*P = 2.60}$$

Indirect Method (20%): Course exit survey

Number of respondents: 54

Number of respondents who strongly agree or agree: 50

$$\text{CSC402.1}_{IDM} = 3$$

Overall attainment:

$$\underline{\text{CSC402.1} = 0.8*\text{CSC402.1}_{DM} + 0.2*\text{CSC402.1}_{IDM} = 2.68}$$

Rubrics for Laboratory Performance:

| Sr. No. | Performance Indicator | Excellent | Good | Average | Below Average |
|---------|----------------------------|---|--|---|--|
| 1 | | The code adheres to all standards. The code is exceptionally well organized and very easy to follow. Comments are complete and useful; variables purposes are clearly communicated by their names. [4 marks] | There may be some minor failures to adhere to standards, for instance, indentation may be inconsistent, some lines may be too long, or a few variables may have unobvious names or be undocumented. [3 marks] | The code fails to adhere to standards at multiple locations indentation is inconsistent throughout the program, many variable names are vague, comments are missing. [2 marks] | There are major problems with the programs design or coding style that would interfere with its comprehension, reuse, or maintenance. The code may be poorly formatted. [0.5-1 Marks] |
| 2 | Output validation [2M] | Output is obtained only for different cases of inputs. [2M] | Output is obtained only for some subsets of inputs. [1M] | Output is obtained only for some subsets of inputs, incorrect output for few cases [0.5M] | No output is obtained [0 marks] |
| 3 | Post Lab Questions [2M] | Answers to all questions are correct and explained in depth [2 Marks] | Answers to most of the questions are correct but not explained in depth [1 Marks] | Few answers are incorrect. [0.5 M] | Answers to most of the questions are incorrect [0 Marks] |
| 4 | Promptness [2M] | The laboratory report submitted on time [2 marks] | The laboratory report submitted next day. [1 mark] | -- | The laboratory report is submitted in the next practical session. [1 mark] |

| Rubrics for Assignment: | | | | | |
|--------------------------------|----------------------------|--|--|--|---|
| | Indicator | Excellent | Good | Average | Below average |
| 1 | Timeline (2) | submitted on time or early (2) | Submitted next day (1) | Submitted in the same week (0.5) | Submitted in the next week (0) |
| 2 | Organization (2) | Well organized neat and clear handwriting, neat diagrams with all labels. (2) | Organized to some extent, diagrams and handwriting is neat with some missing labels (1) | Organization not appropriate, diagrams are with some missing labels (0.5) | Poorly organized, diagrams incomplete (0) |
| 3 | Level of content (3) | All points are covered and answered accurately (3) | Some important points are omitted/ addressed minimally (2) | Many important points are missing and the ones which are written are addresses in brief (2-1) | Many important points are missing and the answers are not accurate. (1-0.5) |
| 4 | Knowledge of the Topic (3) | All Concepts of a topic are clear and knows the application to real world problems (3) | All Concepts of a topic are mostly clear and lacks understanding about real world problems (2) | Concepts of a topic are not understood clearly, lacks understanding about the application to real world problems (2-1) | Poor understanding of concepts and application to real world problems (2-1) |

3.3 Attainment of Program Outcomes and Program Specific Outcomes (50) Total Marks 50.00

| Sr. No | Subject | CO NUM | Target Attainment | Actual Attainment |
|--------|--|-----------|-------------------|-------------------|
| 1 | Applied Maths CSC301 - A | CSC301.1 | 2.7 | 3 |
| | | CSC301.2 | 2.7 | 3 |
| | | CSC301.3 | 2.7 | 3 |
| | | CSC301.4 | 2.7 | 2.8 |
| | | CSC301.5 | 2.7 | 3 |
| | | CSC301.6 | 2.7 | 3 |
| 2 | Discrete Structures and Graph Theory CSC302 -A | CSC302.1 | 2.7 | 2.52 |
| | | CSC302.2 | 2.7 | 2.52 |
| | | CSC302.3 | 2.7 | 2.76 |
| | | CSC302.4 | 2.7 | 2.28 |
| | | CSC302.5 | 2.7 | 2.04 |
| 3 | Data Structures CSC303- A | CSC 303.1 | 2.7 | 2.56 |
| | | CSC 303.2 | 2.7 | 2.84 |
| | | CSC 303.3 | 2.7 | 2.84 |
| | | CSC 303.4 | 2.7 | 2.84 |
| 4 | Digital Logic and Computer Architectures Organisation CSC304-A | CSC 304.1 | 2.7 | 3 |
| | | CSC 304.2 | 2.7 | 3 |
| | | CSC 304.3 | 2.7 | 3 |
| | | CSC 304.4 | 2.7 | 3 |
| | | CSC 304.5 | 2.7 | 3 |
| | | CSC 304.6 | 2.7 | 2.8 |
| 5 | Computer Graphics CSC305 A | CSC305.1 | 2.7 | 3 |
| | | CSC305.2 | 2.7 | 2.84 |
| | | CSC305.3 | 2.7 | 2.84 |
| | | CSC305.4 | 2.7 | 2.76 |
| | | CSC305.5 | 2.7 | 3 |
| 6 | Object Oriented Programming Methodology CSL304-A | CSL304.1 | 2.7 | 2.6 |
| | | CS L304.2 | 2.7 | 2.36 |
| | | CS L304.3 | 2.7 | 2.12 |
| | | CS L304.4 | 2.7 | 2.6 |
| | | CS L304.5 | 2.7 | 2.6 |
| | | CS L304.6 | 2.7 | 2.12 |

| | | | | |
|----|---|-----------|-----|------|
| 7 | Mini Project CSM 301- A | CSM301.1 | 2.7 | 2 |
| | | CSM301.2 | 2.7 | 2.68 |
| | | CSM301.3 | 2.7 | 3 |
| | | CSM301.4 | 2.7 | 3 |
| | | CSM301.5 | 2.7 | 3 |
| | | CSM301.6 | 2.7 | 3 |
| | | CSM301.7 | 2.7 | 2.6 |
| 8 | Applied Mathematics CSC301-B | CSC301.1 | 2.7 | 3 |
| | | CSC301.2 | 2.7 | 3 |
| | | CSC301.3 | 2.7 | 3 |
| | | CSC301.4 | 2.7 | 3 |
| | | CSC301.5 | 2.7 | 3 |
| | | CSC301.6 | 2.7 | 3 |
| 9 | Discrete Structures and Graph Theory CSC303-B | CSC303.1 | 2.7 | 2.52 |
| | | CSC303.2 | 2.7 | 2.52 |
| | | CSC303.3 | 2.7 | 2.76 |
| | | CSC303.4 | 2.7 | 2.04 |
| | | CSC303.5 | 2.7 | 2.04 |
| 10 | Data Structures CSC303- B | CSC 303.1 | 2.7 | 2.56 |
| | | CSC 303.2 | 2.7 | 2.84 |
| | | CSC 303.3 | 2.7 | 2.84 |
| | | CSC 303.4 | 2.7 | 2.84 |
| 11 | Digital Logic and Computer Architectures CSC304-B | CSC 304.1 | 2.7 | 3 |
| | | CSC 304.2 | 2.7 | 3 |
| | | CSC 304.3 | 2.7 | 3 |
| | | CSC 304.4 | 2.7 | 3 |
| | | CSC 304.5 | 2.7 | 3 |
| | | CSC 304.6 | 2.7 | 3 |
| 12 | Computer Graphics CSC305- B | CO305.1 | 2.7 | 2.84 |
| | | CO305.2 | 2.7 | 2.84 |
| | | CO305.3 | 2.7 | 2.84 |
| | | CO305.4 | 2.7 | 2.76 |
| | | CO305.5 | 2.7 | 1.88 |
| 13 | Object Oriented Programming Methodology CSL304 -B | CSL304.1 | 2.7 | 2.6 |
| | | CS L304.2 | 2.7 | 2.36 |
| | | CS L304.3 | 2.7 | 2.12 |
| | | CS L304.4 | 2.7 | 2.6 |
| | | CS L304.5 | 2.7 | 2.6 |
| | | CS L304.6 | 2.7 | 2.12 |
| | Mini Project CSM 301-B | CSM301.1 | 2.7 | 2 |
| | | CSM301.2 | 2.7 | 2.68 |
| | | CSM301.3 | 2.7 | 3 |
| | | CSM301.4 | 2.7 | 3 |
| | | CSM301.5 | 2.7 | 3 |
| | | CSM301.6 | 2.7 | 3 |
| | | CSM301.7 | 2.7 | 2.6 |

| | | | |
|--|-------------|-----|------|
| MINI Project CSM 401-A | CSM 401.1 | 2.7 | 3 |
| | CSM 401.2 | 2.7 | 3 |
| | CSM 401.3 | 2.7 | 3 |
| | CSM 401.4 | 2.7 | 3 |
| Applied Mathematics IV CSC401-A | CSC401.1 | 2.7 | 2.6 |
| | CSC402.2 | 2.7 | 3 |
| | CSC402.3 | 2.7 | 3 |
| | CSC401.4 | 2.7 | 3 |
| | CSC401.5 | 2.7 | 3 |
| | CSC401.6 | 2.7 | 2.68 |
| Analysis of Algorithms CSC402- A | CSC 402.1 : | 2.7 | 2.68 |
| | CSC 402.2 : | 2.7 | 2.52 |
| | CSC 402.3 : | 2.7 | 2.44 |
| | CSC 402.4 : | 2.7 | 2.52 |
| Database Management System CSC403 -A | CSC403.1 | 2.7 | 3 |
| | CSC403.2 | 2.7 | 3 |
| | CSC403.3 | 2.7 | 3 |
| | CSC403.4 | 2.7 | 3 |
| | CSC403.5 | 2.7 | 2.52 |
| | CSC403.6 | 2.7 | 3 |
| Operating System CSC404 -A | CSC404.1 | 2.7 | 2.68 |
| | CSC404.2 | 2.7 | 2.68 |
| | CSC404.3 | 2.7 | 2.68 |
| | CSC404.4 | 2.7 | 2.68 |
| | CSC404.5 | 2.7 | 2.68 |
| | CSC404.6 | 2.7 | 2.68 |
| Microprocessor CSC405-A | CSC405.1 | 2.7 | 2.8 |
| | CSC405.2 | 2.7 | 2.5 |
| | CSC405.3 | 2.7 | 2.8 |
| | CSC405.4 | 2.7 | 2.8 |
| Open Source Technology Lab CSL405 – A | CSL405.1 | 2.7 | 2.84 |
| | CSL405.2 | 2.7 | 2.52 |
| | CSL405.3 | 2.7 | 2.52 |
| | CSL405.4 | 2.7 | 2.36 |
| | CSL405.5 | 2.7 | 2.36 |
| | CSL405.6 | 2.7 | 2.36 |
| MINI Project CSM 401 –A | CSM 401.1 | 2.7 | 3 |
| | CSM 401.2 | 2.7 | 3 |
| | CSM 401.3 | 2.7 | 3 |
| | CSM 401.4 | 2.7 | 3 |
| Applied Mathematics IV CSC401 - B | CSC401.1 | 2.7 | 2.6 |
| | CSC402.2 | 2.7 | 3 |
| | CSC402.3 | 2.7 | 3 |
| | CSC401.4 | 2.7 | 3 |
| | CSC401.5 | 2.7 | 3 |
| | CSC401.6 | 2.7 | 2.68 |

| | | | |
|--|-----------|-----|------|
| Analysis of Algorithms CSC402-B | CSC 402.1 | 2.7 | 2.68 |
| | CSC 402.2 | 2.7 | 2.52 |
| | CSC 402.3 | 2.7 | 2.44 |
| | CSC 402.4 | 2.7 | 2.52 |
| Database Management System CSC403 - A | CSC 403.1 | 2.7 | 3 |
| | CSC 403.2 | 2.7 | 3 |
| | CSC 403.3 | 2.7 | 2.8 |
| | CSC 403.4 | 2.7 | 2.8 |
| | CSC403,5 | 2.7 | 2.8 |
| Operating System CSC404 -B | CSC404.1 | 2.7 | 2.52 |
| | CSC404.2 | 2.7 | 2.52 |
| | CSC404.3 | 2.7 | 2.52 |
| | CSC404.4 | 2.7 | 2.52 |
| | CSC404.5 | 2.7 | 2.52 |
| | CSC404.6 | 2.7 | 2.52 |
| Microprocessor CSC405- B | CSC405.1 | 2.7 | 2.8 |
| | CSC405.2 | 2.7 | 2.8 |
| | CSC405.3 | 2.7 | 3 |
| | CSC405.4 | 2.7 | 2.73 |
| Open Source Technology Lab CSL405-B | CSL405.1 | 2.7 | 2.84 |
| | CSL405.2 | 2.7 | 2.52 |
| | CSL405.3 | 2.7 | 2.52 |
| | CSL405.4 | 2.7 | 2.36 |
| | CSL405.5 | 2.7 | 2.36 |
| | CSL405.6 | 2.7 | 2.36 |
| MINI Project CSM 401-B | CSM 401.1 | 2.7 | 3 |
| | CSM 401.2 | 2.7 | 3 |
| | CSM 401,3 | 2.7 | 3 |
| | CSM 401.4 | 2.7 | 3 |
| TCS CSC501-A | CSC501.1 | 2.7 | 3 |
| | CSC501.2 | 2.7 | 2.76 |
| | CSC501,3 | 2.7 | 3 |
| | CSC501.4 | 2.7 | 3 |
| | CSC501,5 | 2.7 | 2.52 |
| | CSC501.6 | 2.7 | 2.8 |
| Software Engineering CSC502-A | CPC502.1 | 2.7 | 2.84 |
| | CPC502.2 | 2.7 | 2.8 |
| | CPC502,3 | 2.7 | 2.84 |
| | CPC502.4 | 2.7 | 2.84 |
| | CPC502,5 | 2.7 | 2.84 |
| Computer Network CSC503-A | CSC503.1 | 2.7 | 2.68 |
| | CSC503.2 | 2.7 | 3.00 |
| | CSC503,3 | 2.7 | 2.8 |
| | CSC503,4 | 2.7 | 3 |
| | CSC503,5 | 2.7 | 3 |

| | | | |
|--|-------------|-----|------|
| Data Warehousing and Mining CSC504 -A | CSC504.1 | 2.7 | 3 |
| | CSC504.2 | 2.7 | 3 |
| | CSC504.3 | 2.7 | 3 |
| | CSC504.4 | 2.7 | 3 |
| | CSC504.5 | 2.7 | 3 |
| | CSC504.6 | 2.7 | 3 |
| Probabilistic Graphical Model CSDLO5011 | CSDO501.1 | 2.7 | 3 |
| | CSDO501.2. | 2.7 | 3 |
| | CSDO501.3 | 2.7 | 3 |
| | CSDO501.4 | 2.7 | 3 |
| | CSDO501.5. | 2.7 | 3 |
| Internet Programming CSDLO5012 | CSDLO5012.1 | 2.7 | 3 |
| | CSDLO5012.2 | 2.7 | 3 |
| | CSDLO5012.3 | 2.7 | 3 |
| | CSDLO5012.4 | 2.7 | 3 |
| | CSDLO5012.5 | 2.7 | 3 |
| | CSDLO5012.6 | 2.7 | 3 |
| Professional Communication and Ethics-2 CSL504 -A | CSL504.1 | 2.7 | 3 |
| | CSL504.2 | 2.7 | 3 |
| | CSL504.3 | 2.7 | 3 |
| | CSL504.4 | 2.7 | 3 |
| | CSL504.5 | 2.7 | 3 |
| Mini Project A CSM 501-A | CSM501.1 | 2.7 | 3 |
| | CSM501.2 | 2.7 | 3 |
| | CSM501.3 | 2.7 | 3 |
| | CSM501.4 | 2.7 | 3 |
| | CSM501.5 | 2.7 | 3 |
| | CSM501.6 | 2.7 | 3 |
| | CSM501.7 | 2.7 | 3 |
| | CSM501.8 | 2.7 | 3 |
| | CSM501.9 | 2.7 | 3 |
| Theoretical Computer science CSC501-B | CSC501.1 | 2.7 | 3 |
| | CSC501.2 | 2.7 | 2,8 |
| | CSC501.3 | 2.7 | 3 |
| | CSC501.4 | 2.7 | 3 |
| | CSC501.5 | 2.7 | 2,6 |
| | CSC501.6 | 2.7 | 2,8 |
| Software Engineering CSC502-B | CSC502.1: | 2.7 | 2.56 |
| | CSC502.2 : | 2.7 | 2.6 |
| | CSC502.3: | 2.7 | 2,44 |
| | CSC502.4: | 2.7 | 2,12 |
| | CSC502.5: | 2.7 | 2.2 |

| | | | |
|--|----------|-----|------|
| Computer Network CSC503-B | CSC503.1 | 2.7 | 2.8 |
| | CSC503.2 | 2.7 | 2.58 |
| | CSC503.3 | 2,7 | 2,65 |
| | CSC503.4 | 2.7 | 2.72 |
| | CSC503.5 | 2.7 | 2.3 |
| | CSC503.6 | 2.7 | 2.28 |
| Data Warehousing and Mining CSC504-B | CSC504.1 | 2.7 | 2.73 |
| | CSC504.2 | 2.7 | 2.74 |
| | CSC504.3 | 2,7 | 2,73 |
| | CSC504.4 | 2.7 | 2.73 |
| | CSC504.5 | 2.7 | 2.73 |
| | CSC504.6 | 2,7 | 2,73 |
| Professional Communication and Ethics-2 CSL504-B | CSL504.1 | 2.7 | 3 |
| | CSL504.2 | 2.7 | 3 |
| | CSL504.3 | 2.7 | 3 |
| | CSL504.4 | 2.7 | 3 |
| | CSL504.5 | 2.7 | 3 |
| Mini Project A CSM 501-B | CSM501.1 | 2.7 | 3 |
| | CSM501.2 | 2.7 | 3 |
| | CSM501.3 | 2.7 | 3 |
| | CSM501.4 | 2.7 | 3 |
| | CSM501.5 | 2.7 | 3 |
| | CSM501.6 | 2.7 | 3 |
| | CSM501.7 | 2.7 | 3 |
| | CSM501.8 | 2.7 | 3 |
| | CSM501.9 | 2.7 | 3 |
| System Programming and Compiler construction CSC 601-A | CSC601.1 | 2.7 | 2.36 |
| | CSC601.2 | 2.7 | 2.68 |
| | CSC601.3 | 2.7 | 2.2 |
| | CSC601.4 | 2.7 | 2.2 |
| Cryptography and System Security CSC 602-A | CSC602.1 | 2.7 | 3 |
| | CSC602.2 | 2,7 | 3 |
| | CSC602.3 | 2.7 | 2.92 |
| | CSC602.4 | 2,7 | 2,68 |
| | CSC602.5 | 2.7 | 2.76 |
| Mobile Computing CSC603-A | CSC603.1 | 2.7 | 3 |
| | CSC603.2 | 2.7 | 2.68 |
| | CSC603.3 | 2,7 | 2,36 |
| | CSC603.4 | 2.7 | 2.12 |
| | CSC603.5 | 2.7 | 1.56 |
| | CSC603.6 | 2.7 | 2.52 |
| Artificial Intelligence CSC 604-A | CSC604.1 | 2.7 | 2.84 |
| | CSC604.2 | 2.7 | 2.8 |
| | CSC604.3 | 2,7 | 2,84 |
| | CSC604.4 | 2.7 | 2.84 |

| | | | |
|---|-------------|-----|------|
| Cloud Computing CSL605-A | CSL605.1 | 2,7 | 2,7 |
| | CSL605.2 | 2,7 | 2,8 |
| | CSL605.3 | 2,7 | 2,8 |
| | CSL605.4 | 2,7 | 2,7 |
| | CSL605.5 | 2,7 | 2,8 |
| | CSL605.6 | 2,7 | 2,8 |
| Quantitative Analysis CSDLO6013 | CSDLO6013.1 | 2,7 | 3 |
| | CSDLO6013.2 | 2,7 | 3 |
| | CSDLO6013.3 | 2,7 | 3 |
| | CSDLO6013.4 | 2,7 | 3 |
| | CSDLO6013.5 | 2,7 | 3 |
| Internet of Things CSDLO6011 | CSDLO6011.1 | 2,7 | 2,7 |
| | CSDLO6011.2 | 2,7 | 2,8 |
| | CSDLO6011.3 | 2,7 | 2,7 |
| | CSDLO6011.4 | 2,7 | 2,8 |
| | CSM601.1 | 2,7 | 3 |
| Mini Project 2B CSM601-A | CSM601.2 | 2,7 | 3 |
| | CSM601.3 | 2,7 | 3 |
| | CSM601.4 | 2,7 | 3 |
| | CSM601.5 | 2,7 | 3 |
| | CSM601.6 | 2,7 | 3 |
| | CSM601.7 | 2,7 | 3 |
| | CSM601.8 | 2,7 | 3 |
| | CSM601.9 | 2,7 | 3 |
| System Programming and Compiler construction CSC601-B | CSC601.1 | 2,7 | 2,2 |
| | CSC601.2 | 2,7 | 2,36 |
| | CSC601.3 | 2,7 | 2,36 |
| | CSC601.4 | 2,7 | 2,36 |
| Mobile Computing CSC603-B | CSC603.1 | 2,7 | 2,92 |
| | CSC603.2 | 2,7 | 2,92 |
| | CSC603.3 | 2,7 | 2,52 |
| | CSC603.4 | 2,7 | 2,2 |
| | CSC603.5 | 2,7 | 3 |
| | CSC603.6 | 2,7 | 3 |
| Artificial Intelligence CSC 604-B | CSC 604.1 | 2,7 | 3 |
| | CSC 604.2 | 2,7 | 3 |
| | CSC 604.3 | 2,7 | 3 |
| | CSC 604.4 | 2,7 | 3 |
| | CSC 604.5 | 2,7 | 3 |
| | CSC 604.6 | 2,7 | 3 |

| | | | |
|--|-------------|-----|------|
| Cloud Computing CSL605-B | CSL605.1 | 2.7 | 3 |
| | CSL605.2 | 2.7 | 3 |
| | CSL605.3 | 2.7 | 3 |
| | CSL605.4 | 2.7 | 3 |
| | CSL605.5 | 2.7 | 3 |
| | CSL605.6 | 2.7 | 3 |
| Mini Project 2B CSM601-B | CSM601.1 | 2.7 | 3 |
| | CSM601.2 | 2.7 | 3 |
| | CSM601.3 | 2.7 | 3 |
| | CSM601.4 | 2.7 | 3 |
| | CSM601.5 | 2.7 | 3 |
| | CSM601.6 | 2.7 | 3 |
| | CSM601.7 | 2.7 | 3 |
| | CSM601.8 | 2.7 | 3 |
| | CSM601.9 | 2.7 | 3 |
| Digital Signal Processing CSC701 | CSC701.1 | 2.7 | 3 |
| | CSC701.2 | 2.7 | 3 |
| | CSC701.3 | 2.7 | 3 |
| | CSC701.4 | 2.7 | 3 |
| Mobile Computing & communication CSC702 | CSC702.1 | 2.7 | 2.76 |
| | CSC702.2 | 2.7 | 2.76 |
| | CSC702.3 | 2.7 | 2.76 |
| | CSC702.4 | 2.7 | 2.53 |
| | CSC702.5 | 2.7 | 3 |
| Management Information System ILO7013 | ILO7013.1 | 2.7 | 3 |
| | ILO7013.2 | 2.7 | 3 |
| | ILO7013.3 | 2.7 | 3 |
| | ILO7013.4 | 2.7 | 3 |
| | ILO7013.5 | 2.7 | 3 |
| Big Data & Analytics CSDLO7032 | CSDLO7032.1 | 2.7 | 3 |
| | CSDLO7032.2 | 2.7 | 2.76 |
| | CSDLO7032.3 | 2.7 | 2.8 |
| | CSDLO7032.4 | 2.7 | 2.8 |
| | CSDLO7032.5 | 2.7 | 3 |
| | CSDLO7032.6 | 2.7 | 3 |
| Operational Research ILO7015 | ILO7015.1 | 2.7 | 3 |
| | ILO7015.2 | 2.7 | 3 |
| | ILO7015.3 | 2.7 | 3 |
| | ILO7015.4 | 2.7 | 3 |
| Project 1 CSP705 | CSP705.1 | 2.7 | 3 |
| | CSP705.2 | 2.7 | 3 |
| | CSP705.3 | 2.7 | 3 |
| | CSP705.4 | 2.7 | 3 |
| Human Machine Interaction CSC801 | CSC801.1 | 2.7 | 2.7 |
| | CSC801.2 | 2.7 | 2.7 |
| | CSC801.3 | 2.7 | 2.8 |
| | CSC801.4 | 2.7 | 2.7 |

| | | | |
|-------------------------------------|-------------|-----|------|
| Distributed Computing CSC802 | CSC802.1 | 2.7 | 2.75 |
| | CSC802.2 | 2.7 | 2.8 |
| | CSC802.3 | 2.7 | 2.75 |
| | CSC802.4 | 2.7 | 2.66 |
| | CSC802.5 | 2.7 | 2.8 |
| | CSC802.6 | 2.7 | 3 |
| NATURAL LANGUAGE PROCESSING DLO8012 | CSDLO7032.1 | 2.7 | 2.48 |
| | CSDLO7032.2 | 2.7 | 3 |
| | CSDLO7032.3 | 2.7 | 2.32 |
| | CSDLO7032.4 | 2.7 | 2.8 |
| | CSDLO7032.5 | 2.7 | 2.08 |
| | CSDLO7032.6 | 2.7 | 2.52 |
| Project Management ILO8021 | ILO8021.1 | 2.7 | 3 |
| | ILO8021.2 | 2.7 | 3 |
| | ILO8021.3 | 2.7 | 3 |
| | ILO8021.4 | 2.7 | 3 |
| | ILO8021.5 | 2.7 | 3 |
| Finance Management ILO8022 | ILO8022.1 | 2.7 | 3 |
| | ILO8022.2 | 2.7 | 3 |
| Cloud Computing Lab CSL 803 | CSL803.1 | 2.7 | 2.7 |
| | CSL803.2 | 2.7 | 2.8 |
| | CSL803.3 | 2.7 | 2.8 |
| | CSL803.4 | 2.7 | 2.7 |
| Project II CSP805 | CSP805.1 | 2.7 | 3 |
| | CSP805.2 | 2.7 | 3 |
| | CSP805.3 | 2.7 | 3 |
| | CSP805.4 | 2.7 | 3 |

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

Institute Marks: 10

Assessment of programme outcomes is based on the measures and processes Indicated below:

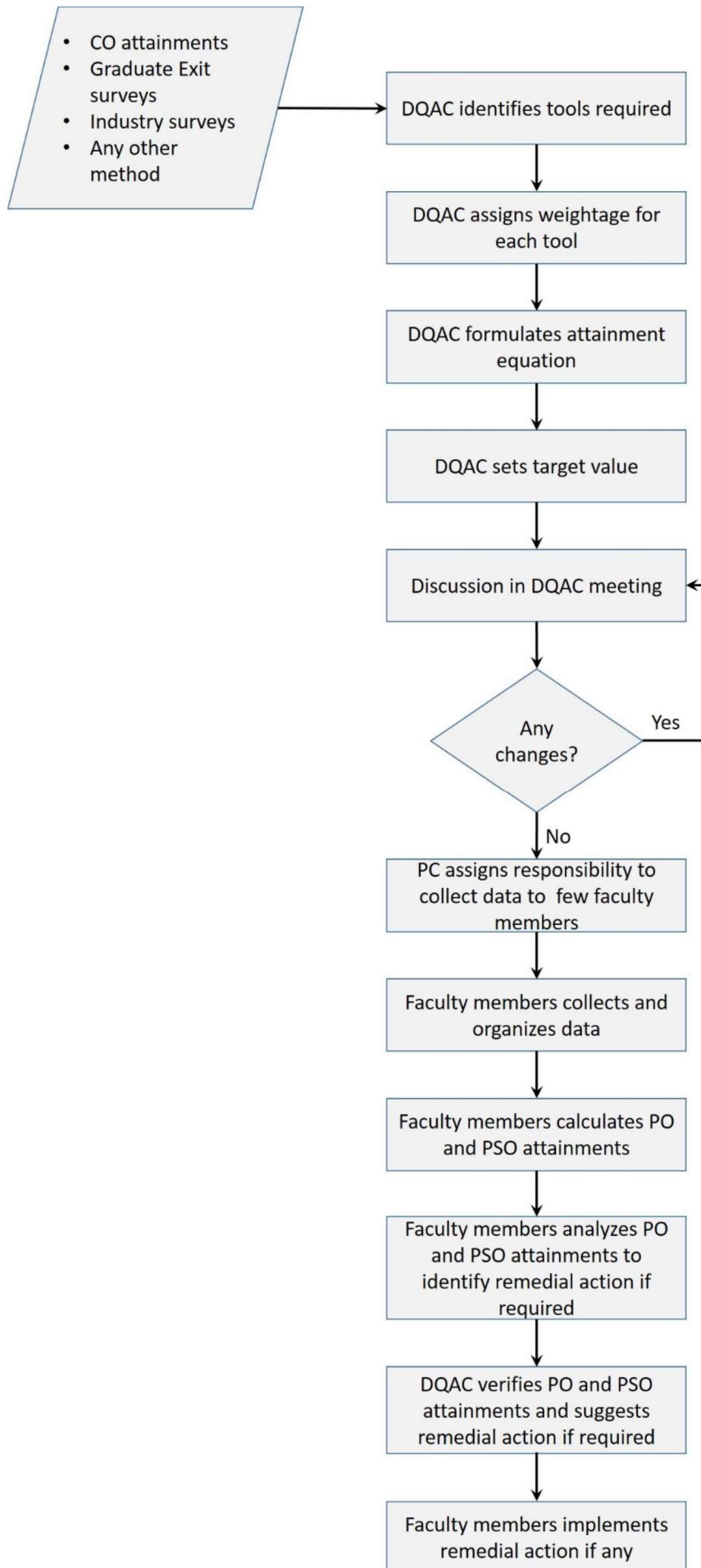
- Course Outcome Assessment:** At the end of every semester, faculty assesses the student's attainment of specific course outcomes based on performance in specific evaluative components of a course. Data is typically provided for all students enrolled in the courses. Faculty provides assessment data via Excel sheets (stored electronically). Faculty also provides copies of assessment instruments and graded student work. Copies are stored electronically. The evaluation cycle for programme outcomes and program specific outcomes is the end of every academic year.
- Graduate Exit Survey:** At the end of every academic year, graduating student assesses their opportunities to attain graduate student outcomes. Data is typically provided for all students completing the graduation Program. data is collected through survey from all students completing the graduation. The evaluation cycle is the end of every academic year.
- Alumni Survey:** At the end of every academic year Alumni assesses their performance basis of the learning in the institute. Data is typically provided for 30-40% of alumni passed in previous three years. Program collects data from alumni through survey from alumnus who can be contacted. Copies are stored electronically. The evaluation cycle is the end of

every academic year.

- **Placement Data:** At the end of every academic year, Placement officer provides placement data. Data is typically provided for all placed students. Placement officer provides data in excel format and stored electronically. The evaluation cycle is the end of every academic year.
- **Final Year Project:** At the end of every academic year, the Project coordinator provides final year project assessment data. Data is typically provided for all final year students. Project coordinator provides data in excel format and stored electronically. The evaluation cycle is the end of every academic year.

Process to Measure PO/PSO attainment:

- DQAC identifies tools required to measure PO and PSO attainment for each PO and PSO.
- DQAC assigns weightage for each tool depending on type of data, etc.
- DQAC formulates equation to calculate attainment.
- DQAC sets target level for PO and PSO attainment.
- DQAC finalizes the method/tools/target value of PO and PSO attainment calculation.
- PC assigns responsibility to few faculty members to collect data and designates one of the faculty member as coordinator.
- Respective faculty member collects the data at the end of semester/year as per the tools selected for measuring PO and PSO attainments
- Respective faculty member organizes data.
- Coordinator calculates consolidated PO and PSO attainments.
- Coordinator analyzes PO and PSO attainments.
- DQAC verifies attainment and suggests remedial action.
- DQAC ensures implementation of remedial measures to improve PO and PSO attainment at department level or sets new target value during next academic year.



Sample PO calculation:

PO1:Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

Direct PO1 attainment (through courses): $PO1_{dm} = 2.70$

Indirect PO1 attainment (through graduate and alumni survey): 3

Indirect PO1 attainment (through events conducted by technical and non-technical councils): =2.83

Average of Indirect PO1 Attainment: $PO1_{idm} = 2.92$

Final PO1 Attainment = $0.8 * PO1_{dm} + 0.2 * PO1_{idm}$

= **2.75**

3.3.2 Provide results of evaluation of PO&PSO (40)

Institute Marks: 40

PO Attainment

| Course | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 |
|----------|------|------|------|------|------|-----|-----|------|------|------|------|------|
| CSC301-A | 2.98 | 1 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 |
| CSC301-B | 3 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 |
| CSC302-A | 2.42 | 2.36 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | 2.04 | 2.04 | PO11 | 2.04 |
| CSC302-B | 2.37 | 2.32 | 2.32 | PO4 | PO5 | PO6 | PO7 | PO8 | 2.04 | 2.04 | PO11 | 2.04 |
| CSC303-A | 2.77 | 2.84 | 2.84 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | 2.84 | 2.84 |
| CSC303-B | 2.77 | 2.8 | 2.8 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | 2.84 | 2.84 |
| CSC304-A | 2.97 | 2.9 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | 2.97 |
| CSC304-B | 3 | 2.9 | 3 | PO4 | 3 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | 2.96 |
| CSC305-A | 2.89 | 2.92 | 2.96 | PO4 | 2.95 | PO6 | 1 | 1 | 3 | 3 | 1 | 2 |
| CSC305-B | 2.63 | 2.58 | 2.53 | PO4 | 2.58 | PO6 | PO7 | 1.88 | 1.88 | 1.88 | 1.88 | 1.88 |
| CSC401-A | 2.88 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 |
| CSC401-B | 2.88 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 |
| CSC402-A | 2.54 | 2.57 | 2.52 | PO4 | PO5 | PO6 | PO7 | PO8 | 2.54 | PO10 | PO11 | PO12 |
| CSC402-B | 2.54 | 2.57 | 2.52 | PO4 | PO5 | PO6 | PO7 | PO8 | 2.54 | PO10 | PO11 | PO12 |
| CSC403-A | 2.92 | 2.92 | 2.92 | PO4 | 2.92 | PO6 | PO7 | PO8 | 2.14 | 2.14 | 2.14 | 2.75 |
| CSC403-B | 2.88 | 2.85 | 2.85 | PO4 | 2.80 | PO6 | PO7 | PO8 | 2.86 | 2.82 | 2.80 | 2.85 |
| CSC404-A | 2.68 | 2.68 | PO3 | 2.68 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 |
| CSC404-B | 2.52 | 2.52 | PO3 | 2.52 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 |
| CSC405-A | 2.73 | 2.7 | 2.65 | PO4 | 2.70 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | 2.7 |
| CSC405-B | 2.83 | 2.84 | 2.8 | PO4 | 2.73 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | 2.83 |
| CSC501-A | 2.85 | 2.85 | 2.86 | 2.66 | PO5 | PO6 | PO7 | PO8 | PO9 | 2.8 | PO11 | 2.8 |
| CSC501-B | 2.8 | 2.8 | 2.85 | 2.6 | PO5 | PO6 | PO7 | PO8 | PO9 | 2.8 | PO11 | 2.75 |
| CSC502-A | 2.83 | 2.83 | 2.84 | PO4 | 2.84 | PO6 | PO7 | PO8 | PO9 | 2.8 | PO11 | 2.8 |
| CSC502-B | 2.45 | 2.58 | 2.5 | 2.37 | 2.12 | PO6 | PO7 | PO8 | 2.38 | 2.59 | 2.6 | 2.6 |
| CSC503-A | 2.89 | 2.94 | 2.9 | PO4 | 2.9 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 |
| CSC503-B | 2.56 | 2.52 | 2.47 | PO4 | 2.69 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 |
| CSC504-A | 3 | 3 | 3 | PO4 | 3 | PO6 | 3 | PO8 | 3 | 3 | 3 | 3 |
| CSC504-B | 2.73 | 2.74 | 2.73 | 2.73 | 2.73 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | 2.73 |

| | | | | | | | | | | | | |
|----------|------|------|------|------|------|------|-----|-----|------|------|------|------|
| CSC601-A | 2.36 | 2.36 | 2.38 | PO4 | 2.2 | PO6 | PO7 | PO8 | 2.36 | PO10 | PO11 | 2.36 |
| CSC601-B | 2.32 | 2.32 | 2.31 | PO4 | 2.36 | PO6 | PO7 | PO8 | 2.32 | PO10 | PO11 | 2.32 |
| CSC602-A | 2.93 | 2.88 | 2 | 2.84 | 2.68 | PO6 | PO7 | 3 | 2.87 | 2.87 | PO11 | 2.87 |
| CSC602-B | 2.9 | 2.68 | 1.95 | 3 | 2.52 | 2.63 | PO7 | PO8 | 3 | PO10 | PO11 | PO12 |
| CSC603-A | 2.37 | 2.64 | 2.64 | PO4 | 2.58 | PO6 | PO7 | PO8 | 2.52 | 2.52 | 2.52 | 2.52 |
| CSC603-B | 2.76 | 2.9 | 3 | 2 | 2.79 | PO6 | PO7 | PO8 | 2 | 3 | 3 | 3 |
| CSC604-A | 2.83 | 2.83 | 2.84 | PO4 | 2.84 | PO6 | PO7 | PO8 | PO9 | 2.8 | PO11 | 2.8 |
| CSC604-B | 3 | 3 | 3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 |
| CSC701 | 3 | 3 | 3 | PO4 | 3 | PO6 | PO7 | PO8 | 3 | PO10 | PO11 | PO12 |
| CSC702 | 2.76 | 2.8 | 2.94 | PO4 | 2.94 | PO6 | PO7 | 3 | 3 | 3 | 3 | 3 |
| CSC801 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | PO7 | PO8 | PO9 | PO10 | PO11 | 2.7 |
| CSC802 | 2.75 | 2.66 | 2.66 | 2.87 | 2 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | 2 |
| CSDL501 | 3 | 3 | 3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 |
| CSDL502 | 3 | PO2 | 3 | PO4 | 3 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 |
| CSDL601 | 2.35 | 2.4 | 3 | 3 | 3 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 |
| CSDL602 | 2.75 | 2.75 | 2.75 | PO4 | 2.75 | PO6 | PO7 | PO8 | 2.75 | 2.75 | PO11 | 2.75 |
| CSDL701 | 2.89 | 2.87 | 2.87 | 2.85 | 2.87 | 3 | PO7 | PO8 | 2.95 | 3 | 3 | 3 |
| CSDL801 | 2.53 | 2.54 | 2.54 | 2.62 | 2.54 | 2.30 | PO7 | PO8 | 2.47 | 2.52 | 2.52 | 2.34 |
| CSILO701 | 3 | 3 | 3 | 3 | 3 | 3 | PO7 | PO8 | PO9 | PO10 | 3 | 3 |
| CSILO702 | 3 | 3 | 3 | 3 | PO5 | 3 | 3 | PO8 | 3 | PO10 | PO11 | 3 |
| CSILO801 | 3 | 3 | 3 | 3 | 3 | PO6 | PO7 | 3 | 3 | 3 | 3 | 3 |
| CSILO802 | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | 3 | PO12 |
| CSL304-A | 2.4 | 2.39 | 2.38 | PO4 | 2.34 | 2.13 | PO7 | PO8 | 2.12 | 2.13 | 2.13 | 2.13 |
| CSL304-B | 2.4 | 2.39 | 2.38 | PO4 | 2.34 | 2.13 | PO7 | PO8 | 2.12 | 2.13 | 2.13 | 2.13 |
| CSL405-A | 2.49 | 2.44 | 2.43 | PO4 | 2.5 | PO6 | PO7 | PO8 | 2.36 | PO10 | PO11 | 2.4 |
| CSL405-B | 2.49 | 2.44 | 2.43 | PO4 | 2.42 | PO6 | PO7 | PO8 | 2.4 | PO10 | PO11 | 2.36 |
| CSL504-A | PO1 | PO2 | PO3 | PO4 | PO5 | 3 | PO7 | 3 | 3 | 3 | PO11 | PO12 |
| CSL504-B | PO1 | PO2 | PO3 | PO4 | PO5 | 3 | PO7 | 3 | 3 | 3 | PO11 | PO12 |
| CSL605-A | 2.73 | 2.73 | 2.73 | 2.73 | 2.73 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | 2.73 |
| CSL605-B | 3 | 3 | 3 | 3 | 3 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | 3 |
| CSL803 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | PO7 | PO8 | PO9 | PO10 | PO11 | 2.7 |
| CSM301-A | 2.34 | 2.34 | 2.68 | 2.5 | 2.68 | PO6 | 3 | PO8 | 3 | 3 | 3 | 2.6 |
| CSM301-B | 2.34 | 2.34 | 2.68 | 2.5 | 2.68 | PO6 | 3 | PO8 | 3 | 3 | 3 | 2.6 |
| CSM401-A | 3 | 3 | 3 | 3 | 3 | PO6 | PO7 | 3 | 3 | 3 | 3 | 3 |
| CSM401-B | 3 | 3 | 3 | 3 | 3 | PO6 | PO7 | 3 | 3 | 3 | 3 | 3 |
| CSM501-A | 2.33 | 2.25 | 3 | PO4 | 3 | PO6 | PO7 | 3 | 3 | 3 | 2.63 | 2.67 |
| CSM501-B | 2.33 | 2.25 | 3 | PO4 | 3 | PO6 | PO7 | 3 | 3 | 3 | 2.63 | 2.67 |
| CSM601-A | 3 | 3 | 3 | PO4 | 3 | PO6 | PO7 | 3 | 3 | 3 | 3 | 2.33 |
| CSM601-B | 3 | 3 | 3 | PO4 | 3 | PO6 | PO7 | 3 | 3 | 3 | 2.2 | 2.3 |
| CSP705 | 3 | 3 | 3 | PO4 | 3 | 3 | PO7 | 3 | 3 | 3 | 3 | 3 |
| CSP805 | 3 | 3 | 3 | PO4 | 3 | PO6 | PO7 | PO8 | 3 | 3 | 3 | 3 |

PO Attainment Level

| Course | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Direct Attainment | 2.74 | 2.69 | 2.75 | 2.74 | 2.77 | 2.77 | 2.6 | 2.76 | 2.67 | 2.75 | 2.64 | 2.66 |
| Indirect Attainment | 2.92 | 2.65 | 3 | 2.57 | 1.95 | 2.53 | 2.49 | 2.5 | 2.07 | 2.54 | 2.52 | 2.05 |

PSO Attainment

| Course | PSO1 | PSO2 |
|----------|------|------|
| CSC301-A | PSO1 | PSO2 |
| CSC301-B | PSO1 | PSO2 |
| CSC302-A | 2.37 | 2.16 |
| CSC302-B | 2.38 | 2.04 |
| CSC303-A | 2.77 | 2.77 |
| CSC303-B | 2.77 | 2.77 |
| CSC304-A | 2.97 | PSO2 |
| CSC304-B | 2.96 | PSO2 |
| CSC305-A | 2.89 | 3 |
| CSC305-B | 2.63 | 2.32 |
| CSC401-A | PSO1 | PSO2 |
| CSC401-B | PSO1 | PSO2 |
| CSC402-A | 2.54 | 2.54 |
| CSC402-B | 2.54 | 2.54 |
| CSC403-A | 2.92 | 2.92 |
| CSC403-B | 2.88 | 2.85 |
| CSC404-A | 2.68 | PSO2 |
| CSC404-B | 2.52 | PSO2 |
| CSC405-A | 2.71 | PSO2 |
| CSC405-B | 2.49 | 2.52 |
| CSC501-A | 2.85 | 2.85 |
| CSC501-B | 2.75 | 2.85 |
| CSC502-A | 2.84 | 2.82 |
| CSC502-B | 2.38 | 2.38 |
| CSC503-A | 2.89 | PSO2 |
| CSC503-B | 2.56 | 2.55 |
| CSC504-A | 3 | 3 |
| CSC504-B | 2.73 | 2.73 |
| CSC601-A | 2.2 | 2.2 |
| CSC601-B | 2.36 | 2.36 |
| CSC602-A | 2.88 | 2.91 |
| CSC602-B | 2.72 | 2.55 |
| CSC603-A | 2.37 | 2.52 |
| CSC603-B | 2.76 | 3 |
| CSC604-A | 2.84 | 2.82 |
| CSC701 | 3 | PSO2 |
| CSC702 | 2.76 | 2.92 |
| CSC801 | 2.7 | PSO2 |

| | | |
|----------|------|------|
| CSC802 | 2.75 | 2.66 |
| CSDL501 | 3 | 3 |
| CSDL502 | 3 | PSO2 |
| CSDL601 | PSO1 | PSO2 |
| CSDL602 | 2.75 | 2.75 |
| CSDL701 | 2.89 | 2.87 |
| CSDL801 | 2.53 | 2.54 |
| CSILO701 | 3 | PSO2 |
| CSILO702 | 3 | 3 |
| CSILO801 | 3 | 3 |
| CSILO802 | PSO1 | 3 |
| CSL304-A | 2.28 | 2.4 |
| CSL305-B | 2.37 | 2.37 |
| CSL504-A | PSO1 | PSO2 |
| CSL504-B | PSO1 | PSO2 |
| CSL605-A | 2.76 | PSO2 |
| CSL803 | 3 | 3 |
| CSM301-A | 2.34 | 2.84 |
| CSM301-B | 2.34 | 2.84 |
| CSM401-A | 3 | PSO2 |
| CSM401-B | 3 | PSO2 |
| CSM501-A | 3 | 3 |
| CSM501-B | 3 | 3 |
| CSM601-A | 3 | 3 |
| CSM601-B | 3 | 3 |
| CSP705 | 3 | 3 |
| CSP805 | 3 | 3 |

PSO Attainment Level

| Course | PS01 | PSO2 |
|---------------------|------|------|
| CO Attainment | 2.54 | 2.57 |
| Direct Attainment | 2.75 | 2.74 |
| Indirect Attainment | 1.71 | 1.89 |

4. STUDENTS' PERFORMANCE (150)

Total Marks 132.50

Table 4.1

| Item (Information to be provided cumulatively for all the shifts with explicit headings, wherever applicable) | 2022-23 (CAY) | 2021-22 (CAYm1) | 2020-21 (CAYm2) | 2019-20 (CAYm3) | 2018-19 (CAYm4) | 2017-18 (CAYm5) | 2016-17 (CAYm6) |
|--|---------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Sanctioned intake of the program(N) | 120 | 120 | 120 | 120 | 60 | 60 | 60 |
| 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) | 128 | 130 | 129 | 130 | 66 | 65 | 67 |
| Number of students admitted in 2nd year in the same batch via lateral entry (N2) | 12 | 12 | 12 | 13 | 6 | 12 | 12 |
| Separate division students, If applicable (N3) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total number of students admitted in the programme (N1 + N2 + N3) | 140 | 142 | 141 | 143 | 72 | 77 | 79 |

Table 4.2

| Year of entry | Total No of students admitted in the program (N1 + N2 + N3) | Number of students who have successfully graduated without backlogs in any semester/ year of study (Without Backlog means no compartment or failures in any semester/ year of study) | | | |
|-----------------|---|--|---------|----------|---------|
| | | I year | II year | III year | IV year |
| 2022-23 (CAY) | 140 | 79 | 0 | 0 | 0 |
| 2021-22 (CAYm1) | 142 | 114 | 116 | 0 | 0 |
| 2020-21 (CAYm2) | 141 | 129 | 133 | 128 | 0 |
| 2019-20 (CAYm3) | 143 | 112 | 124 | 124 | 120 |
| 2018-19 (LYG) | 72 | 56 | 63 | 63 | 63 |
| 2017-18 (LYGm1) | 77 | 61 | 70 | 68 | 68 |
| 2016-17 (LYGm2) | 79 | 53 | 55 | 53 | 53 |

Table 4.3

| Year of entry | N1 + N2 + N3 | Number of students who have successfully graduated in stipulated period of study) | | | |
|-------------------------|--------------------|---|---------|----------|---------|
| | (As defined above) | [Total of with Backlog + without Backlog] | | | |
| | | I Year | II Year | III Year | IV Year |
| CAY(2022-23) | 140 | 121 | 0 | 0 | 0 |
| CAYm1(2021-22) | 142 | 130 | 131 | 0 | 0 |
| CAYm2(2020-21) | 141 | 129 | 140 | 138 | 0 |
| CAYm3(2019-20) | 143 | 129 | 141 | 141 | 140 |
| CAYm4 (LYG) (2018-19) | 72 | 63 | 70 | 70 | 70 |
| CAYm5 (LYGm1) (2017-18) | 77 | 65 | 76 | 75 | 75 |
| CAYm6 (LYGm2) (2016-17) | 79 | 66 | 76 | 76 | 76 |

4.1 Enrolment Ratio (20)

Total Marks 20.00

Institute Marks: 20.00

| | N (From Table 4.1) | N1 (From Table 4.1) | Enrollment Ratio [(N1/N)*100] |
|-----------------|--------------------|---------------------|-------------------------------|
| 2022-23 (CAY) | 120 | 126 | 105 |
| 2021-22 (CAYm1) | 120 | 130 | 108.33 |
| 2020-21 (CAYm2) | 120 | 129 | 107.50 |

Average [(ER1 + ER2 + ER3) / 3]: 107.29

Assessment: 20.00

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

Total Marks 34.75

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

Institute Marks: 20.25

| Item | Latest Year of Graduation, LYG (2018-19) | Latest Year of Graduation minus 1, LYGm1 (2017-18) | Latest Year of Graduation minus 2 LYGm2 (2016-17) |
|---|--|--|---|
| X Number of students admitted in the corresponding First year + admitted in 2nd year via lateral entry and seperated division, if applicable | 72.00 | 77.00 | 79.00 |
| y Number of students who have graduated without backlogs in the stipulated period | 63.00 | 68.00 | 53.00 |
| Success Index [SI = Y / X] | 0.88 | 0.89 | 0.68 |

Average SI [(S11 + S12 + S13) / 3]: 0.817

Assessment [25 * Average SI]: 20.41

4.2.2 Success rate in stipulated period (15)

Institute Marks: 14.50

| Item | Latest Year of Graduation, LYG (2018-19) | Latest Year of Graduation minus 1, LYGm1 (2017-18) | Latest Year of Graduation minus 2 LYGm2 (2016-17) |
|---|--|--|---|
| X Number of students admitted in the corresponding First year + admitted in 2nd year via lateral entry and separated division, if applicable | 72.00 | 77.00 | 79.00 |
| y Number of students who have graduated in the stipulated period | 70.00 | 75.00 | 76.00 |
| Success Index [$SI = Y / X$] | 0.97 | 0.97 | 0.96 |

Average SI [$(SI1 + SI2 + SI3) / 3$]: 0.97

Assessment [$15 * \text{Average SI}$]: 14.50

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

4.3 Academic Performance in Third Year (15)

Total Marks 13.09

Institute Marks: 13.09

| Academic Performance | CAYm3 (2019-20) | LYG (2018-19) | LYGm1 (2017-18) |
|---|-----------------|---------------|-----------------|
| Mean of CGPA or mean percentage of all successful students(X) | 9.27 | 8.85 | 8.24 |
| Total number of successful students(Y) | 141.00 | 70.00 | 75.00 |
| Total number of students appeared in the examination(Z) | 141.00 | 70.00 | 76.00 |
| API [$X*(Y/Z)$]: | 9.27 | 8.85 | 8.13 |

Average API [$(AP1 + AP2 + AP3)/3$] : 8.75

Assessment [$1.5 * \text{Average API}$]: 13.125

4.4 Academic Performance in Second Year (15)

Total Marks 13.46

Institute Marks: 13.46

| Academic Performance | CAYm2 (2020-21) | CAYm3 (2019-20) | LYG (2018-19) |
|---|-----------------|-----------------|---------------|
| Mean of CGPA or mean percentage of all successful students(X) | 8.84 | 9.35 | 8.41 |
| Total number of successful students (Y) | 140.00 | 141.00 | 70.00 |
| Total number of students appeared in the examination (Z) | 140.00 | 142.00 | 70.00 |
| API [$X * (Y/Z)$] | 8.84 | 9.29 | 8.41 |

Average API [$(AP1 + AP2 + AP3)/3$] : 8.85

Assessment [$1.5 * \text{Average API}$] : 13.27

4.5 Placement, Higher Studies and Entrepreneurship (40)

Total Marks 33.20

Institute Marks: 33.20

| Item | LYG (2018-19) | LYGm1 (2017-18) | LYGm2 (2016-17) |
|--|------------------|--------------------|--------------------|
| Total No of Final Year Students(N) | 70.00 | 75.00 | 76.00 |
| No of students placed in the companies or government sector(X) | 48.00 | 55.00 | 42.00 |
| No of students admitted to higher studies with valid qualifying scores(GATE or equivalent State or National Level tests, GRE, GMAT etc.) (Y) | 14.00 | 12.00 | 12.00 |
| No of students turned entrepreneur in engineering/technology (Z) | 0.00 | 0.00 | 0.00 |
| $x+y+z=$ | 62.00 | 67.00 | 54.00 |
| Placement Index $[(X+Y+Z)/N]:$ | 0.89 | 0.89 | 0.71 |

Average Placement $[(P1 + P2 + P3)/3]:$ 0.83Assessment $[40 \cdot \text{Average Placement}]:$ 33.20**Program Name:****Assessment Year Name: CAYm1**

| S. No | Student Name | Enrollment No | Employee Name | Appointment No |
|-------|----------------------------|---------------|---------------|--------------------------------------|
| | Agarwal Mayur Dinesh | 8584 | Quantiphi | Ref. Not Available-30/12/2021 |
| 2 | Agrawal Isha | 8585 | JP Morgan | Ref. Not Available 30/04/2022 |
| 3 | Almeida Clayton Denis | 8587 | Cognizant | 19710687 20/04/2022 |
| 4 | Aloj Hansie Dilip | 8588 | Xorient | 673207 24/02/2022 |
| 5 | Bilonikar Shreya Kailas | 8590 | Accenture | C10940209 30/03/2022 |
| 6 | Biswas Simran Amit | 8591 | Capgemini | 1117897 |
| 7 | Chaube Nitin Sunil | 8593 | TIM | Ref. Not Available 09/06/2022 |
| 8 | Colaco Raj Prakash | 8596 | Cognizant | 1162963 02/11/2021 |
| 9 | Dabre Chelsea Moses | 8597 | Juspay | Ref. Not Available 06/06/2022 |
| 10 | Dcruz Smith Richard | 8598 | Xoriant | 673270 11/03/2022 |
| 11 | Dias Mario Jonas | 8599 | UBS | CIN U74999PN2015FTC157258, 09/06/202 |
| 12 | Dodti Nash Michael | 8600 | Cognizant | 19927512, 28/01/2022 |
| 13 | Dsa Nigel Godfrey | 8601 | Dolat Capital | Ref. Not Available 21/01/2022 |
| 14 | Dsilva Celine Leonard | 8602 | Quantiphi | Ref. Not Available 30/12/2021 |
| 15 | GaurSamyak | 8604 | cityflo | Ref. Not Available 08/12/2021 |
| 16 | George Ron Shaju | 8605 | Accenture | C10938495 25/03/2022 |
| 17 | Hodges Lyndon Luke Allen | 8608 | Wissen | Ref. not Available 07/04/2022 |
| 18 | Iyer Sahaana Chandramoulee | 8609 | JP Morgan | Ref. Not Available 28/04/2021 |
| 19 | Lopes Princely Jonas | 8613 | Dolat Capital | Ref. Not Available 21/01/2022 |
| 20 | Mangalorkar Krish Sunil | 8614 | Accenture | C10938690 25/03/2022 |
| 21 | Mascarenhas Nicola Mary A. | 8615 | Cognizant | 1098541 19/11/2021 |

| | | | | |
|----|---------------------------------|------|---------------|---|
| 22 | Mascarenhas Nisha Nitin | 8616 | Accenture | C10938691 25/03/2022 |
| 23 | Mascarenhas Samantha R. | 8617 | Quantiphi | Ref. Not Available 30/12/2021 |
| 24 | Mendonca Carol Sierra N. | 8618 | TCS Ninja | TCSL/DT20218047690 14/10/2021 |
| 25 | Menezes Tristan Thomas | 8619 | Accenture | C10940210 30/03/2022 |
| 26 | Mishra Vinayak Shyamsunder | 8620 | JP Morgan | Ref. Not Available 28/04/2022 |
| 27 | Nadar Justin Sureshkumar | 8621 | Cognizant | 1115405 02/11/2021 |
| 28 | Ninan Nijo Saju | 8624 | JP Morgan | Ref. Not Available 03/05/2021 |
| 29 | Nunes Calvin Leo | 8625 | Dolat Capital | Ref. Not Available 21/01/2022 |
| 30 | Phadakale Divita Chandrakant | 8626 | TCS Ninja | TCSL/DT20218046263 14/10/2021 |
| 31 | Potdukhe Karishma Sanjeev | 8628 | TIM | Ref. Not Available 09/06/2022 |
| 32 | Pothen Tresa | 8629 | IDFC First | Ref. Not Available 28/05/2022 |
| 33 | Purohit Suryansh Bhupesh | 8630 | Carwale | Ref. Not Available 28/04/2022 |
| 34 | Reddy Ganesh Bheemesh | 8631 | UBS | Ref. Not Available 09/06/2022 |
| 35 | Rede Praditi Pramod | 8632 | TCS(Ninja) | TCSL/DT20218046690 01/09/2021 |
| 36 | Rolwyn Raju | 8634 | Cognizant | 1115934 02/11/2021 |
| 37 | Rumao Gladden Mathew | 8636 | TCS(Digital) | TCSL/CT2021365976 01/09/2021 |
| 38 | Sadhu Arpan | 8637 | Cognizant | 1151417 02/11/2021 |
| 39 | Sharma Sheetal Tarsam | 8639 | Cognizant | 1090520 02/11/2021 |
| 40 | Shetty Sanath Krishna | 8640 | Forcepoint | Ref. Not Available 15/03/2022 |
| 41 | Tijo K Thomas | 8644 | Quantiphi | Ref. Not Available 30/12/2021 |
| 42 | Tamar Ayush Devendra | 8645 | Carwale | Ref. Not Available 23/07/2021 |
| 43 | Tripathi Sudheer Vijaykumar | 8646 | ClearGlass | Ref. Not Available 2/11/2021 |
| 44 | Yadav Ayush Ramkaran | 8648 | Cognizant | 1180637 25/10/2021 |
| 45 | Navia Vijay D'silva | 8663 | TCS(Ninja) | TCSL/DT20206785789 01/09/2021 |
| 46 | Aaron Domingo | 8763 | Accenture | C10938500 05/03/2022 |
| 47 | Aadarsh Kshirsagar | 8765 | Accenture | C10938494 25/03/2022 |
| 48 | Pai Aditi Balkrishna | 8766 | Edge CRM | T-G/IN/Mum/FRD/Offer/425, 23/09/2022 |

Assessment Year Name : CAYm2

| S. No | Student Name | Enrollment No | Employee Name | Appointment No |
|-------|------------------------------|---------------|-----------------------------|-------------------------------|
| | AHIRRAO ABHISHEK NARESH | 8312 | Quantiphi | Ref. Not Available 05/02/2021 |
| 2 | BAGRECHA PRANAY MANOJ | 8314 | Dolat Capital | Ref. Not Available 30/03/2021 |
| 3 | BARBOZA DEVIN JEROME | 8315 | Quantiphi | Ref. Not Available 05/02/2021 |
| 4 | SARETTO PRINCETON BAPTIST | 8316 | Interactive Brokers (IB) | Ref Not Available 03/06/2021 |
| 5 | BASU AMURTO AMLAN | 8317 | TIAA | Ref Not Available 17/11/2020 |
| 6 | BINDRA SIMRAN PREET KAUR | 8319 | ICICI Securities | CJ22154793 27/07/2021 |
| 7 | CAROL SEBASTIAN | 8320 | Dolat Capital | Ref. Not Available 30/03/2021 |

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|----|----------------------------|------|----------------------|--------------------------------------|
| 8 | CHERUTHURUTHY KEVIN RUFFIN | 8321 | Jaro Education | Ref. Not Available 23/09/2020 |
| 9 | CHOWDHURY PRATIK VINAYAK | 8322 | Dolat Capital | Ref. Not Available 30/03/2021 |
| 10 | CORREA ARIANE JEAN ASHWIN | 8324 | Oracle | 12633820 04/05/2021 |
| 11 | DMELLO PRINCE ALEX | 8329 | Cognizant | 14676368 22/03/2021 |
| 12 | DMELLO RIA MICHAEL | 8330 | Deloitte | Ref. Not Available 27/07/2021 |
| 13 | DSA MARIO PHILIP | 8332 | Quantiphi | Ref. Not Available 05/02/2021 |
| 14 | DSOUZA ELVIS EDWIN | 8333 | UBS | Ref. No. Not Available 09/03/2021 |
| 15 | DSOUZA SHERWYN ROHIT | 8334 | Xoriant Technologies | 408273 06/11/2020 |
| 16 | DSOUZA SIMRAN JOHN | 8335 | Accenture | C9369889 06/04/2021 |
| 17 | DSOUZA SUSAN VINCENT | 8336 | Neeble | NTHR/21-22N027 26/04/2021 |
| 18 | EMMIMA GNANARAJ | 8337 | TCS | TCSL/CT20203388667/Mumbai 19/12/2020 |
| 19 | FERNANDES CALISTA LUIS | 8338 | Oracle | 12634080 04/05/2021 |
| 20 | GUPTARIYA | 8339 | Accenture | C9363249 03/04/2021 |
| 21 | KHAJURIAADITYA | 8341 | Tata Technologies | Ref Not Available 19/06/2021 |
| 22 | KUNDER MOHIT SATISH | 8344 | Accenture | C9363252 03/04/2021 |
| 23 | LOPES REYNOLD JAMES | 8345 | Capgemini | Ref. Not Available 05/05/2021 |
| 24 | MENEZES LEESA ROBIN | 8347 | Oracle | 12634255 04/05/2021 |
| 25 | MISHRA MAYANK MANMOHAN | 8348 | Xoriant Technologies | 408278 04/11/2020 |
| 26 | MISHRA SHAILESHKUMAR | 8349 | Quantiphi | Ref. Not Available 05/02/2021 |
| 27 | MISHRA SHUBHAM SANTOSH | 8350 | Quantiphi | Ref. Not Available 05/02/2021 |
| 28 | MULAKKALANUPJOSEPH | 8351 | Quantiphi | Ref. Not Available 04/11/2020 |
| 29 | NAZARETH DARLENE DOMINIC | 8353 | TCS Digital | TCSL/CT20203391089/Mumbai 29/10/2020 |
| 30 | NORONHA SANFER SAMSON | 8354 | Quantiphi | Ref. Not Available 05/02/2021 |
| 31 | OZA DISHANK KAILASH | 8355 | Xoriant Technologies | 408272 04/11/2020 |
| 32 | PILLAI SHERWIN JESUDAS | 8358 | Quantiphi | Ref. Not Available 05/02/2021 |
| 33 | RACHEL JOSE | 8361 | Xoriant Technologies | 408283 05/11/2020 |
| 34 | SAMUEL DAVIS | 8365 | Quantiphi | Ref. Not Available 05/02/2021 |
| 35 | SETHI DEEPANSHU DEEPAK | 8366 | Capgemini | 311958 Date not Available |
| 36 | SHAHI SURYA PRATAP | 8367 | Accenture | C9404456 16/04/2021 |
| 37 | SHAIKH KHALID | 8368 | BrowserStack | Ref Not Available 06/06/2021 |
| 38 | SHETTY KAUSTUBH | 8369 | TCS Ninja | TCSL/CT20203508868Mumbai 19/12/2020 |

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|----|---------------------------|------|----------------------|--------------------------------------|
| 39 | SRIVASTAVA MAYANK | 8370 | Xoriant Technologies | 408277 04/11/2020 |
| 40 | SUSMITA MATHEW | 8371 | Xoriant Technologies | 408268 15/10/2020 |
| 41 | THARAYILALBIN JIMMY | 8372 | TIAA | Ref. Not Available 18/11/2020 |
| 42 | TRIVEDI HARDIK PRAKASH | 8373 | CyberInc | Ref. Not Available 29/01/2021 |
| 43 | VAZ CASSIA HILARY | 8374 | UBS(PPO) | Ref. Not Available 03/03/2021 |
| 44 | YADAV ALOK KUMAR RAMLAL | 8375 | TCS Ninja | TCSL/DT20206839582 29/10/2020 |
| 45 | YADAV NAGENDRA | 8376 | Xoriant Technologies | 408276 04/11/2020 |
| 46 | BAHETI AMAN ANAND | 8468 | Capgemini | Ref & DATE. Not Available |
| 47 | GUPTA SAHIL KRISHNA | 8470 | Oracle | 12634185 03/05/2021 |
| 48 | KUDEL ALRICH AGNEL | 8471 | Capgemini | 240807 Date not Available |
| 49 | LOBO PRANAY SHEEHAN PETER | 8472 | Protegrity | Ref.Not Available 166/06/2021 |
| 50 | MAHALUNGE ABHIJITH BALU | 8473 | ICICI Securities | 155198 30/07/2021 |
| 51 | MALE MEHEK BHUPESH | 8474 | UBS(PPO) | Ref.Not Available 26/02/2021 |
| 52 | MISHRA SAKSHI SHYAMBIHARI | 8475 | MindTree | Ref.Not Available 24/06/2021 |
| 53 | PEREIRA CLEONA CHARLES | 8477 | TCS Ninja | TCSL/DT20206945658/Mumbai 19/12/2020 |
| 54 | REYNA BINNY | 8478 | Accenture | C9395840 13/04/2021 |
| 55 | VAZ NASH RAJESH | 8479 | ABM | ABMH/HR/OP/PK/Lo0/1687 17/07/2021 |

Assessment Year Name : CAYm3

| S. No | Student Name | Enrollment No | Employee Name | Appointment No |
|-------|----------------------------------|---------------|---------------------|--------------------------------------|
| 1 | AISHWARIYA SEBIN SHEEBA | 7916 | UBS | Ref.Not Available-15-06-2020 |
| 2 | ANNE ISAI PANDIA RAJAN JAYAMANI | 8160 | LTI | LTI/HR/Campus/2020 21-08-2019 |
| 3 | ATRE ATHARVAATUL SHILPA | 7918 | HR-JAPAN Citiustech | Ref.Not Available-26-09-2019 |
| 4 | AUGUSTIN RENITA MARY | 7967 | MAO SOFTWARE | Not Available-22-07-2020 |
| 5 | BHATKAR MANTHAN KIRAN RAJESHWARI | 8161 | TCS | TCSL/DT20195435235/Mumbai 13-09-2019 |
| 6 | BHATKAR SUMEDH SANTOSH SUSHMA | 8162 | TCS | TCSL/CT20192736825/Mumbai 13-09-2019 |
| 7 | BHUJBAL SHREYA DATTU JYOTI | 7919 | HR-JAPAN,Citiustech | Ref. Not Available-26-09-2019 |
| 8 | CHOBHE DHANANJAY | 7921 | INTERACTIVE | Ref.Not Available-03-07- |

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|----|--|------|-----------------------|--------------------------------------|
| | RAMNATH NISHIGANDHA | | BROKERS | 2020 |
| 9 | CORDEIRO ROCHELLE CYPRIAN HILDA | 7922 | GEP | Ref.Not Available-16-07-2020 |
| 10 | D'SOUZA BRINEL VALERIAN VEENA | 7933 | DELLOIT | Ref.Not Available-17-01-2020 |
| 11 | DANIEL LENSON VINOY LISSY | 7924 | TCS DIGITAL | TCSL/CT20182512928/Mumbai 12-09-2019 |
| 12 | DCOSTA STEVE SEBASTIAIN HELEN | 7925 | TCS | TCSL/CT20192777524/Mumbai 12-09-2019 |
| 13 | DEO SAYALI ARUN KIRTI | 7926 | LTI | LTI/HR/Campus/2020 21-08-2019 |
| 14 | DMELLO MACWILL WILLIAM SHAILA | 7929 | TCS | TCSL/CT20192793763/Mumbai 13-09-2019 |
| 15 | DMELLO RYAN ANDREW FATIMA | 7930 | UTOPIA | UT/0101/2020/00002 21-07-2020 |
| 16 | DODHIYA SUNNY DINESH ROZINA | 7932 | CRIMSON & CO | Not Available-21-01-2020 |
| 17 | FALCAO LEON LESLIE VELGA | 7935 | Capgemini | HR/Campus/LO14158607/107-11-2019 |
| 18 | FERNANDES KENRICK ANTHONY SELMA | 7936 | ZS | Not Available-26-11-2019 |
| 19 | GEORGE SOLOMON JOSE MARY | 7938 | GEP | NA-16-07-2020 |
| 20 | HIPPURGIKAR SANJEEV RAVINDRANATH SARASWATI | 7940 | NSEIT | NSEIT/HR/OL/SD/04330 |
| 21 | JARE GAURI MAHESHKUMAR SHILPA | 7941 | QUANTIPHI | Ref.Not Available-07-09-2020 |
| 22 | KALNAD NEHAL VINOD PRAMILA | 7943 | TCS DIGITAL | TCSL/DT20184482051/Mumbai 12-09-2019 |
| 23 | KARTICK HARIHARAN PREMA | 7944 | ZS | Ref. Not Available-26-12-2019 |
| 24 | LOBO HAZEL FELIX HELEN | 7946 | BNP | Ref. Not Available |
| 25 | MANJREKAR RAJESH GANESH GEETA | 8169 | AMAZON DSPL | Ref. Not Available |
| 26 | MOLATH ALEX SAJI JESSY | 7952 | ZS | Not Available-26-12-2019 |
| 27 | NADAR PRABHU ANAND SUSHIL KUMAR PREMA | 7954 | TCS | TCSL/DT2019553845/Mumbai 13-09-2019 |
| 28 | NICHOLAS JEROME RACHEL JESSIE | 7942 | MSCI | Not Available-21-01-2020 |
| 29 | PATILADITYAVINOD VIDULA | 7958 | BROAD INFINITY | Not Available |
| 30 | PAYAPILLY MERLIN KURUVILLA SHEENA | 7959 | ZS | Not Available-26-12-2019 |
| 31 | PEREIRA CLAYTON SOHAN CANUTE SHALINI | 7960 | INTERACTIVE BROKER | Not Available-03-07-2020 |

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|----|---|------|-----------------|--------------------------------------|
| 32 | PEREIRA NERISSA GODFREY ARCHANA | 7961 | LTI | LTI/HR/Campus/2020 21-08-2019 |
| 33 | PINTO DAVINA LYDIA VINCENT FLORY DAISY | 7962 | LTI | LTI/HR/Campus/2020 21-08-2019 |
| 34 | RAUT SHREYA BHARAT HARSHALA | 7966 | MAQ SOFTWARE | Not Available-22-07-2020 |
| 35 | RODRIGUES CAJETAN CHRISTOPHER SABRINA | 7968 | ZS | Not Available-26-12-2019 |
| 36 | RODRIGUES KEVIN MOSES SUSHILA | 7969 | LTI | LTI/HR/Campus/2020 21-08-2019 |
| 37 | RODRIGUES LINNET NICHOLAS LALITA | 7971 | LTI | LTI/HR/Campus/2020 21-08-2019 |
| 38 | SAKHARDANDE VEDANT ATMARAM UTPALA | 7973 | LINCKUP | Not Available-01-06-2020 |
| 39 | SALVI SUYASH BHALCHANDRA BHAGYASHRI | 7974 | LTI | LTI/HR/Campus/2020 21-08-2019 |
| 40 | SHETTY RAKSHA SADANAND GEETA | 8171 | NSEIT | NSEIT/HR/OL/SD/04257 |
| 41 | SREEKUMAR SUYASH SMITA | 7976 | TCS DIGITAL | TCSL/DT20184510584/Mumbai 12-09-2019 |
| 42 | VADAKKEPARAMPILANO L KURIAN NIMMI | 7978 | GEP | Not Available-16-07-2020 |

4.6 Professional Activities (20)

Total Marks 18.00

4.6.1 Professional societies/ chapters and organizing engineering events (5)

Institute Marks : 5.00

To facilitate the students to enhance their technical expertise, the department of Computer Engineering has initiated the following student chapters:

- CSI
- CODELABS
- Mozilla
- Cyber Security
- Gaming Developer Club
- Google Student Developers Club
- IEEE
- IEEE WIE

These student chapters focus on imparting knowledge that is beyond the scope of the academic curriculum. In a semester, each student chapter organizes at least two technical events. Students are encouraged to join multiple student chapters. They plan industrial visits, workshops, competitions, and hackathons to give students hands-on experience and practical knowledge. These activities assist students in developing organizational skills, leadership qualities, teamwork, and

communication abilities. Students improve their technical knowledge, sharpen their engineering skills, and learn new technologies by participating in these activities.

| Year 2019-20 | | | | | | |
|--------------|--|--------------------------|---|--|---------------------|--|
| Sr. No | Name of the Event | Date | Name of the speaker and Organization (if any) | Description/Purpose | Nos of participants | Organized by |
| 1 | LAN Gaming (Counter Strike 1.6) (Inter College) | 30/09/2019 | - | It was a non-technical event during the college fest Synergy. LAN Gaming (Counter Strike 1.6), a multiplayer game which was played in the gaming battle zone. | 20 | CSI CRCE |
| 2 | React JS Workshop (Intra College) | 04/10/2019 | Mr. Khalid Shaikh | The speaker giving a quick gist about JavaScript and this was followed by enlightening the audience about React JS. | 22 | CSI CRCE |
| 3 | Industrial Visit to Shimla/ Manali/ Chandigarh (Intra College) | 27/12/2019 to 04/01/2020 | - | The objective of the visit was to help students gain first hand information regarding the functioning of the industry. This provided them with an opportunity to interact with the industrial professionals giving them a deeper insight into the practical implementation of the theoretical knowledge. | 140 | CSI CRCE in collaboration with ACM, IEEE-WIE and SAE |
| 4 | Intellectual Property Rights Session (Intra College) | 23/01/2020 | Dr. Bhushan Patil | The session introduced the basic concept of IPR. The speaker emphasized on the four types of IPR which includes patents, copyrights, trademarks and trade secrets and further the students were briefed on its | 155 | CSI CRCE in collaboration with IIC CRCE |

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| | | | | importance and proper management. | | |
| 5 | Competitive Programming Session (Intra College) | 27/01/2020 | Mr. Gaurav Sen and Mr. Khushan Sen | The speakers introduced the concept of Competitive Programming and the students were guided on how and when to begin Competitive Programming mainly by being perfect in time complexity. Step wise instructions were given on this topic. Importance of every essential topic was explained such as that of Data Structures and Algorithms and core languages. The speakers also shared their experiences and gave some tips to be followed before facing an interview. | 266 | CSI CRCE |
| 6 | Poster Presentation Competition (Intra College) | 31/01/2020 | - | The aim of the event was to make something innovative and the participants had to inculcate innovation into their posters. | 35 | CSI CRCE in collaboration with IIC CRCE |
| 7 | Alcoholic 1.0 (Inter College) | 10th August 2019 | - | A coding competition that is held online so that students can take part from the comforts of their houses and compete with various students, for exposure | 100 | Codelabs CRCE |
| 8 | Machine Learning Workshop (Intra College) | 24 August 2019 | Mr. Princeton Baretto | This workshop was held by the council for the Second Year students. An introduction to the Python language and in depth focus on Machine Learning was done. Students from all branches attended this | 75 | Codelabs CRCE |

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| | | | | workshop. | | |
| 9 | Python and Introduction to Machine Learning (Intra College) | 21st August 2019 | Princeton Baretton, Albin Tharayil, Sanfer Noronha | This workshop was organized for the students of First Year of all branches. Students were taught the basics right from scratch and a brief introduction to Artificial Intelligence was made. | 75 | Codelabs CRCE |
| 10 | Node JS (Intra College) | 03/08/2019 | Mr. Thompson Naidu | The purpose of this event was to host a seminar, where students could learn to use it as a single programming language to write both front end and back end web application. Students were also introduced to E6 and its features, understanding it's core module. It was a hands-on workshop and basics of HTML and JavaScript were the prerequisites. | 86 | Mozilla Campus Club |
| 11 | Mongo DB (Intra College) | 29/08/2019 | Mr. Nehal Kalnad | The purpose of this event was to host a seminar, where students could be introduced to the basics of API in order to build one. It was a hands-on workshop which ended with a positive feedback from the students. | 86 | Mozilla Campus Club |
| 12 | (Synergy Event) Classroom Cricket (Inter College) | 23/08/2019 | - | It was a simple game where you could play cricket indoors without using a cricket bat. It was an innovative attempt to play an otherwise outdoor sport indoors | - | Mozilla Campus Club |
| 13 | HTML, CSS and Bootstrap Workshop (Intra College) | 25/01/2020 | Rathil Patel, Samyak Gaur and Yameen Ajani | The purpose of this event was to host a workshop where students could learn how to use HTML | 48 | Mozilla Campus Club |

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|----|---------------------------------------|------------------------------------|--|--|-----------------------|-----------|
| | | | | and CSS. It was a hands-on workshop and no prior knowledge was required for the students to attend the workshop. | | |
| 14 | Papparazzi | 30 th August 2019 | | organized games and fun activities in ‘SYNERGY’. The game tested the convincing skills of the participants and the product which was sold the fastest won the prize. | 30 | IEEE-CRCE |
| 15 | Field Visit to MICA | Saturday, 21st September 2019 | Mr. Shoaib Aslam, Sr. Engineer (MICA Labs) | This visit was organized for the students so that they may have the knowledge of various Automation and Control Systems associated with the Marine Industrial Sector. | 20 | IEEE CRCE |
| 16 | Industrial Visit | 27th of December to 4th of January | Mr. Rajiv Kumar, the resource person at A2IT Pvt. Ltd. | <ol style="list-style-type: none"> 1. Visit to Visions Software Pvt. Ltd. (Chandigarh) 2. Visit to Auscan Academy of Information Technology (Chandigarh) 3. Visit to Micro Turner Group, Baddi (Himachal Pradesh) 4. Visit to Aar Kay Shawl Industries, Bhuntar – Kullu (Himachal Pradesh) | Above 92 students | IEEE-CRCE |
| 17 | International Women’s Day Celebration | 13th March 2020 | Ms. Prema Mishra Founder of Catapult | The theme for International Women’s Day this year was, “Women in Entrepreneurship”, which emphasizes innovation by women and girls, for women and girls, at the heart of efforts to ignite the passion of Entrepreneurship. | More than 70 students | IEEE-CRCE |

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| 18 | Papparazzi | 30 th August 2019 | | organized games and fun activities in 'SYNERGY'. The game tested the convincing skills of the participants and the product which was sold the fastest won the prize. | 30 | IEEE-WIE CRCE |
| 19 | Field Visit to MICA | Saturday, 21st September 2019 | Mr. Shoaib Aslam, Sr. Engineer (MICA Labs) | This visit was organized for the students so that they may have the knowledge of various Automation and Control Systems associated with the Marine Industrial Sector. | 20 | IEEE-WIE CRCE |
| 20 | Industrial Visit | 27th of December to 4th of January | Mr. Rajiv Kumar, the resource person at A2IT Pvt. Ltd. | 1. Visit to Visions Software Pvt. Ltd. (Chandigarh) 2. Visit to Auscan Academy of Information Technology (Chandigarh) 3. Visit to Micro Turner Group, Baddi (Himachal Pradesh) 4. Visit to Aar Kay Shawl Industries, Bhuntar – Kullu (Himachal Pradesh) | Above 92 students | IEEE and IEEE-WIE CRCE |
| 21 | SPARKC | 17 th January, 2021 | WIE Council Members | Orphanage children of 12 to 18 age range from Fr Agnel Ashram were explained the concepts of General Science like Electromagnetism and Reflection of light in water with practical demonstration. | 21 | IEEE-WIE CRCE |
| 22 | Code Breakers | 30th January 2020, | WIE Branch Counsellor | The essence of the event was to test the knowledge of students who are familiar with the basics of programming languages like C or | 63 | IEEE-WIE CRCE |

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|----|---------------------------------------|-----------------|---|---|-----------------------|------------------|
| | | | | Java. Each participants were given a different set of 10 Questions. | | |
| 23 | International Women's Day Celebration | 13th March 2020 | Ms. Prema Mishra Founder of Catapult | The theme for International Women's Day this year was, "Women in Entrepreneurship", which emphasizes innovation by women and girls, for women and girls, at the heart of efforts to ignite the passion of Entrepreneurship. | More than 70 students | IEEE-WIE CRCE |

Year 2020-21

| Sr. No | Name of the Event | Date | Name of the speaker and Organization (if any) | Description/Purpose | Nos of participants | Organized by |
|--------|--|---------------------------|---|--|---------------------|---|
| 1 | Web Development Bootcamp (Intra College) | 10/10/2020 | Mr. Rathil Patel | A detailed explanation about HTML, CSS, JavaScript was given which helped the participants to master the fundamentals and improve their overall knowledge in the field of web development. | 83 | CSI CRCE |
| 2 | Unscript Rookie's Hackathon 2k20 (National Event) | 21/11/2020 and 22/11/2020 | - | The primary goal of this event was to raise awareness of technical talent and foster a competitive, yet cooperative, and congenial culture for talented individuals. It also allowed participants from all over India to connect with Industry personnel's, faculty mentors, and most importantly, with each other. | 200 | CSI CRCE in collaboration with ACM CRCE |
| 3 | My Story – Motivational Session By Successful Innovators (Intra College) | 28/11/2020 | Ms. Vandana Thakur | The objective of the event was to enlighten the young minds about entrepreneurship and start ups | 73 | CSI CRCE in collaboration with IIC CRCE |

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| 4 | My Story-Landing a Dream Job and Living A startup Dream (Intra College) | 07/04/2021 | Mr. Gaurav Sen | The objective of the event was to help the students to understand and clear their doubts regarding placements and to get guidance on how they can land to their dream job and also enlighten the students about start ups and entrepreneurship. | 46 | CSI CRCE in collaboration with IIC CRCE |
| 5 | Workshop on Prototype/ Process Design and Development (Intra College) | 10/04/2021 | Mr. Amit Sanjay Lokhande | The objective of the event was to help the students to understand what exactly is process design and development (Prototyping) and also to enlighten the young minds about entrepreneurship and start ups by developing their own ideas and achieving success in it. | 30 | CSI CRCE in collaboration with IIC CRCE |
| 6 | How to start with Data Science By Krish Naik (Inter College) | 26th September 2020 | Mr. Krish Naik | Binary Talk Episode 1. A webinar on Data Science by an experienced data scientist and youtuber, Krish Naik. | 120 | Codelabs CRCE |
| 7 | Alcoholic 1.0 (Intra College) | 11th October 2020 | - | Online Coding competition held on Hackrrank for the students of Third and Second Year. The problems used concept of Data Structures and Algorithms | 42 | Codelabs CRCE |
| 8 | Object Oriented Programming In Coding Interviews (Intra College) | 25th October 2020 | Mr. Akash Palghadmal and Mr. Princeton Baretto | Binary Talk Episode 2. An interactive session on Object Oriented Programming, how to prepare for coding interviews and ace them. | 60 | Codelabs CRCE |
| 9 | Unscript 2k20 (National Event) | 21st - 22nd November | - | National Level Annual Hackathon | 140 | Codelabs CRCE in |

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| | | 2020 | | Unscript 2k20. The hackathon had teams competing by developing products in their selected domains of Web/App Development, ML/AI and Security/Blockchain. The event was conducted online. | | collaboration with Mozilla Campus Club CRCE |
| 10 | Design Thinking, Critical Thinking and Innovation Design (Intra College) | 29th November 2020 | Edwin Clement | A webinar on Design Thinking, Critical Thinking and Innovation Design | 75 | Codelabs CRCE in collaboration with IIC CRCE |
| 11 | Competitive Coding and Placement Preparation for Software Development Roles In Top Companies (Inter College) | 21st February 2021 | Mamta Kumari (PrepBytes) | An online workshop on competitive programming and placement preparation in companies like, Amazon, Microsoft, Google, etc. | 120 | Codelabs CRCE in collaboration with PrepBytes |
| 12 | How to plan for a Startup's ethical and legal steps (Intra College) | 28th April 2021 | Prof. Swati Ringe | A webinar on how to plan and go about with building a startup. The webinar covered some ethical and legal steps for the same. | 75 | Codelabs CRCE in collaboration with IIC CRCE |
| 13 | Alcoholic 2.0 (Intra College) | 2nd May, 2021 | - | Online Coding competition held on Hackrank for the students of Third and Second Year. The problems used concept of Data Structures and Algorithms | 55 | Codelabs CRCE |
| 14 | AWS Certification (Intra College) | 31/10/2020 | Mr. Pranit Rajee | The main purpose was to guide the participants on the roadmap to get AWS certified and its scope in the near future. The speaker, being four times AWS certified himself, also shared his personal experience and its benefits. | 147 | Mozilla Campus Club CRCE |

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|----|--|-----------------------------|----------------------|--|-----|--|
| 15 | UnScript 2k20 (National Level) | 21/11/2020 to 22/10/2020 | - | National Level Annual Hackathon Unscript 2k20. The hackathon had teams competing by developing products in their selected domains of Web/App Development, ML/AI and Security/Blockchain. The event was conducted online. | 140 | Mozilla Campus Club CRCE in collaboration with Codelabs CRCE |
| 16 | Design Validation (Intra College) | 5/12/2020 | Mr. Ismail Akbani | The main purpose of the session was to introduce the participants to the various design validation models, the process and the phases of the double diamond approach with its significance. | 55 | Mozilla Campus Club CRCE in collaboration with IIC CRCE |
| 17 | Roadmap to become CyberSecurity Specialist (Intra College) | 27/03/2021 | Mr. Rohit Date | The main aim of the event was to introduce the participants to Cyber Security and its various domains thus highlight its highly growing significance. The participants were also guided about the pre-required skills to become a Cyber Security Specialist and the number of paths, certifications and projects to conquer it | 50 | Mozilla Campus Club CRCE |
| 18 | Prototype Validation (Intra College) | 10/04/2021 | Mr. Rudragouda Patil | The main agenda of the session was to introduce the participants to the importance identifying the problem and passion, validation of problem and prototype and validating the minimum variable product with customer which can help one to convert a prototype into a start- | 37 | Mozilla Campus Club CRCE in collaboration with IIC CRCE |

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| | | | | up. | | |
| 19 | Entrepreneurship and Innovation as Career Opportunity (Intra College) | 9 th November 2020 | Ayush Jain and Farhan Shaik | IEEE & WIE in collaboration with IIC presents to you a Webinar on the topic “Entrepreneurship and Innovation as Career Opportunity” | 72 | IEEE-CRCE |
| 20 | Android Developing Webinar (Intra College) | 12th February 2021 | Sir Ninand Khanvilkar and his team | This workshop enabled participants to understand the Android Development process. They introduced the course that they provide for android coding, shared benefits of the course, timeline, stages and more. | 37 | IEEE-CRCE |
| 21 | Webinar on Technical Paper Writing (Intra College) | 23rd February 2021 | Dr. Sapna Prabhu | This workshop was a success as participants learned about Technical Paper Writing with hands on experience. She encouraged students to write technical papers and publish them. This workshop will be helpful to the participant, as an emerging frontier to deal with problems and areas of technical paper writing and research | 55 | IEEE-CRCE |
| 22 | Crescendo-Technical Paper Presentation Competition (Intra College) | 19th March 2021 | Prof. Monica Khanore | It is an Annual technical paper presentation competition organised by IEEE-WIE CRCE to encourage participants to express their project in terms of Writing and enhancing their technical skills | 42 | IEEE-CRCE |
| 23 | Crescendo-Project Competition (Inter College) | 21st March 2021 | Mr. Dilip Chandra and Dr. S.S. Rathore | The competition was held to focus on the importance of project and practical | 65 | IEEE-CRCE |

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| | | | | implementations of innovative ideas in engineering. | | |
| 24 | Webinar on Successful Start-up Founders(Intra College) | 10th April 2021 | Mr. Nirmal Topiwala | Mr Nirmal Topiwala is Chief Business Officer at AJACKUS.His purpose is Enabling businesses to build agile and accountable technology teams that can deliver results in a secure and scalable way. At Ajackus, He introduced widely accepted constitution of diverse technologies that can deliver solutions to any business problem. This event was helpful to the participants, budding entrepreneurs as we know Entrepreneurs who have prior work experience bring much more value to the world of entrepreneurship | 51 | IEEE-CRCE |
| 25 | Android Developing Webinar(Intra College) | 12th February 2021 | Sir Ninand Khanvilkar and his team | This workshop enabled participants to understand the Android Development process. They introduced the course that they provide for android coding, shared benefits of the course, timeline, stages and more. | 37 | IEEE and IEEE-WIE CRCE |
| 26 | Webinar on Technical Paper Writing(Intra College) | 23rd February 2021 | Dr. Sapna Prabhu | This workshop was a success as participants learned about Technical Paper Writing with hands on experience. She encouraged students to write technical papers and publish them. This workshop will be helpful to the | 55 | IEEE and IEEE-WIE CRCE |

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| | | | | participant, as an emerging frontier to deal with problems and areas of technical paper writing and research | | |
| 27 | Women's Day Celebration (Intra College) | 12th March 2021 | Chairperson of "WEE-Women Entrepreneurs Enclave" and Owner of shree OM Communication and Solutions | Many students' boys as well as girls from the college actively participated for the event and showed their enthusiasm. Father gave a wonderful speech on women empowerment. Our Principal ma'am gave a speech on women leading the world. There were live performances as well as recorded performances | 100 | IEEE-WIE CRCE |
| 28 | Crescendo-Technical Paper Presentation Competition (Intra College) | 19th March 2021 | Prof. Monica Khanore | It is an Annual technical paper presentation competition organised by IEEE-WIE CRCE to encourage participants to express their project in terms of Writing and enhancing their technical skills | 42 | IEEE and IEEE-WIE CRCE |
| 29 | Crescendo-Project Competition(Inter College) | 21st March 2021 | Mr. Dilip Chandra and Dr. S.S. Rathore | The competition was held to focus on the importance of project and practical implementations of innovative ideas in engineering. | 65 | IEEE and IEEE-WIE CRCE |
| 30 | Webinar on Successful Start-up Founders (Intra College) | 10th April 2021 | Mr. Nirmal Topiwala | Mr Nirmal Topiwala is Chief Business Officer at AJACKUS.His purpose is Enabling businesses to build agile and accountable technology teams that can deliver results in a secure and scalable way. At Ajackus, He introduced widely | 51 | IEEE and IEEE-WIE CRCE |

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| | | | | accepted constitution of diverse technologies that can deliver solutions to any business problem. This event was helpful to the participants, budding entrepreneurs as we know Entrepreneurs who have prior work experience bring much more value to the world of entrepreneurship | | |
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Year 2021-22

| Sr. No | Name of the Event | Date | Name of the speaker and Organization (if any) | Description/Purpose | Nos of participants | Organized by |
|---------------|---|---------------------------|--|--|----------------------------|---|
| 1 | My Story – Motivational Session By Successful Innovators (Intra College) | 25/09/2021 | Ms. Neelam Bhayre | The objective of the event was to enlighten the young minds about entrepreneurship and start-ups. | 48 | CSI CRCE in collaboration with IIC CRCE |
| 2 | Cyber Security: Career and Business Opportunities (Intra College) | 03/10/2021 | Mr. Shuvamoy Roy | The objective of the event was to help students understand the job, start-ups and entrepreneurship opportunities in 'Cyber Security' Domain. | 62 | CSI CRCE in collaboration with IIC CRCE |
| 3 | Workshop On Developing A CoronaVirus Tracker Software (Inter College) | 23/10/2021 | Mr. Swastik Sharma | The objective of the session was to introduce and explain young minds the various aspects of how to start developing a software that hits various APIs and displays the number of coronavirus cases in the response. | 49 | CSI CRCE |
| 4 | Unscript Rookie's Hackathon 2k20 (National Level) | 22/01/2022 and 23/01/2022 | - | The primary goal of this event was to boost the innovation culture and further establish the idea-sharing, effective collaboration and creativeness driven | 250 | CSI CRCE in collaboration with ACM CRCE |

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| | | | | by enthusiasm towards a shared goal. The hackathon allowed the participants to connect with Industry personnel's, faculty mentors, and most importantly, with each other. | | |
| 5 | Workshop on Prototype/ Process Design and Development (Intra College) | 09/02/2022 | Mr. Amit Sanjay Lokhande | The objective of the event was to help the students to understand what exactly process design and development (Prototyping) is and to enlighten the young minds about entrepreneurship and startups by developing their own ideas and achieving success in it. | 56 | CSI CRCE in collaboration with IIC CRCE |
| 6 | Mystery Query Event for Crescendo Technical Fest (Inter College) | 17/03/2022 | - | The idea for the event was based on MySQL Murder Mystery. | 40 | CSI CRCE in collaboration with The Students' Council |
| 7 | Alcoholic 1.0 (Intra College) | 19th September 2021 | - | Online Coding competition held on Hackrank for the students of Third and Second Year. The problems used concept of Data Structures and Algorithms. | 104 | Codelabs CRCE |
| 8 | Binary Talk Episode: 1 Competitive Programming (Efficient Solution) with Amurto Basu (Intra College) | 26th September 2021 | Mr. Amruto Basu | This event was hosted for the second and third year students to encourage them to start competitive coding. Such events motivate students to think unorthodoxically and come up with new techniques to find solutions to existing problems. | 60 | Codelabs CRCE |
| 9 | GRE/GMAT | 19th October | Preyash Shah, | A webinar conducted | 114 | Codelabs |

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| | webinar (Inter College) | 2021 | LilacBuds | based on GRE/GMAT examinations, procedure to follow and other information related to post graduation. | | CRCE in collaboration with Lilac Buds |
| 10 | Webinar on "Design Thinking, Critical Thinking and Innovation Design" (Intra College) | 22nd October 2021 | Mr. Kashyap Sheth | The objective of the event was to encourage and motivate students to think unorthodoxically and come up with new techniques to find solutions to existing problems innovatively. Also to enlighten the young minds about entrepreneurship and startups by developing their own ideas and achieving success in it. | 60 | Codelabs CRCE in collaboration with IIC CRCE |
| 11 | Unscript 2k22 (National Level) | 22nd - 23rd January 2022 | Ms. Ipsita Bhattacharya, J.P. Morgan Chase (Chief Guest) | National Level Annual Hackathon Unscript 2k22. The hackathon had teams competing by developing products in their selected domains of Web/App Development, ML/AI, Security/Blockchain and an innovation domain. The event was conducted online. | 240 | Codelabs CRCE in collaboration with Mozilla Campus Club CRCE |
| 12 | Webinar on "How to plan for Start- up and Legal & Ethical Steps (Intra College) | 7th February 2022 | Prof. Swati RInge | The objective of the event was to provide students an insight of Legal and Ethical Steps to be followed while running a start- up. Also to enlighten the young minds about entrepreneurship and startups by developing their own ideas and achieving success in it. | 55 | Codelabs CRCE in collaboration with IIC CRCE |

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| 13 | Code Hunt event for Crescendo (Inter College) | 17th March 2022 | - | 2 round competition, the first round consisted of an encoded text which the participants were supposed to decode which will result in an algorithm. In the second round participants were given a problem statement for which a program was to be written, the computer screen for this round was turned off. The first round was elimination round and participants were allowed to use any programming language of their choice. | 43 | Codelabs CRCE in collaboration with The Student Council |
| 14 | Linux Security and Hacking Workshop (Intra College) | 16/10/2021 to 17/10/2021 | Prof. Sunil Chaudhari, Fr.CRCE, Mr. Govind Gaundalkar, Upmanyu Jha, Prathamesh Adake, Vanessa D'mello, Ronald Patrick, Happy Cherian | The main aim of the event was to introduce the participants to Linux Security and its various domains thus highlight its highly growing significance | 70 | Mozilla Campus Club CRCE |
| 15 | Design Validation Using Double Diamond Approach (Intra College) | 21/10/2021 | Mr. Umesh Rathod | The main purpose of the session was to introduce the participants to the various design validation models, the process and the phases of the double diamond approach and its significance in the industry. The event marked its end with a question and answer session. | 43 | Mozilla Campus Club CRCE in collaboration with IIC CRCE |
| 16 | Game Development using Java and Unreal Engine (Intra College) | 04/12/2021 | Charmi Tank, Santo Sunny, Sahil Bane, Jinish Varaiya, Hitesh Sharma, | The objective of the event was to help the students to understand what exactly is game | 75 | Mozilla Campus Club CRCE |

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| | | | Naman Chouhan | development. | | |
| 17 | Unscript 2k22 (National Level) | 22/01/2022 to 23/01/2022 | - | National Level Annual Hackathon Unscript 2k22. The hackathon had teams competing by developing products in their selected domains of Web/App Development, ML/AI, Security/Blockchain and an innovation domain. The event was conducted online. | 240 | Mozilla Campus Club CRCE in collaboration with Codelabs CRCE |
| 18 | Prototype Validation – Converting a Prototype into a Startup (Intra College) | 26/02/2022 | Dr. Shilpa Kankonkar | The main agenda of the session was to introduce the participants to the importance identifying the problem and passion, validation of problem and prototype and validating the minimum variable product with customer which can help one to convert a prototype into a start-up. | 37 | Mozilla Campus Club CRCE in collaboration with IIC CRCE |
| 19 | Women's Day Celebration (Intra College) | 08/03/2022 | Ms. Harshala Chavan, Mrs. Parita Amin, | Two women speakers were called for a motivational speech | 120 | IEEE - CRCE & IEEE-WIE CRCE |
| 20 | Self defence workshop (Intra College) | 08/03/2022 | Mr. Akash Kandukuri | A martial arts team for martial art workshop | 120 | IEEE and IEEE-CRCE |
| 21 | CRESENDO - Innolette 2022 (Intra College) | 05/03/2022 | Prof. Saurabh Kulkarni, Prof. Dipali Bhise, Prof. Deepika Singh | Group of students will be assigned some random object and they have to present an innovative idea for the assigned object. | 15 teams | IEEE - CRCE |
| 22 | Industrial Trends and Technology (Intra College) | 05/02/2022 | Dr. Shailendra Pathak | To give basic overview of real time and experience of current industry and their trends and technology. | 45 | IEEE - CRCE & IEEE-WIE CRCE |

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| 23 | Event on Lead Entrepreneur Acceleration Program(Intra College) | 18 th September 2021 | Prof. NeeleshKumar Pandit (speaker) | The objective of the event was to give basic overview of LEAP workshop organized by Prof. NeeleshKumar Pandit. Our speaker was Prof. NeeleshKumar Pandit who were an alumini professor of Fr. Conceao Rodrigues College of Engineering | 50 | IEEE - CRCE |
| 24 | Design Thinking for Web Based Projects(Intra College) | 02/10/2021 | Prof. Kavita Devanand Bathe | Introduce Student to website building and design thinking for web based projects | 25 | IEEE-WIE CRCE |
| 25 | Women Healthcare Awareness (Intra College) | 06/02/2022 | Dr. Pallavi Raut | Aware female students and teachers about PCOS, PCOD and to solve doubts of female students | 40 | IEEE-WIE CRCE |
| 26 | Women's Day Celebration(Intra College) | 08/03/2022 | Ms. Harshala Chavan, Mrs. Parita Amin, | Two women speakers were called for a motivational speech | 120 | IEEE and IEEE-WIE CRCE |
| 27 | Self defence workshop (Intra College) | 08/03/2022 | Mr. Akash Kandukuri | A martial arts team for martial art workshop | 120 | IEEE-WIE CRCE |
| 28 | CRESENDO - Innolette 2022 (Intra College) | 05/03/2022 | Prof. Saurabh Kulkarni, Prof. Dipali Bhise, Prof. Deepika Singh | Group of students will be assigned some random object and they have to present an innovative idea for the assigned object. | 15 teams | IEEE and IEEE-WIE CRCE |
| 29 | Industrial Trends and Technology(Intra College) | 05/02/2022 | Dr. Shailendra Pathak | To give basic overview of real time and experience of current industry and their trends and technology. | 45 | IEEE and IEEE-WIE CRCE |

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

Institute Marks : 5.00

C.R.C.E. students are encouraged to publish a variety of technical magazines and newsletters under these student chapters that include articles by students on the most recent technological developments. Also, department publishes newsletter annually. This provides an excellent opportunity for them to demonstrate their communication and writing abilities.

Aside from that, the college publishes an annual magazine, FRAGMAG, which is released during the colleges annual fest, Euphoria. Students can express their own ideas in a professional manner and in a variety of languages. The magazine includes articles, poems, stories, and sketches. They are primarily written by students, but faculty and alumni are also invited to contribute.

The publication of such magazines and newsletters fosters a spirit of cooperation while also encouraging healthy competition.

| Title of the Magazine/News letter | Publication Year | Publisher | Editorial Team |
|-----------------------------------|------------------|----------------------------------|---|
| The Byte Stream | May 2020 | Computer Department | Editorial Team: Prof. Swati Ringe and Jason D'Costa |
| Fragmag (CATALYSE) | 2020 | CRCE student's Council | Editorial Team: Dr. Ketaki Joshi (Convener and Marathi Editor), Prof. Deepika Singh (Hindi Editor), Dr. Joseph Rodrigues (English Editor) Student Editorial Team: Ruben Lobo (Editorial Secretary), Richa Tripathi, Varad Patil, Maria Anthony, Yohaam Mhatre, Gautam Manuel, Jeswin Thomas, Sakshi Ghadigaonkar |
| The Byte Stream | May 2021 | Computer Department | Editorial Team: Prof. Swati Ringe and Pooja Panchal |
| Fragmag (IKIGAI) | 2021 | CRCE student's Council | Editorial Team: Dr. Ketaki Joshi (Convener and Marathi Editor), Prof. Deepika Singh (Hindi Editor), Dr. Joseph Rodrigues (English Editor) Student Editorial Team: Saloni Khanna (Editorial Secretary), Gatami Thakur, Yammen Ajani, Joshua Godinho |
| CRCE Roots | 2021 | Alumni Committee | Editorial Team: Prachi Patil, Mareena Mathew |
| ICAC3'21 Souvenir | 2021 | Conference Publication Committee | Publication Committee: Dr. Ketaki Joshi (Coordinator) Prof. Vaibhav Godbole (Co-(Coordinator)) Dr. Deepak Bauskar, Prof. Sunil Choudhari, Prof. Unik Lokhande, Mr. Nilesh Patil, Mr. Vipin Palkar |
| The Byte Stream | May 2022 | Computer Department | Editorial Team: Prof. Swati Ringe |
| Fragmag (Adwitiyah) | 2022 | CRCE student's Council | Editorial Team: Dr. Ketaki Joshi (Convener) Ms. Jyoti Kargutkar (Marathi Editor), Prof. |

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| | | | Deepika Singh (Hindi Editor), Dr. Joseph Rodrigues and Prof. Prahelika Pai (English Editor) Student Editorial Team: Alisha Rao (Editorial Secretary), Amaeza Rodrigues, Mohini Gautam, and Yashas Joglekar, Nixon Lobo, Sachi Varma, Ivan D'Silva & Tanuj Kumbhar |
| CRCE Roots | 2022 | Alumni Committee | Editorial Team: Prachi Patil, Mareena Mathew |
| Technoscoop- an official CSI-CRCE magazine | November 2022 | CSI | Editorial Team: Ayush Batra |
| Mozi-TechNews | November 2022 | Mozilla | Editorial Team: Pratham Kambli, Shoydon and Lisa |
| TechChronicles | November 2022 | Codelab | Editorial Team: Lloyd Louis, Joshua Lewis, Soham Ladgaonkar, Aaron Furtado, Neil Pandit. Basilica Anthony |
| Exypnos | March 2023 | Google Developers Club | Editorial Team: Mahek Intwala, Aakarsh Sharma, Ryan Valliaparambil |
| Game Gospel | March 2023 | Gaming Club | Editorial Team: Malaika Monterio, Sanvi Pokle |
| Trinetra | March 2023 | HAWKi(Cyber Security Club) | Editorial Team: Prof. Unik Lokhande, Upmanyu Jha and Prathamesh Adak |
| TECHNOBUZZ | March 2023 | IEEE | Editorial Team: Prof Swapnali Makdey, Santo sunny, Rachana |
| WiTron | March 2023 | IEEE-WIE | Editorial Team: Grace Pereira, Mrinmayi Prabhughate, Erica Mathias, Peral D'souza, Sania Almeida |

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

Institute Marks : 8.00

| Sr. No | Paper contests, Design contests, Any other awards, achievements |
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| Year 2019-20 | |
| 1 | Final year Students Sumedh Deshpande, Karan Rao, Yashom Dighe, Christo Thomas, Yash Turkar (Maverick UAS team) received the Just joe sportsmanship award (\$500.00) in 17th annual Student Unmanned Air Systems Competition held at Webster field, St Inigoes, Maryland USA from 12 to 15 June 2019. (International Level) |
| 2 | Third Year Students Vedant Sahai from Team TEACH-AI in “Singapore India Hackathon 2019” from 28 th September to 30 th September 2019, Won prize of (\$2000) (International Level) |
| 3 | Final Year Students Nehal Kalnad, Ashley Lobo and Kartick Hariharan are selected for Final round of Prestigious all India level coding Competition by ICPC foundation. (National Level) |
| 4 | Third year Students Pranay Lobo, Pranay Bagrecha and Sahil Gupta secured First position at TSEC CodeStorm Hackathon on “Blockchain & Social Courses” on 20 and 21 September 2019, for project Firestation. (National Level) |
| 5 | Third Students Darlene Nazareth, Elita Menezes, Kevlyn Kadamala and Sherwyn D'souza won First prize at VCET HACKATHON 2019 on 27 th and 28 th September at Vidyavardhini's College of Engineering and Technology, Mumbai. (Inter College) |

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| 6 | Third Year Students Elvis Dsouza, Kevlyn Kadamala, Pratik Chowdhury and Vedant Sahai secured 4th place in 72 hour Symbiosis AI Hackathon held on 29 September 2019. (National Level) |
| 7 | Third Student Alok Yadav of team error (404) was Finalist at VESAithon AI based 24 hour hackathon at VESIT, Mumbai on 28-29 June, 2019. (Inter College) |
| 8 | Pranay Bagrecha and Kevin Ruffin from Third Year secured 2nd position in Sardar Patel College Of Engineering Annual Debate held on 4 th -5 th October, 2019 (National Level) |
| 9 | Mehek Male, Mayank Srivastava and Darlene Nazareth Secured First Place in Synergy hackathon held on 31st August, 2019 at F.R.C.R.C.E. Bandra (National Level) |
| 10 | Third Year Student Mayank Srivastava successfully presented a paper titled Startup Initiatives for women with policy at Goa Technology Association on 24 th August 2019 at Pilar Technological College, GOA. (National Level) |
| 11 | Third Year Student Shubham Bhate, Abhishek Ahirrao, Vedant Sahai Successfully completed Workshop on Machine Learning and AI using Python. (National Level) |
| 12 | Third year Students Darlene Nazareth, Elita Menezes, Sherwyn D'souza and Kevlyn Kadamala won first prize in Cyber Security Hackathon on 31 st Jan and 1 st Feb 2020 at SPIT, Mumbai (National Level) |
| 13 | Third year Students Pranay Lobo, Pranay Bagrecha and Sahil Gupta won the Most Innovative Idea award at Hackathon Jan 2020 organized by St. John Engineering College, Palghar (Inter College) |
| 14 | Third year Students Pranay Lobo, Pranay Bagrecha and Sahil Gupta won First prize at DMCE Hackathon Jan 2020, Navi Mumbai. (National Level) |
| 15 | Third year Students Darlene Nazareth, Elita Menezes, Kevlyn Kadamala and Sherwyn D'souza won Second prize at DMCE Hackathon Jan 2020, Navi Mumbai. (National Level) |
| 16 | Third year students Jason D'costa, Elvis Dsouza, Princeton Baretto won Best Documentation Award at ByteCamp '20 held at SIES Graduate School of Technology. ((Inter College) |
| 17 | Third year Students Princeton Baretto, Elvis Dsouza, Pratik Chowdhury, Amurto Basu won Second Prize at Codeshastra 6.0 Hackathon March 8, DJ Sanghvi, Mumbai. (Inter College) |
| 18 | Third year Students Anup Joseph, Abhishek Nagvekar, Samuel Davis, Anuj Purandare, Rachel Jose and Hardik Trivedi of team Doryforos were selected for Smart India Hackathon – 2020 (National Level) |
| 19 | Third year students Mayank Srivastava, Pratik Chowdhury and Devin Barboza presented an idea to MHRD during an Ideathon to fight Covid - 19 held on 27th and 28th March 2020. (National Level) |
| 20 | Third year students Mehek Male, Albin Tharayil, Sanfer Noronha and Mayank Srivastava won Second Prize at TSEC Hackathon 2020 held on, 5th and 6th February, 2020 (Inter College) |
| 21 | Third year Students Amurto Basu, Shubham Bhate, Sherwin Pillai, Mahesh Desai, Carol Sebastian and Cassia Vaz of team Data_Pirates1 were selected for Smart India Hackathon – 2020. (National Level) |
| 22 | Third year students Shaikh Khalid, Ariane Correa, Rahim Chunara, Alok Yadav, Mario Dsa & Shubham Pednekar of team Surge1 were shortlisted for Cisco Devnet Problem Statement in Smart India Hackathon – 2020. (National Level) |
| 23 | Shubham Pednekar & Hardik Trivedi won SPIT Capture-The-Flag 2020 Security Penetration Competition. (Inter College) |
| 24 | Third year student, Shubham Pednekar of Team Bindass was shortlisted among the top 20 teams of "India-Singapore Hackathon 2019." (International Level) |

| Year 2020-21 | |
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| 1. | Final year students – Simran D’souza, Riya Gupta and Dishank Oza secured 1 st place in Technical paper presentation competition, organized during Crescendo – A National level Technical Festival, CRCE, Mumbai , March 2021. (National Level) |
| 2. | Final year student – Mahek Male, secured 2nd place in Project Competition, , organized during Crescendo – A National level Technical Festival, CRCE, Mumbai , March 2021. |
| 3. | Final year student – Mahek Male, Winner of Best Overall Hack at HackHealth 2021 (Stony Brook University, New York) |
| 4. | Final year student – Simran D’Souza, Riya Gupta and Dishank Oza secured third place in project competition – Software on “Hand Tracking and Gesture Recognizing communication system for disabled people” organized during Crescendo – A National level Technical Festival, CRCE, Mumbai , March 2021. (National Level) |
| 5. | Final year student – Riya Gupta secured 2 nd place in Mechathon, organized during Crescendo – A National level Technical Festival, CRCE, Mumbai , March 2021. (National Level) |
| 6. | Final year student – Kevlyn Kadamala – Team CROSS Coders declared the winners of Smart India Hackathon2020 – Software Edition. (National Level) |
| 7. | Final year student – Kevlyn Kadamala , won the Best Quantum Computing Hack award at MacHacks one of the North America’s only Artificial Intelligence Focused hackathons, February 5-7 2021, McMaster University, Ontario |
| 8. | Final year student – Elita Menezes, Winner of Best Overall Hack at HackHealth 2021 (Stony Brook University, New York) |
| 9. | Final year student – Shaileshkumar Mishra, 1st Runner up in Code Hunter, Shivaji College, Delhi University. (National Level) |
| 10 | Final year student – Shaileshkumar Mishra, 2nd Runner up Codex (SIES College). (Inter College) |
| 11 | Final year student – Sherwyn D’Souza and Darlene Nazareth ranked in top 10 in Facebook's Wit.ai Hackathon. (National Level) |
| 12 | Final year student – Shubham Pednekar, India Singapore Hackathon 2020 Finalist (Domain - Medical Waste Management) (International Level) |
| 13 | Final year student – Shubham Pedneksr, Mario D’Souza, Khalid Shaikh, Rahim Churana, Alok Yadav, Ariaen Correa SIH 2020 Winner by Cisco Devnet (PS AM289) (National Level) |
| 14 | Final year student – Khalid Shaikh, secured 276 th Rank in TCS CodeViita 2020 (National Level) |
| 15 | Final year students – Abhishek Ahirao stood 2 nd in Mechathon, organized during Crescendo – A National level Technical Festival, CRCE, Mumbai , March 2021. (National Level) |
| 16 | Final year student – Sanfer Noronha secured second prize in hackathon, organized during Crescendo – A National level Technical Festival, CRCE, Mumbai , March 2021. (National Level) |
| 17 | Final year student – Dishank Oza secured 1 st prize in Circuit Wi, organized during Crescendo – A National level Technical Festival, CRCE, Mumbai , March 2021.z competition (National Level) |
| 18 | Final year student – Amurto Basu, Shubham Bhate, Mahesh Desai, Cassia Vaz, Sherwin Pillai Carol Sebastian, Elvis D'Souza, Finalist of Smart India Hackathon 2020. (National Level) |
| 19 | Final year student – Anuj Purandare, Anuj Joseph, Abhishek Magvekar, Rachel Jose, Hardik Trivedi, Samuel Davis, Finalist of Smart India Hackathon 2020. (National Level) |

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| 20 | Final Year student Kevin Ruffin and Pranay Bagrecha, Runner up, CRMD-2020, National Level Debate competition held at CRCE, Bandra, September 2020. (National Level) |
| 21 | Third Year students - Bilonikar Shreya, Mendonca Carol, Phadakale Divita won 3 rd Prize in Ingress Hackathon national level (Team iCode) on February 13-14, 2021 by Mar Baselios college of Engineering and Technology (autonomous), Thiruvananthapuram, Kerala. (National Level) |
| 22 | Third Year students, Purohit Suryansh, Reddy Ganesh, Shetty Sanath Krishna and Tomar Ayush Devendra were declared the winners of the Beta 3.0 national level hackathon winner (Code Asylum) held by NIT Bhopal. (National Level) |
| 23 | Third Year Computer Engineering student, Sanfer Samson Noronha won 2 nd Prize in Hackathon organized during Crescendo – A National level Technical Festival, CRCE, Mumbai, March 2021 (National Level) |
| 24 | Third Year Computer Engineering student, Kevlyn Kadamala won the prize for Best Quantum Hack and Best use of Google Cloud in Hackathon MLH- MackHacks 2021. (International Event) |
| 25 | Third year student, Tripathi Sudheer Vijaykumar, Global Rank 324, August Long Challenge Div 1, Codechef, Aug 2020. (International Event) |
| 26 | Third year student, Tripathi Sudheer Vijaykumar, Global Rank 866, Google Kickstart Round H, 2020. (International Event) |
| 27 | Third year student, Tripathi Sudheer Vijaykumar, Rank 3, Codebattle 2.0, inter college coding competition by codemistic, Sept 2020. |
| 28 | Third year student, Tripathi Sudheer Vijaykumar Winner, Team Tricode, Unscript Mixed Hackathon, Nov 2020 organized by CRCE, Bandra, Mumbai (Inter college) |
| 29 | Third year student, Tripathi Sudheer Vijaykumar, Winner, Team Tricode, Hackathon organized during Crescendo – A National level Technical Festival, CRCE, Mumbai, March 2021. (National Level) |
| 30 | Third year student, Samyak Gaur, Runners up, Team catastrophe, Unscript Mixed Hackathon, Nov 2020 organized by CRCE, Bandra, Mumbai. (National Level) |
| 31 | Third year student, Ajani Yameen Tanveer, Runners up, Unscript Mixed Hackathon, Nov 2020 organized by CRCE, Bandra, Mumbai. (National Level) |
| 32 | Third year student, Dabre Chelsea Moses, Top 10 rank at Hack36 National level Hackathon April 2021 (National Level) |
| 33 | Third year student, Dias Mario Jonas, 3rd Place winner Algoholic 2.0 May 2021 organised by Codelabs CRCE, Mumbai (Intra college) |
| 34 | Third year student, Mascarenhas Nicola Mary, 1st place, medical device for improving neonatal care, April 23-25, 2021 organised by Mh2 Maharashtra Health Hackathon team (National Level) |
| 35 | Third year student, Purohit Suryansh Bhupesh Reddy Ganesh Bheemesh Tomar Ayush Devendra, Shetty Sanath Krishna, winner Version Beta 3.0 national level hackathon winner (Code Asylum) 2021 held by NIT Bhopal. (National Level) |
| 36 | Third year student, Shetty Sanath Krishna, has Built a storage drive, “ Save as blockchain ” for Pistis.io pitched in gsv summit, ORU university and several more universities which was highly appreciated. (National Level) |
| 37 | Third year student, Shetty Sanath Krishna, has developed “IMS Global badges” for baking of the digital badge. (National Level) |
| 38 | Second year student – D’Souza Dilton secured THIRD PLACE IN 26th INTERNATIONAL E-KATA OPEN WFSO KARATE CHAMPIONSHIP (International Event) |
| 39 | Second year student - Chettiar Rissa and Sequeira Rachel Lawrence secured First Place in National Level Robotics Competition (BrainWreck organized by MIT AOE), 16-17 March 2021. (National Level) |

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| 40 | Second year student – Upmanyu Jha, won top 10 Best Performers award in Ethical hacking training By Internshala. (National Level) |
| 41 | Second Year student, Mohare Prachi, Jayesh Badwal, Manan Shah (Team- DevGeeks), Runner up Unscript Rookies Nov 2020 organized by CRCE, Bandra, Mumbai organized by Fr. CRCE, Mumbai, 21 st & 22 nd November. (National Level) |
| 42 | Second year students-Raj Mourya, secured first place in AlgoHolic1.0 place, Best SE team (Code Debuggers) in Hackathon organized during Crescendo – A National level Technical Festival, CRCE, Mumbai , March 2021. (National Level) |
| 43 | Second year student - Thakur Aayushi and Sreenivasan Murugan won Best Circuit Design in National Level Robotics Competition(BrainWreck organized by MIT AOE), 16-17 March 2021. (National Level) |
| 44 | Second year student - Almeida Alan Anthony, won First Prize at Open Coding Competition, St. Francis Institute of Techonlogy, 27 February, 2021. (Inter college) |
| 45 | Second year student - Almeida Alan Anthony, won First Prize in Scavenger Hunt competition t Virtual Colloquium 2021 on 'IT for Gaming' organized by St. Francis Institute of Technology, 27 February 2021, First Prize (Inter college) |
| Year 21-22 | |
| 1 | Final year student Dias Mario won Consolation Prize at AI for Healthcare Hackathon, an initiative of SINE-IITB, supported by MSH, MEITY, and organized by DERBI Foundation virtually in the month of Aug 2021 for the Theme: Deep Learning Multiple Diseases Prediction Model based on Retina Image. Part of Team: Medical Explorers. (National Level) |
| 2 | Third-year students Prachi Mohare, Arnav Chawate, Jayesh Badwal, and Brendan Lucas - Winner of e-Yantra Innovation Challenge 2022 under the Best Hardware category for the project “coconut harvester” (National Level) |
| 3 | Third-year students Chettiar Rissa, Sequeira Rachel, Sanghvi Mann, Kolhe Bhuvanesh, and Bhandari Praveen Raju – team Infura was declared the first runner-up of TIAA Hackathon, TIAA, April'22. (Intra college) |
| 4 | Rohan Tapulli, Bhuvanesh kolhe, Jainesh Chawan, Abde-abitalib , Rachel Dhalwani, Aaron Dsouza- team Mavericks, UAS second runners up, TIAA Hackathon, TIAA, April'22. (Intra college) |
| 5 | Third-year student Jain Lavish Kumar, Problem Solving Certificate by HackerRank. (National Level) |
| 6 | Third-year student Almeida Alan Anthony secured 1 st Position at SynTechXist Quiz, National College Bandra, 04/03/22. (Inter college) |
| 7 | Third-year student Almeida Alan Anthony secured second prize at Debug Me, National College Bandra, 04/03/22. (Inter college) |
| 8 | Third-year student Loomba Ishaan Sanjeev, Crescendo Hackathon, FRCRCE, March'22 Winner. (National Level) |
| 9 | Third-year student Dsouza Colin, Winner of Crescendo PS 2 competition during Crescendo organized by CRCE, March 2022. . (National Level) |
| 10 | Third-year student Mahamuni Aditya Rajendra successfully completed Level 1 and Level 2 of Learn to Earn Cloud Security Challenge by Google Cloud and Qwiklabs. (National Level) |
| 11 | Third-year student Mishra Kaustubh Krishnanand participated in NASA Space App International challenge 2021, held on 2 nd and 3 rd October 2021. (National Level) |
| 12 | Third-year student More Akhilesh Sambhaji won the First prize in Crescendo Hackathon 2022 organized by CRCE March 2022. (National Level) |
| 13 | Second-year student Fernandes Eric, cleared 2 rounds of Flipkart grid 3.0 competition, 2 rounds of DD Robocon competition, Second place in crescendo hackathon, second place in unscript rookies hackathon (National Level) |

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| 14 | Second-year student Makwana Harshang , secured first place in coding competition Alcoholic 1.0 organized by codelabs crce (Intra college) |
| 15 | Second-year student Pakhle Bhushan secured 1st Runner Up in Crescendo Hackathon (PS: 3) (National Level) |
| 16 | Second-year student Patankar Vedant secured 1st Runner Up in Crescendo Hackathon (PS: 3) (National Level) |
| 17 | Second-year student Patil Manasvi Runner up Crescendo Mechathon, Fr CRCE Bandra (National Level) |
| 18 | Second-year student Patra Srijita secured 2nd position in Crescendo Hackathon (PS:2) (National Level) |
| 19 | Second-year student Pimenta Shaun, Winners of Crescendo Hackathon and Secured 5th Place in the SAE International West Competitions as a part of Team Vaayushastra (International Level) |
| 20 | Second-year student Sharma Hitesh, 2 nd runner up in Mumbai Hackathon, Finalist In Unscript Hackathon (National Level) |
| 21 | Second-year student Tank Charmi, secured first place in Hackathon 1: Crescendo: 5 th position in SAE Aero design Competition (Team Vaayushastra) (International Level) |
| 22 | Second-year student Valiaparambil Ryan, 1st Runner Up Hackathon 1:- UNSCRIPT ROOKIES [AIML], 1st Runner Up Hackathon 2:- CRESCENDO (National Level) |
| 23 | Second-year student Vyas Aditya winner of Hackathon 1:- Crescendo Elexathon (National Level) |
| 24 | Second-year student GRACIAS DEON, winner Hackathon 1:- Crescendo Elexathon, winner Hackathon 2:- Crescendo Mechathon (National Level) |
| 25 | Second-year student Pawar Atharva winner Hackathon 1:- Crescendo Elexathon, winner Hackathon 2:- Crescendo Mechathon (National Level) |
| 26 | Second-year student Prajapati Vijay, first runner up hackathon 1 :- Techstrom, Ruia college Dadar , winners hackathon 2 :- Unscript, Fr. CRCE Bandra , winners hackathon 3 :- Hackverse, nit Karnataka (National Level) |
| 27 | Second-year student DSilva Chris secured 4th place Unscript Rookies Hackathon (National Level) |
| 28 | Second-year student Kallivalappil Neave secured 2nd Place Unscript Rookies 2022 2nd place Crescendo Hackathon (National Level) |
| 29 | Second-year student Mendonca Glenn secured 2nd place Alcoholic 1.0 CodeLabs (Intra college) |
| 30 | Second-year student Misquitta Nigel secured 4 th place Unscript Rookies Hackathon (National Level) |
| 31 | Second-year student Ojha Shubham secured 3 rd place Alcoholic, Crescendo Hackathon 3rd place, DamnCon CTF, Shashtra CTF, Square CTF, Knight CTF (National Level) |
| 32 | Second-year student Oza Riddhi secured 3rd place Crescendo Hackathon (National Level) |

List of Publications-2019-20

| Sr. No | Publication in conference and Journal |
|--------|--|
| 1 | Mahendra Mehra, Dr. D. R. Kalbande, Shubham Mankar, Sohaa Mutsaddi," Data mining in Educational System for effective Student Mentoring", ICAC3'19 IEEE Conference, 20-21st December , Mumbai |
| 2 | Simran Gadkari, Jenell, Ashwini Pansare," Analysis of pre trained Convolutional Neural Networks to Build a Flower Classification System", IJRASET, Volume 7, Issue XI, Nov 2019, ISSN:2321-9653 |
| 3 | Pradnya Borkar, Marilyn Pulinthitha, Mrs. Ashwini Pansare, “Match Pose - A system for Comparing Poses”, International Journal of Engineering Research and Technology, Volume 8, Issue 10, October -2019. ISSN 2278-0181. |
| 4 | Ashley Lobo, Kartick Hariharan , Suyash Sreekumar , Monali Shetty,” Time Optimal long distance trip planning for electric vehicles”, 2019 5th International Conference on Computing Communication Control and Automation ICCUBEA - IEEE conference,2019. ISSN: 978-1-7281-4042-1/19. http://doi.org/10.1729/Journal.23359 |
| 5 | Kamoji S., Koshti D., Peter R. (2020) Analysis of Growth and Planning of Urbanization and Correlated Changes in Natural Resources. In: Raj J., Bashar A., Ramson S. (eds) Innovative Data Communication Technologies and Application. ICIDCA 2019. Lecture Notes on Data Engineering and Communications Technologies, vol 46. Publisher Springer, Cham. Print ISBN: 978-3-030-38039-7, Online ISBN: 978-3-030-38040-3 DOI: https://doi.org/10.1007/978-3-030-38040-3_23 |
| 6 | Dipali Koshti , Nehal Kalnad , Sreekumar Suyash, Shreya Bhujbal, “ Video Anomaly Detection using Inflated 3D Convolution Network”, 5 th IEEE International Conference on Inventive Computation Technologies (ICICT-2020) organized by RVS Technical Campus , 26-28 February 2020 at Coimbatore. |
| 7 | Supriya Kamoji, Alphaeus Dmonte, Solomon Jose George, Clayton Sohan Pereira, “Vehicle Identification and Speed Measurement”, 5 th IEEE International Conference on Inventive Computation Technologies (ICICT-2020) organized by RVS Technical Campus, 26-28 February 2020 at Coimbatore. |
| 8 | Mahendra Mehra, Vedant Sahai, Pratik Chowdhury, Elvis D’souza, “Home Security System using IOT and AWS Cloud Services”, ICAC3'19 IEEE Conference, 20-21st December, Mumbai |
| 9 | Kalpana Deorukhkar, Gauri Jare, Aishwarya Sebin, Wensita Rodrogues,” Speech Assistance for the Deaf”, Journal of Emerging Technologies and Innovative Research, Volume 7, Issue 4, March 2020, DOI: http://doi.org/10.1729/Journal.23359 |
| 10 | Dr Brijmohan Daga, Juhi Checker, Sayali Deo, Anne Rajan,” Computer Science Career Recommendation System using Artificial Neural Network”, IJCTT, 20 March 2020. |
| 11 | Yashom Dhige, Yash Turkar, Cristo Aluckal, Yogesh Agarwadkar, Dr. Sunil Surve, “Dynamic path planning system for UAV remote sensing in urban environments”, National Symposium on Innovations in Geospatial Technology for sustainable Development with special emphasis on NER, ISG, ISRS, Shillong, Meghalaya, India, November 20-22, 2019, |

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|----|---|
| 12 | Harshula Tulapurkar, Varsha Turkar, B. Krishna Mohan, Yash Turkar,” Curvelet Based Watermarking of Multispectral Images and its effect on classification accuracy”, URSI Asia- Pacific Radio Science Conference (IEEE) (AP- RASC 2019), New Delhi, India, March 9-15, 2019. |
| 13 | Cristo Aluckul, Yash Turkar, Yashom Dhige, , Sumedh Deshpande, , B. K. Mohan, Yogesh Agarwadkar, Sunil Surve, Brijmohan Daga, “Dynamic real- time indoor environment mapping for Unmanned Autonomous Vehicle navigation”, IEEE International Conference on Advances in Computing, Communication & Control, Fr. Conceicao Rodrigues College of Engineering, Mumbai, India, December 20-21, 2019. |
| 14 | Anol Kurian, Rochelle Cordeiroo, Brinel D'souza, “Automated training for Job Interviews”, International journal of computer trends and technology (IJCTT), 20 March 2020. |
| 15 | Roshni Padate, Dhanajay Chobhe, Davina Pinto,” Fire detection system using convolutional neural network”, IJETT. |
| 16 | Prof. Monali Shetty, Christina A. Daniel, Manthan K. Bhatkar, Ofrin P. Lopes, "Virtual Mouse Using Object Tracking", IEEE 5th International Conference on Communication and Electronics Systems (ICCES), 2020 |
| 17 | Merly Thomas, Kenrick Fernandes, Jerome Nicholas, "Analysis of Semantic and Stylistic Image Generation", JETIR May 2020, Vol 7, Issue 5 |
| 18 | Merly Thomas, Nerissa Pereira, Simran Dabreo, Linnet Rodrigues, "Comparative Analysis of Fake News Detection using Machine Learning and Deep Learning Techniques.", JETIR April 2020, Vol 7, Issue 4 |

List of Publications-20-21

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| | <i>Paper contests, Design contests, Any other awards, achievements</i> |
| 1. | Vedant S., Jason D., Mayank S., Mahendra M., Dhananjay K. (2021) Leveraging Deep Learning and IoT for Monitoring COVID19 Safety Guidelines Within College Campus. In: Garg D., Wong K., Sarangapani J. Gupta S.K. (eds) Advanced Computing. IACC 2020. Communications in Computer and Information Science, vol 1367. Springer, Singapore. https://doi.org/10.1007/978-981-16-0401-0_3 . |
| 2. | Samarjeet Kaur, Vedant Sahai, Aditi Jaiswal, Sayonsom Chanda,” Knowledge Mining for Defining Systemic Engineering Practices, 4th International Conference on Electronics, Communication and Aerospace Technology (ICECA 2020), pp. 1346-1352, DOI: 10.1109/ICECA49313.2020.9297380. |
| 3. | Benita Rego, Nolita Rego, Mohit Kunder, “Social Media Analysis for Mental Health Evaluation” International Journal for Research in Applied Science & Engineering Technology (IJRASET), ISSN: 2321-9653, pp. 1453-1460, Volume 9 Issue IV Apr 2021. DOI: https://www.doi.org/10.22214/ijraset.2021.33962 |
| 4. | S. Kaur, V. Sahai, A. Jaiswal and S. Chanda, "Knowledge Mining for Defining Systemic Engineering Practices," 2020 4th International Conference on Electronics, Communication and Aerospace Technology (ICECA), 2020, pp. 1346-1352, DOI: 10.1109/ICECA49313.2020.9297380. |
| 5. | Dipali Koshti, Kevin Cheruthuruthy, Surya Pratap Shahi, Mayank Mishra," A Detection, Tracking and Alerting System for Covid-19 using Geo-Fencing and Machine Learning', IEE Sponsored 5th International Conference on Intelligent Computing and Control Systems (ICICCS-21), May 6-8- 2021, organized by Vaigai College of engineering, Madurai, India. |
| 6. | Swati Ringe, Sharwari Marathe, Rajesh Manjrekar, Raksha Shetty, "Teaching pre-schoolers using VQA: A Web app that answers natural language questions.", Zeichen Journal September 2020, Vol 6, Issue 9. |
| 7. | Swati Ringe, Vedant Sakhardande, Cajetan Rodrigues, Atharva Atre, "Drone Delivery- Application and Path Optimization", Alochana Chakra Journal , September 2020, Vol 9, |

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| | Issue 9 |
| 8. | Ashwini Pansare, Simran Gadkari, Jnnell Mathians , Merlin P, " categorization of diabetic retinopathy and identification of characteristics to assist effective diagnosis" in 3 rd IEEE international conference on " Emerging smart computing and informatics" on 5th-7 th March 2021 |
| 9. | Mahendra Mehra, Steve D’Costa, Ryan D’Mello, Joseph George and Dr. D.R. Kalbande, "Leveraging Deep Learning for Nail Disease Diagnostic", 4th Biennial International Conference on Nascent Technologies in Engineering, IEEE Conference(Scopus indexed) , Jan 2021 |
| 10. | Mehra Mahendra, Ajani Yameen, Mangalorkar Krish, Nadar Yohann and Kalbande Dhananjay, "College Project Preservation and Emulation using Containerization over Private Cloud", in Fifth International Conference on Information and Communication Technology for Competitive Strategies(ICTCS DEC 2020) Springer LNNS. ISBN Number - 2367-3370 Series |
| 11. | Monali Shetty, Sankalp Rane, ‘Selection of optimal cricket team based on the players performance’, IEEE XPLORE ISBN:978-1-7281-5371-1, International Conference on Communication and Electronics Systems 2020 -July 2020 |
| 12. | Supriya Kamoji, Dipali Koshti, Joshua Noronha, Smart Street lamps A solution to Urban Pollution 2nd International Conference on Inventive Research in Computing Applications (ICIRCA) 2020 organized by RVS college of Engineering and Technology , Coimbatore, India, on 15-17 , July 2020 |
| 13. | Carol Sebastian, Princeton Baretto, Sherwin Pillai, Supriya Kamoji,"Virtual assistance using question generation/ Answering ", IEEE Sponsored International Conference on Communication, Information and Computing Technology (ICCICT 2021), June 25-27-2021, Organised by SPIT Mumbai, India |
| 14. | Yameen Ajani, Krish Mangalorkar and Yohann Nadar “Homomorphic Encryption for Secure Conversations with AI Bots over Cloud to Prevent Social Engineering Attacks”, accepted in ICAITR 2021 by VIT Mumbai. |
| 15. | Bilonikar Shreya, Mendonca Carol, Phadakale Divita, " Blockchain based model of royalty payments of artists and remix-makers” in International Conference on Smart Data Intelligence (ICSMDI 2021), 29 th April 2021, Organized by Kongunadu College of Engineering and Technology, Trichy, Tamil |
| 16. | Sherwyn Dsouza, Darlene Nazareth, Cassia Vaz, Prof. Monali Shetty, "Blockchain and AI in Pharmaceutical Supply Chain", Elsevier SSRN, International Conference on Smart Data Intelligence ICSMDI 2021 |
| 17. | Gupta, Riya, Dishank Oza, and Sunil Chaudhari. "Real-Time Hand Tracking and Gesture Recognizing Communication System for Physically Disabled People." <i>Inventive Communication and Computational Technologies</i> . Springer, Singapore, 2022. 731-746. |
| 18. | Kalpna Deorukhkar, Kevlyn Kadamala, Elita Menezes, "FGTD: Face generation from Textual description", 5th International conference on Inventive Communication and Computational Technologies ICICCT 2021), June 2021, Scopus Source ID: 21100901469 |

List of Publications-2021-22

| Sr. No | Title of Publication, Conference and Journal |
|--------|---|
| 1 | Sujata Deshmukh, Bhushan Patil, Ketaki Joshi, Chinmay Gaonkar, Ms. Perna Pallan, Sumedh Bhatkar, “A Novel Method for IOT Based Smart Traffic System”, Industrial Engineering Journal, Vol. XV & Issue No. 06 June – 2022-UGC approved Journal |
| 2 | Khasgiwala, Y., Castellino, D.T., Deshmukh, Sujata," A Decentralized Federated Learning Paradigm for Semantic Segmentation of Geospatial Data", International conference on Intelligent Computing & Optimization. ICO, In: Vasant, P., Zelinka, I., Weber, GW. (eds), |

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| | 2021. Lecture Notes in Networks and Systems, vol 371. Springer, Cham, 01 January 2022, https://doi.org/10.1007/978-3-030-93247-3_20-Scopus_indexed |
| 3 | Sujata Deshmukh, P. Rede, S. Sharma and S. Iyer, "Voice-Enabled Vision For The Visually Disabled," 2021 International Conference on Advances in Computing, Communication, and Control (ICAC3), 2021, pp. 1-6, DOI: 10.1109/ICAC353642.2021.9697125- Scopus indexed |
| 4 | Sujata Deshmukh, Candida Noronha, Lizel Farnandes, Gini Chacko,"Virtual E-mail Assistance for The Visually Impaired", IEEE Conference on Technologies for Future Cities 2021 (CTFC 2021), 8th & 9th October 2021. |
| 5 | Sujata Deshmukh, Amurto Basu, Sarvesh Kulkarni, Shubham Mishra, Prashant Deshmukh, Bhushan Patil," Disaster Damage Assessment of Satellite Images Using Transfer Learning with Fine Tuning", Journal of Engineering, Project, and Production Management, 2022-Scopus indexed [Accepted through RGIT ICEI4.0] |
| 6 | Monali Shetty, S. Shetty, J. Dsouza "Cyber bullying Detection in Native Languages", Springer, International conference on soft computing for security applications,2021 |
| 7 | S. I. Amjad Abidi, A. A. Almeida, L. G. Soares and A. Pansare, "Interactive Map Application for Real-Time Crime Reporting," 2021 International Conference on Advances in Computing, Communication, and Control (ICAC3), 2021, pp. 1-8, DOI: 10.1109/ICAC353642.2021.9697179. |
| 8 | Mario Dias, Hansie Aloj, Nijo Ninan, Dipali Koshti,"BERT Based Multiple parallel Co-attention for Visual Question Answering", 6th International IEEE conference ICICCS 2022, May 25-27 2022. |
| 9 | Sanath Shetty, Ganesh Reddy, Princely Lopes, Ashwini Pansare, " cyber bullying detection System" 4 th International conference PICET 2022, AIP publishing, Scopus indexed |
| 10 | Supriya Kamoji, S., Koshti, D., Dmello, V. V. Kudel, A. A., & Vaz, N. R. (2021, July). Prediction of Parkinson's Disease using Machine Learning and Deep Transfer Learning from different Feature Sets. In <i>2021 6th International Conference on Communication and Electronics Systems (ICCES)</i> (pp. 1715-1720). IEEE. |
| 11 | Swati Ringe, Clayton Almeida, Ron George, Akshay Naphade, "Resolving the Data Imbalance problem in Fraud Detection Using Sampling and Machine Learning Techniques", POSITIF JOURNAL Volume 22, Issue 5, MAY 2022. |
| 12 | Swati Ringe, Davin Barboza, Sanfer Noronha, Mayank Srivastava, "food ordering assistant with dish recognition and recommendation system" ICRTTEAS 2021 held on 19-20 July 2021 |
| 13 | Vanessa DeMello, Yashaswini Chaudhari, Srushti Shah, "Autonomous Time table system using Genetic Algorithm, 4 th International Conference on Smart System and Inventive Technologies (ICSSIT 2022) organized by Francis Xavier Engineering College, India on 20-22 January 2022. |

5 FACULTY INFORMATION AND CONTRIBUTIONS (200) Total Marks 154.40

| Name | PAN No. | University Degree | Date of Receiving Degree | Area of Specialization | Research Paper Publication | PhD Guidance | Faculty receiving PhD during the assessment year | Current Designation | Date (Designated as Prof./Assoc. Prof.). | Initial Date of Joining | Association Type |
|-----------------------------------|------------|-------------------|--------------------------|--|----------------------------|--------------|--|---------------------|--|-------------------------|------------------|
| Dr. Sujata Deshmukh | AKXPD6716H | B.Tech. and PhD | 22/02/2018 | Data Mining and Machine Learning, Blockchain | 29 | 0 | 0 | Professor | 01/09/2022 | 16/07/2016 | Regular |
| Dr. Sunil Surve | ANMPS6072K | B.Tech. and PhD | 31/12/2012 | Artificial Intelligence, Machine Learning, Deep Learning, Robotics | 34 | 3 | | Professor | 02/04/2012 | 01/12/1986 | Regular |
| Dr. B. S. Daga | ACTPD9010E | B.Tech. and PhD | 20/12/2018 | Software engineering and Artificial Intelligence | 15 | 0 | 0 | Associate Professor | 01/09/2009 | 08/08/2003 | Regular |
| Prof. Merly Thomas | BAGPS7034B | M.E/M.Tech | 15/02/2003 | Computer Networks, Security and Distributed Computing | 5 | 0 | 0 | Associate Professor | 17/12/2005 | 21/08/1996 | Regular |
| Prof. Monica T. Khanore | ADIPK9311M | M.E/M.Tech | 15/01/2007 | Telecommunication | 5 | 0 | 0 | Assistant Professor | | 12/08/1997 | Regular |
| Prof. Roshni Suresh Padate | AIPPP9487K | M.E/M.Tech | 03/04/2010 | Image Processing, Data Warehouse and Mining, Machine Learning | 15 | 0 | 0 | Assistant Professor | | 05/01/2001 | Regular |
| Prof. Roshni Suresh Padate | AIPPP9487K | M.E/M.Tech | 03/04/2010 | Image Processing, Data Warehouse and Mining, Machine Learning | 15 | 0 | 0 | Assistant Professor | | 05/01/2001 | Regular |
| Prof. Kalpana Prasanna Deorukhkar | AXSPS7664R | M.E/M.Tech | 28/01/2012 | Natural Language Processing, Data Structures, Advance Algorithm | 15 | 0 | 0 | Assistant Professor | | 01/08/2003 | Regular |

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|--|------------|------------|------------|--|----|---|---|------------------------|--|------------|---------|
| Prof. Wagle Kranti Kiran | AKBPK2431N | M.E/M.Tech | 02/04/2012 | Computer Organization, Embedded Systems, RTOS, IoT | 8 | 0 | 0 | Assistant Professor | | 19/07/2004 | Regular |
| Prof. Jagruti Nagaonkar | AFHPN2900C | M.E/M.Tech | 21/02/2013 | Computer Networks. Database Management System, Digital Signal Processing | 2 | 0 | 0 | Assistant Professor | | 28/07/2004 | Regular |
| Prof. Ashwini Pansare | ANGPP8501Q | M.E/M.Tech | 31/12/2012 | Artificial Intelligence, Machine Learning, Deep Learning | 13 | 0 | 0 | Assistant Professor | | 05/07/2005 | Regular |
| Prof. Supriya Shivanath Kamoji | AROPK1602K | M.E/M.Tech | 12/12/2012 | Artificial Intelligence, Machine Learning, Deep Learning | 17 | 0 | 0 | Assistant Professor | | 05/07/2005 | Regular |
| Prof. Nagdeote Sushma Fattuji | AEKPN5614B | M.E/M.Tech | 31/12/2012 | Image Processing Multimedia System and Design, AI, Machine Learning | 8 | 0 | 0 | Assistant Professor | | 05/07/2005 | Regular |
| Prof. Monali Shetty | BCRPS5046Q | M.E/M.Tech | 04/08/2012 | System Security, Block chain Technology, Computer Network | 13 | 0 | 0 | Assistant Professor | | 20/02/2006 | Regular |
| Prof. Prachi Kunal Patil | AIKPC6786H | M.E/M.Tech | 31/12/2012 | Structure Programming, Internet Programming, Operating Systems | 4 | 0 | 0 | Assistant Professor | | 18/09/2006 | Regular |
| Prof. Parshvi Shah | BUNPS5891K | M.E/M.Tech | 24/01/2015 | Programming, Basics of Electrical and Electronics Engg | | 0 | 0 | Assistant Professor | | 18/09/2006 | Regular |

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|-----------------------------|------------|------------|------------|--|----|---|---|---------------------|--|------------|---------|
| Prof. Sangeeta Parshionikar | BBMPS8352R | M.E/M.Tech | 24/01/2015 | Digital Logic Design, Computer Organization, IoT, TCS, Deep Learning | 9 | 0 | 0 | Assistant Professor | | 09/07/2007 | Regular |
| Prof. Prajakta Dhamnaskar | ASOPD7928C | M.E/M.Tech | 13/01/2014 | Data structure, Algorithms, Data mining, ML | 11 | 0 | 0 | Assistant Professor | | 02/01/2015 | Regular |
| Prof. Lokhande Unik | AIPL3785B | M.E/M.Tech | 01/04/2014 | Cloud Computing, System/Information/Cyber Security | 4 | 0 | 0 | Assistant Professor | | 16/07/2018 | Regular |
| Prof. Ankita Amburle | BQXPA9282N | M.E/M.Tech | 29/06/2020 | Quantitative analysis and Cloud Computing, Machine Learning | 2 | 0 | 0 | Assistant Professor | | 05/09/2022 | Regular |
| Prof. Heenakausar Pendhari | BJEPP4416P | M.E/M.Tech | 03/04/2010 | Internet Programming, Digital Logic and Design Application | 2 | 0 | 0 | Assistant Professor | | 09/07/2022 | Regular |

5.1 Student-Faculty Ratio (20)

Total Marks 20.00

Institute Marks : 20.00

UG

No. of UG Programs in the Department 1

| Bachelor of Engineering in Computer Engineering | | | | | | |
|---|-------------------|--|-------------------|--|-------------------|--|
| Year of Study | CAY | | CAYm1 | | CAYm2 | |
| | (2022-23) | | (2021-22) | | (2020-21) | |
| | Sanctioned Intake | Actual admitted through lateral entry students | Sanctioned Intake | Actual admitted through lateral entry students | Sanctioned Intake | Actual admitted through lateral entry students |
| 2nd Year | 120 | 12 | 120 | 12 | 120 | 12 |
| 3rd Year | 120 | 12 | 120 | 13 | 60 | 6 |
| 4th Year | 120 | 13 | 60 | 6 | 60 | 12 |
| Sub-Total | 360 | 37 | 300 | 31 | 240 | 31 |
| Total | 397 | | 331 | | 271 | |
| Grand Total | 397 | | 331 | | 271 | |

PG

No. of PG Programs in the Department 0

Grand total:

SFR

No. of UG Programs in the Department 1

No. of PG Programs in the Department 0

| Description | CAY(2022-23) | | CAYm1 (2021-22) | | CAYm2 (2020-21) | |
|---|--------------|--|-----------------|--|-----------------|--|
| Total No. of Students in the Department(S) | 396 | Sum total of all (UG+PG) students | 330 | Sum total of all (UG+PG) students | 264 | Sum total of all (UG+PG) students |
| No. of Faculty in the Department(F) | 22 | F1 | 20 | F2 | 13 | F3 |
| Student Faculty Ratio(SFR) | 18 | SFR1=S1/F1 | 16.5 | SFR2=S2/F2 | 20.31 | FR3=53/F3 |
| Average SFR | 17.79 | SFR=(SFR 1+SFR2+SFR3)/3 | | | | |
| F=Total Number of Faculty Members in the Department (excluding first year faculty) | | | | | | |

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

1. Shall have the AICTE prescribed qualifications and experience.
2. Shall be appointed on full time basis and worked for consecutive two semesters during the particular academic year under consideration.
3. Should have gone through an appropriate process of selection and the records of the same shall be

made available to the visiting team during NBA visit

5.1. 1 Provide the information about the regular and contractual faculty as per the format mentioned below:

| | Total number of regular faculty in the department | Total number of contractual faculty in the department |
|----------------|---|---|
| CAY(2022-23) | 22 | 0 |
| CAYm1(2021-22) | 20 | 0 |
| CAYm2(2020-21) | 13 | 0 |

Average SFR for three assessment years: 17.79

Assessment SFR : 20

5.2 Faculty Cadre Proportion (25)

Total Marks 22.00

Institute Marks: 22.00

| Year | Professors | | Associate Professors | | Assistant Professors | |
|-----------------|-------------|-----------|----------------------|-----------|----------------------|-----------|
| | Required F1 | Available | Required F2 | Available | Required F3 | Available |
| CAY(2022-23) | 2.00 | 2.00 | 4.00 | 3.00 | 12.00 | 17.00 |
| CAYm1(2021-22) | 2.00 | 1.00 | 4.00 | 3.00 | 12.00 | 16.00 |
| CAYm2(2020-21) | 2.00 | 1.00 | 4.00 | 3.00 | 12.00 | 9.00 |
| Average Numbers | 2.00 | 1 | 4.00 | 3.00 | 12.00 | 14 |

Cadre Ratio Marks [(AF1 / RF1) + [(AF2 / RF2) * 0.6] + [(AF3 / RF3) * 0.4]] * 12.5: 17.71

5.5 Faculty Qualification (25)

Total Marks 15.40

Institute Marks : 15.40

| | x | y | F | FQ = 2.5 x [(10X + 4Y) / F] |
|----------------|---|----|-------|------------------------------|
| 2022-23(CAY) | 5 | 17 | 18 | 16.39 |
| 2021-22(CAYm1) | 3 | 17 | 16.5 | 14.85 |
| 2020-21(CAYm2) | 3 | 10 | 20.31 | 8.62 |

Average Assessment: 13.29

5.4 Faculty Retention (25)

Total Marks 25.00

Institute Marks: 25.00

| Description | 2021-22 | 2022-23 |
|------------------------|---------|---------|
| No of Faculty Retained | 12 | 11 |
| Total No of Faculty | 20 | 20 |
| % of Faculty Retained | 92.3 | 84.61 |

Average: 88.455

Assessment Marks: 20.00

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

Total Marks 15.00

Institute Marks: 15.00

In recent years, faculty members have shifted their emphasis from a traditional teaching-learning process to a student-centric learning strategy while imparting knowledge to students in lectures.

For effective knowledge transfer and learning, the emphasis is on student engagement and active participation. The faculty member helps students build useful and lifetime skills by giving them a platform to explore on their own, learn from their peers and through self-study. The teaching and learning process at our college was not halted by the lockdown brought on by the COVID 19 outbreak.

When beginning and implementing online instruction, systematic efforts were made. The Google Meet platform was utilized to host various webinars, FDPs, and teaching and learning activities throughout the lockdown.

A list of a few of the department faculty's notable initiatives is shown below. However, it shouldn't be viewed as a definitive list; rather, it should be seen as a step in an on-going process of continual improvement.

| Teaching Method | Description |
|---|---|
| Online Course Creation | The Principal of Fr CRCE, Dr. Surendra Singh Rathod, has created more than five video lectures that are available online through Udemy, a platform for massive open online courses. During the Covid -19 pandemic, few teachers videotaped their lectures on YouTube as web-based instruction. |
| Virtual Teaching | Google Classroom Many faculty members are using Google Classroom for organizing and managing online classes. Students are made to join as members of the Google classroom. Lecture materials, Assignments, Quiz questions are posted in the online classroom. |
| | Google Meet Online classes are delivered using the Google Meet platform. Teachers recorded their lectures and posted them in the classroom for the benefit of the students. Lab experiments are recorded and the demo videos are shared with the students. |
| | Virtual Labs For some courses like COA, DS, AOA etc. we are using Virtual labs. Through remote experimentation, this would aid in learning both fundamental and sophisticated concepts. |
| Learning Management System | Moodie: Moodie provides the most flexible tool-set to support both blended learning and 100% online courses. Many faculty are using a moodle for sharing notes, quiz assessment etc. |
| Information and Communication Technologies (ICT) | Since most classes are equipped with LCD projectors and WiFi internet connection, the instructor uses a blackboard or LCD projector judiciously while delivering the lecture. |

| | |
|---|--|
| Enabled Teaching-Learning | |
| MOOCs | <p>NPTEL: Fr. CRCE has established NPTEL Local Chapter in the college from 2017-18. NPTEL (National Programme on Technology Enhanced Learning) is a joint initiative of the IITs and IISc. It offers online courses and certification in Engineering, Sciences & Humanities Streams. Online course: Free for all, Certification exam: For a nominal fee. Approximately 20+ students completed NPTEL courses in last 3 years.</p> <p>Coursera, EDx and other online learning platform To help and to minimize the impact of the coronavirus outbreak on students, the Coursera community had launched a global effort to assist universities and colleges to deliver courseware online. As part of this programme Coursera and EDx E-Learning platforms had offered free subscriptions for Faculty and students to enroll for the courses offered under their curriculum. Fr. CRCE entered into a partnership agreement with Coursera and EDx for Enhanced Learning; to make our students more industry ready and skills relevant. Coursera brings to the table more than 4700+ courses from top universities & professors in the world. With more industry relevant partnerships and rigorous surveys with industry on how to continuously upskill our students in domains from AI- Data Analytics or Business intelligence to Life Sciences. These courses are certified programs of Basic, intermediate and professional level designed in collaboration with foreign universities. Our college had applied and received 800 subscriptions for the Coursera for campus programme and 500 subscriptions as part of EDx programme, which benefited students and faculty in upgrading their knowledge with the latest curriculum in their respective areas. To encourage student participation in the certification programmes they were given considerations while teamwork evaluations. Approximately 150+ students completed online courses in last 3 years.</p> |
| Project/ Activity Based Learning | <p>Due to the quick development and active changes in the fields of science and technology, it is necessary to go beyond the traditional curriculum and investigate the most recent engineering achievements. Enrolling in numerous technical councils such as Team Robocon, Team Mavericks, TEDxCRCE and Project Cell (E-yantra 11TB initiatives) etc., provides students with opportunities and broad exposure to the dynamic world of practice.</p> <p>Participating in various projects, activities, and events provides students with hands-on learning opportunities. Through additional design-based experiments, lab work, and projects, the existing gap in the traditional education system is filled.</p> <p>Students work on a project over an extended period of time - over two semesters as a part of course "major/mini project" and individual subject mini project - that engages them in solving a real-world problem or answering a complex question.</p> <p>Students acquire a deeper knowledge through active exploration of real- world challenges and problems.</p> |

| | |
|-----------------------------------|---|
| Study of Research Papers | <p>IEEE xplore, ACM, Springer, Elsevier</p> <p>Faculty shares the research papers in their respective subject domain, and students read the paper, present their findings through presentations.</p> <p>This activity improves scientific literacy, critical thinking abilities, and knowledge of scientific facts among students.</p> |
| Flipped Classrooms | <p>In this, teachers share lecture videos with students for viewing, assign and collect work via online learning management systems, and students are required to attend regularly scheduled lectures for discussion and exploration of the topic.</p> |
| Student Chapter activities | <p>The department has a number of student chapters/clubs, such as CSI, Codelabs, and GDSC, which give the students a strong platform to participate actively in the numerous competitions, seminars, and lectures hosted by the club. The exercises enable the students to demonstrate their abilities in teamwork, communication, target work, and general professional development. Each student chapter has a faculty advisor assigned to it for governance, mentoring, and other duties. Alumni students are invited to give a technical discussion and engage in conversation with the students to inform them of the demands of the modern marketplace.</p> |

5.6 Faculty as participants in Faculty development/training activities/STTPs (15)

Total Marks 15.00

Institute Marks: 15.00

| Name of the faculty | Max 5 Per Faculty | | |
|--|-------------------|-----------------|-----------------|
| | 2021-22 (CAYm1) | 2020-21 (CAYm2) | 2019-20 (CAYm3) |
| Dr. Sujata Deshmukh | 5.00 | 5.00 | 5.00 |
| Prof. Merly Thomas | 5.00 | 5.00 | 5.00 |
| Prof. Monica Khanore | 0.00 | 5.00 | 3.00 |
| Prof. Roshni Suresh Padate | 5.00 | 5.00 | 5.00 |
| Prof. Kalpana Deorukhkar | 5.00 | 5.00 | 5.00 |
| Prof. Wagle Kranti Kiran | 5.00 | 3.00 | 5.00 |
| Prof. Jagruti Nagaonkar | 5.00 | 5.00 | 5.00 |
| Prof. Ashwini Pansare | 5.00 | 5.00 | 5.00 |
| Prof. Supriya Kamoji | 5.00 | 5.00 | 5.00 |
| Prof. Nagdeote Sushma | 5.00 | 0.00 | 0.00 |
| Prof. Monali Shetty | 5.00 | 5.00 | 5.00 |
| Prof. Sangeeta Parshionikar | 5.00 | 5.00 | 5.00 |
| Prof. Heenakaasar Pendhari | 5.00 | 5.00 | 5.00 |
| Prof. Prajakta Dhamnaskar | 5.00 | 5.00 | 0.00 |
| Prof. Lokhande Unik | 0.00 | 5.00 | 5.00 |
| Prof. Anika Amburle | 0.00 | 5.00 | 3.00 |
| Dr. Sunil Surve | 0.00 | 5.00 | 0.00 |
| Prof. Dipali Koshti | 0.00 | 5.00 | 5.00 |
| Prof. Swati Ringe | 0.00 | 5.00 | 5.00 |
| Prof. Parshvi Shah | 5.00 | 0.00 | 5.00 |
| Prof. Prachi Patil | 0.00 | 5.00 | 5.00 |
| Sum | 70.00 | 93.00 | 86.00 |
| RF = Number of Faculty required to comply with 20:1 Student Faculty Ratios per 5,1 | 19.25 | 16.55 | 13.55 |
| Assessment [3*(Sum / 0.5RF)] | 21.82 | 33.72 | 38.08 |

Average assessment over 3 years: 31.21

5.7 Research and Development (30)

Total Marks 16.00

5.7.1 Academic Research (10)

Institute Marks: 9.00

Research and development is a process used to generate new or improved technology that can give an organization, industry, or nation an edge over its competitors. It also helps in the overall development of the faculty as well as students.

The institute encourages multidisciplinary quality research related to science, engineering and technology in the domain of Computer Engineering, AI and Data Science, Electronics engineering, Mechanical engineering, Sciences and Humanity. Academic research, funded research projects, and the creation of intellectual property in the engineering and technology domains are all part of the research activities. The institute strives to create a vibrant research environment for faculty and students engaged in emerging areas. A research and development committee is formed to support the research ecosystem and channel the related activities.

The following Table provides an overview of the Departments progress in research and development.

| Serial No. | Criteria | | Quantity |
|------------|---|--|-----------------|
| 1 | Quality of Publication | No of Papers in | |
| | | SCI/ESCI: | 03+ |
| | | SCOPUS: | 15+ |
| | | Non SCI/SCOPUS: | 70+ |
| | | IEEE conference/ IET conferences : | 25+ |
| | | Books: | 07 |
| | | Books Chapter: | 02 |
| | | Patents/Copyrights : | 03 |
| 2 | Amount of Funded Research Received | | Rs. 1,50,000 |
| 3 | Number of PhD Given | | 01 |
| 4 | Number of PhD awarded | | 0 |
| 5 | Number of PhD Pursuing | | 11 |
| 6 | No. of Ph.D. Guides available in the Department | | 03 |

Papers Published:**Year 2022-23**

| Sr. No | Paper Publication Details |
|---------------|--|
| 1 | Pranav Gangurde, Melita Japhet. Clafacio Lobo, Nilesh Patil, Prachi Patil, "ResStorage - Blockchain Based Decentralized Resume Storage Application",in 2022 IEEE World Conference on Applied Intelligence and Computing (AIC), August 2022 |
| 2 | Varad Patil, Dhruvil Shah, Yash Sankpal, Prajakta Dhamanskar, Prajakta Bhangale, " EARTHQUAKE MAGNITUDE PREDICTION USING NEURAL NETWORKS" Volume No. 14, Issue- 5 , October - December 2022 in Samriddhi: A Journal of Physical Sciences, Engineering and Technology, Impact Factor: 6.6, UGC Care Approved, Peer Reviewed and Referred Journal |
| 3 | Robin Lobo, Sonali Joshi, Joel Syrus Fernandes, Prajakta Bhangale, Prajakta Dhamanskar, "A COMPUTABLE STUDY ON TACTICS TOWARDS CRIME PREDICTION AND ANALYSIS", Volume No. 14, Issue- 5 , October - December 2022 in Samriddhi: A Journal of Physical Sciences, Engineering and Technology, Impact Factor: 6.6, UGC Care Approved, Peer Reviewed and Referred Journal |
| 4 | Tanisha Harry Braganza; Fatima Felix Pereira; Sameeksha Pravin Rane; Kranti Wagle, "Multipurpose Application for the Visually Impaired",2022 2nd Asian Conference on Innovation in Technology (ASIANCON),26-28 August 2022 |
| 5 | Sumi! Kothari, Sujata Deshmukh, Samarth Mehta, "Comparison of Age, Gender and Ethnicity Prediction Using Traditional CNN and Transfer Learning", 13th IEEE INTERNATIONAL CONFERENCE ON COMPUTING, COMMUNICATION AND NETWORKING TECHNOLOGIES (ICCCNT) 2022, October 3rd - 5th, 2022 |
| 6 | "Optimal Hybrid LSTM-RNN for Image Captioning with Deep Features", Kalpana Deorukhkar, Salish Ket, International Conference on Embracing Industry 4.0 Technologies for Sustainable Growth (ICEI 4.0), April 2022. |
| 7 | Brendan Lucas, Aditya Mahamuni, Vinyas Kulal, Abhi Gupta, Kalpana Deorukhkar, "Affordable Real-Time Heart Rate, ECG & SpO2 Monitoring System Using Internet of Things (IoT)", Volume 10, Issue XI, International Journal for Research in Applied Science and Engineering Technology (IJRASET) Page No: 1852-1858, ISSN: 2321-9653, www.ijraset.com |
| 8 | Ron George, Prof. Swati Ringe, Clayton Almeida, Akshay Naphade, "Resolving the Data Imbalance problem in Fraud Detection Using Sampling and Machine Learning Techniques", POSITIF Journal, Vol22 Issue 7 2022, ISSN NO: 0048-4911 https://doi.org/10.37896/psj30.7/1201 |
| 9 | Thomas, M. and Meshram, B.B. (2023) "ChSO-DNFNet: Spam detection in Twitter using feature fusion and optimized Deep Neuro Fuzzy Network," Advances in Engineering Software [Preprint], (175). Available at: https://doi.org/https://doi.org/10.1016/j.advengsoft.2022.103333 . |
| 10 | Merly Thomas, B. B Meshram, "Combating the Distributed Network Attacks using A Proposed Progressive Analyzer based on an Ensemble Learning Framework", 13th IEEE INTERNATIONAL CONFERENCE ON COMPUTING, COMMUNICATION AND NETWORKING TECHNOLOGIES (ICCCNT) 2022, October 3rd - 5th, 2022 |
| 11 | Thomas, M. and Meshram, B.B. (2022) "A Brief Review of Network Forensics Process Models and a Proposed Systematic Model for Investigation," <i>Intelligent Cyber Physical Systems and Internet of Things, (Chapter 45)</i> . Available at: DOI: 10.1007/978-3-031-18497-0 |

Year 2021-22

| Sr. No | Paper Publication Details |
|---------------|--|
| 1 | Sujata Deshmukh, Bhushan Patil, Ketaki Joshi, Chinmay Gaonkar, Ms. Prerna Pallan, Sumedh Bhatkar, "A Novel Method for IOT Based Smart Traffic System", Industrial Engineering Journal, Vol. XV & Issue No. 06 June - 2022-UGC approved Journal |
| 2 | Deshmukh Sujata, Khasgiwala, Y., Castellino, D.T," A Decentralized Federated Learning Paradigm for Semantic Segmentation of Geospatial Data", International conference on intelligent Computing & Optimization. ICO, In: Vasant, P., Zelinka, I., Weber, GW. (eds), 2021. Lecture Notes in Networks and Systems, vol 371. Springer, Cham, 01 January 2022, https://doi.org/10.1007/978-3-030-93247-3_20 |
| 3 | Sujata Deshmukh, P. Rede, S. Sharma and S. Iyer, "Voice-Enabled Vision For The Visually Disabled," 2021 International Conference on Advances in Computing, Communication, and Control (ICAC3), 2021, pp. 1-6, DOI: 10.1109/ICAC353642.2021.9697125- Scopus indexed |
| 4 | Sujata Deshmukh, Candida Noronha, Lizel Farnandes, Gini Chacko,"Virtual E-mail Assistance for The Visually Impaired", IEEE Conference on Technologies for Future Cities 2021 (CTFC 2021), 8th & 9th October 2021. |
| 5 | Sujata Deshmukh, Amurto Basu, Sarvesh Kulkarni, Shubham Mishra, Prashant Deshmukh, Bhushan Patil," Disaster Damage Assessment of Satellite Images Using Transfer Learning With Fine Tuning", Journal of Engineering, Project, and Production Management, 2022- Scopus indexed |
| 6 | V. Rao, B.T. Patil, V Shaikh, D.S.S Sudhakar, Sujata Deshmukh, "Investigation of Surface Roughness and Cutting Temperature Parameters in Turning AISI 4340 Steel using MQL Mist Technique with Nano-Fluids (n-Al ₂ O ₃ , n-MoS ₂ & n-Graphene) mixed in Edible Vegetable Coconut Oils", Journal of Engineering, Project, and Production Management. 2022-Scopus indexed [Accepted through RGIT ICEI4.0] |
| 7 | Dipali Bhise, B.T. Patil, V Shaikh, D.S.S Sudhakar, Sujata Deshmukh, "Comparative Economic Analysis and Investigation of Micro Lubrication Over Conventional Cooling in manufacturing" Journal of Engineering, Project, and Production Management". 2022-Scopus indexed [Accepted through RGIT ICEI4.0] |
| 8 | Monali Shelly, S. Shelly, J. Dsouza "Cyberbullying Detection in Native Languages", Springer, international conference on soft computing for security applications,2021 |
| 9 | Ashwini Pansare, S. I. Amjad Abidi, A. A. Almeida, L. G. Soares and "Interactive Map Application For Real-Time Crime Reporting," 2021 International Conference on Advances in Computing, Communication, and Control (ICAC3), 2021, pp. 1-8, doi: 10.1109/ICAC353642.2021.9697179. |
| 10 | Supriya Kamoji, Dipali Koshti, Valiant Vincent Dmello, Alrich Agnel Kudel, Nash Rajesh Vaz, "Prediction of Parkinsons Disease using Machine Learning and Deep Transfer Learning from different Feature Sets", 6th International Conference on Communication and Electronics, |

| | |
|----|---|
| | Systems (ICCES), 8-10 July 2021 |
| 11 | Swati Ringe, Srivastava Mayank, Barboza Devin, Noronha Sanfer, "FoodPal: An in-restaurant food ordering app", 3rd International Conference on Recent Trends in Technology, Engineering and Applied Science - ICRTEAS 2021, held virtually on 19th and 20th July 2021. |
| 12 | Monali Shetty, Shreya Bilonikar, Carol Mendonca, Divita Phadakale, "Blockchain Based Model for Royalty Payments of Artists and Remix-Makers", International Conference on Smart Data Intelligence (ICSMDI 2021), Elsevier publication |
| 13 | Ashwini Pansare, Leesa Menezes, Emmima G, Simran Bindra, "Early stage stroke prediction " ,2021 IEEE 2nd Global Conference for Advancement in Technology (GCAT), Bangalore, India. Oct 1-3, 2021 |
| 14 | Ashwini Pansare, Ariane Correa, Kaustubh Shetty, Reyna Binni", "An Image caption generator for the visually CHALLENGED" ,2021 IEEE 2nd Global Conference for Advancement in Technology (GCAT) Bangalore, India. Oct 1-3, 2021 |
| 15 | Ria Gupta , Dishank Oza and Sunil Chaudhari , " Real time Hand Tracking and Gesture Recognizing Communication System for physically disabled People" Copywrite year 2022, Inventive Communication and Computational Technologies Springer |
| 16 | Heenakausar Pendhari, Sushma Nagdeote, Sandeep Rathod, Lubna Khan, Saurabh Vishwakarma, "Compound Emotions: A Mixed emotion detection", International Conference on Computational and Intelligent Data Science, 21st May 2022. (In process) |
| 17 | Sushma Nagdeote, Heenakausar Pendhari, Omkar Shirsat, Raj Lad, Sujata Chiwande, "Esports Analysis with Data Science", AIP Conference Proceeding, 2022, 24th -25th March 2022 Will be Published in AIP Conference Proceedings (In Process) |
| 18 | Kranti Wagle, Himanshu Alwe, "Stroke Awareness ChatBot Assistant with stroke Risk Prediction using Demographic Data", Springer Nature Switzerland AG 2022 |
| 19 | Monali Shetty, Sakshi Shetty, Jesica Dsouza, Ameaza Rodrigues, "Cyberbullying Detection in JNative Languages", Springer Book, Soft Computing for Security Applications, Jan2022 |
| 20 | Sherwyn Dsouza, Darlene Nazareth, Cassia Vaz, Prof. Monali Shetty, "Blockchain and AI in Pharmaceutical Supply Chain", Elsevier SSRN, international Conference on Smart Data intelligence ICSMDI 2021 |
| 21 | Mario Dias; Hansie Aloj, Nijo Ninan; Dipali Koshti, "BERT based multiple parallel co-attention model for Visual question answering" , 6th International Conference on Intelligent Computing and Control Systems (ICICCS 2022) held at Madurai, India organized by Vaigai College of Engineering during May 25-27, 2022. |
| | Ashwini Pansare, Sanath Shetty, Ganesh Reddy, Princely Lopes, " cyber bullying detection System" 4th International conference PICET 2022, AIP publishing, Scopus indexed |
| 23 | Borgalli, R. A., & Surve, S. (2022). Facial Emotion Recognition Through Detection of Facial Action Units and Their Intensity. Scientific Visualization, 14(1), DOI: 10.26583/sv.14.1.06 http://sv-journal.org/2022-1/06/ |
| 24 | Borgalli, R. A., & Surve, S. (2022). Compound Facial Expression Recognition and Pain intensity Measurement Using Optimized Deep Neuro Fuzzy Network. International Journal of Swarm Intelligence Research (IJSIR), 13(1), 1-27. DOI: 10.4018/IJSIR.304721 |
| 25 | Borgalli, R. A., & Surve, S. (2022, March). Deep Learning Framework for Facial Emotion Recognition using CNN Architectures. In 2022 International Conference on Electronics and |

| | |
|----|---|
| | Renewable Systems (ICEARS) (pp. 1777-1784). IEEE, DVD Part Number: CFP22AV8-DVD; ISBN: 978-1-6654-8424-4. |
| 26 | Borgalli, M. R. A., & Surve, S. (2022, March). Deep learning for facial emotion recognition using custom CNN architecture. In Journal of Physics: Conference Series (Vol. 2236, No. 1, p. 012004). IOP Publishing. 2nd International Conference on Computational Intelligence & IoT (ICCIoT) 2021 organized by Department of Electronics and Communication Engineering North Eastern Regional Institute of Science and Technology (NERIST) Nirjuli, Itanagar, Arunachal Pradesh, India on 23-24 Feb., 2022, Conference Proceedings published in SCOPUS indexed IOPs Journal of Physics. |
| 27 | Preeti Jain and Sunil K Surve. Evaluating Resource Centric Behavior of Workloads and Performance Analysis in CMPs due to Shared Resources. In the International Journal of Innovative Technology and Exploring Engineering. Blue Eyes Intelligence Engineering and Sciences Publication. August 2019. |
| 28 | Jain P. N, Gautam D.K, Surve S.K. Resource Based Modelling of Applications on Multi-cores Using Adapted Tilman Model, 4th International Conference on Computing in Engineering, (ICCET2019) Springer, ASIC series. |
| 29 | Jain P.N, Surve S K. Resource Centric Characterization and Classification of Applications Using K-Means for Multicores. IEEE 33rd International Conference on Information and Technology (ICOIN). 2019 |
| 30 | Preeti Jain and Sunil K Surve. Modeling Shared Resource Competition for Multicores Using Adapted Tilman Model. In the International Journal of High Performance Computing and Networking. InderScience Publications. 2020 |
| 31 | Preeti Jain and Sunil K Surve. A Review of Shared Resource Contention in Multicores and its Mitigation Techniques. In the International Journal of High Performance Systems Architecture. InderScience Publications. |
| 32 | Kranti Wagle, Himanshu Alwe, Stroke Awareness ChatBot Assistant with Stroke Risk Prediction Using Demographic Data. Part of the book series: Studies in Computational Intelligence, 2022 (SCI, volume 1027), http://dx.doi.org/10.1007/978-3-030-96634-8_23 , DOI: 10.1007/978-3-030-96634-8_23 |
| 33 | Supriya Kamoji, S., Koshti, D., Dmello, V. V., Kudel, A. A., & Vaz, N. R. (2021, July). Prediction of Parkinsons Disease using Machine Learning and Deep Transfer Learning from different Feature Sets. In 2021 6th International Conference on Communication and Electronics Systems (ICCES) (pp. 1715-1720). IEEE. |
| 34 | Kalpana Deorukhkar, Salish Ket, "A detailed review of prevailing image captioning methods using deep learning techniques", Springer, January 2022, Multimedia Tools and Applications 81(4) |
| 35 | Kalpana Deorukhkar, Salish Ket, "Performance evaluation of state of art deep learning techniques for Image Captioning", Conference on Technologies for Future Cities, Pillai College of Engineering, New Panvel Oct 2021. |

| Sr. No | Paper Publication Details |
|--------|--|
| 1 | Swati Ringe, Sharwari Marathe, Rajesh Manjrekar, Raksha Shetty, "Teaching pre-schoolers using VQA: A Web app that answers natural language questions.", Zeichen Journal September 2020, Vol 6, Issue 9 |
| 2 | Swati Ringe, Vedant Sakhardande, Cajetan Rodrigues, Atharva Aire, "Drone Delivery-Application and Path Optimization", Alochana Chakra Journal, September 2020, Vol 9, Issue 9 |
| 3 | Roshni Padate, Hazel Lobo, Shreya Raul,, Renita Augustin,, "A Mobile Application for Detection and Classification of facial acne.", Alochana Chakra Journal Volume IX, Issue VI. June 2020,ISSN NO: 2231-3990,Scientific Journal Impact Factor-6.3 |
| 4 | Roshni Padate , Dhananjay Chobhe ,Davina Pinto ,"Fire Detection System Using Convolutional Neural Network", Alochana Chakra Journal ,Volume IX, Issue XII. June 2020,ISSN NO: 2231-3990.Scientific Journal Impact Factor -6.3 |
| 5 | Ashwini Pansare, Simran Gadkari, Jnnell Mathians, merlin P, "categorization of diabetic retinopathy and identification of characteristics to assist effective diagnosis" in 3 rd IEEE international conference on" Emerging smart computing and informatics" on 5th-? th March 2021 |
| 6 | Mahendra Mehra, Steve D'Costa, Ryan D'Mello, Joseph George and Dr. D.R. Kalbande, "Leveraging Deep Learning for Nail Disease Diagnostic", 4th Biennial International Conference on Nascent Technologies in Engineering, IEEE Conference (Scopus indexed) , Jan 2021 |
| 7 | Mehra Mahendra, Ajani Yameen, Mangalorkar Krish, Nadar Yohann and Kalbande Dhananjay, "College Project Preservation and Emulation using Containerization over Private Cloud", in Fifth International Conference on Information and Communication Technology for Competitive Strategies(ICTCS DEC 2020) Springer LNNS. ISBN Number- 2367-3370 Series |
| 8 | Mehra Mahendra, Sahai Vedant, D'Costa Jason, Srivastava Mayank and Dr. Kalbande Dhananjay, "Leveraging Deep Learning and IoT for monitoring COVID19 Safety Guidelines within College Campus." 10th International Advance Computing Conference (IACC 2020) Springer CCIS |
| 9 | Merly Thomas, Nerissa Pereira, Simran Dabreo, Linnet Rodrigues, "Comparative Analysis of Fake News Detection using Machine Learning and Deep Learning Techniques.", International Journal of Emerging Technologies and Innovative Research (www.jetir.org), ISSN:2349-5162, Vol.7, Issue 4, page no.1379-1385, April-2020, Available : http://www.jetir.org/papers/JETIR2004387.pdf |
| 10 | Merly Thomas, Kenrick Fernandes, Jerome Nicholas, "Analysis of Semantic and Stylistic mage Generation", International Journal of Emerging Technologies and Innovative Research (www.jetir.org I UGC and issn Approved), ISSN:2349-5162, Vol.7, Issue 5, page no. pp 632-641, May-2020, Available at: http://www.jetir.org/papers/JETIR2005230.pdf |
| 11 | Monali Shelly, Sankalp Rane, "Selection of optimal cricket team based on the players performance", IEEE XPLORE ISBN:978-1-7281-5371-1, International Conference on Communication and Electronics Systems 2020 -July 2020 |
| 12 | Monali Shelly, Christina D, Manthan K, Ofrin Lopes, "Virtual Mouse Using Object Tracking", IEEE Xplore, July 2020 |
| 13 | Sharwari Marathe, Monali Shelly," Comparative Study of Botnet Detection System using Different Machine Learning Algorithms", SCOPUS UGC-CARE Approved group-II Journal |

| | |
|----|---|
| 14 | Supriya Kamoji, Dipali Koshti, Joshua Noronha, Smart Street lamps A solution to Urban Pollution 2nd International Conference on Inventive Research in Computing Applications (ICIRCA) 2020 organized by RVS college of Engineering and Technology, Coimbatore, India, on 15-17, July2020 |
| 15 | K. Hariharan, A. Lobo and S. Deshmukh, "Hybrid Approach for Effective Disaster Management Using Twitter Data and Image-Based Analysis," IEEE-2021 International Conference on Communication information and Computing Technology (ICCICT), SPIT, Mumbai, 2021, pp. 1-6, DOI: 10.1109/ICCICT50803.2021.9510029. |
| 16 | Carol Sebastian, Princeton Barello, Sherwin Pillai, Supriya Kamoji , "Virtual assistance using question generation/ Answering", 4th IEEE Sponsored International Conference on Communication, Information and Computing Technology (ICCICT 2021), June 25-27-2021, Organized by SPIT Mumbai, India |
| 17 | Dipali Koshti,, Kevin Cheruthuruthy, Surya Pratap Shahi, Mayank Mishra," A Detection, Tracking and Alerting System for Covid-19 using Geo-Fencing and Machine Learning, IEEE Sponsored 5th International Conference on Intelligent Computing and Control Systems (ICICCS-21), May 6-8-2021, organized by Vaigai College of engineering, Madurai, India. |
| 18 | Chaudhari Sunil, Ria Gupta , Dishank Oza ," Real time Hand Tracking and Gesture Recognizing Communication System for physically disabled People" |
| 19 | Yameen Ajani, Krish Mangalorkar, Yohann Nadar, Sunil Chaudhari, Mahendra Mehra "Homomorphic encryption for secure conversations with AI bots over cloud to prevent Social Engineering attacks" International Journal of Engineering Research and Applications. ISSN: 2248-9622, pp. 21-27 |
| 20 | Kalpna Deorukhkar, Kevlyn Kadamala, Elita Menezes, "FGTD: Face generation from Textual description", 5th International conference on Inventive Communication and Computational Technologies ICICCT 2021), June 2021, Scopus Source ID: 21100901469 |
| 21 | Diabetes and Liver Detection Using Machine Learning Algorithms", SSRN Electronic Journal, Meera Ghaskadvi, Sakshi Khochare, Rozebud Gonsalves, Prajakta Dhamanskar, 22 Jul 2021 |
| 22 | "Pneumonia and Diabetic Retinopathy Detection Using Deep Learning Algorithm", Advances in Intelligent Systems and Computing, Meera Ghaskadvi, Sakshi Khochare, Rozebud Gonsalves, Prajakta Dhamanskar, 2021 |
| 23 | Khanore, M., & Unnikrishnan, S., "A Simple and Sturdy Hybrid Interference Canceller for DS-CDMA System in Multipath Environment for Static and Mobile Users", Proceedings of Third international Conference on VLSI, Communication and Signal Processing (VCAS), pp: 145-154, October 2020. |
| 24 | Khanore, M., & Unnikrishnan, S., "Interference Canceller for Spread Spectrum Modulation Based Multiple Access Systems", ICTACT International Journal on Communication Technology, pp: 2231-2238, Vol. 12(1), March 2021. |
| 25 | Kolhatkar, C., Wagle, K. (2021). "Review of SLAM Algorithms for Indoor Mobile Robot with LIDAR and RGB-D Camera Technology", In: Favorskaya, M.N., Mekhilef, S., Pandey, R.K., Singh, N. (eds) Innovations in Electrical and Electronic Engineering. Lecture Notes in Electrical Engineering, vol 661. Springer, Singapore. |
| 26 | Chinmay Kolhatkar, Kranti Wagle. Review of SLAM Algorithms for Indoor Mobile Robot with LIDAR and RGB-D Camera Technology, Part of the Lecture Notes in Electrical Engineering book series 2021 (LNEE, volume 661) pp 397-409 DOI: 10.1007/978-981-15-4692-1_30 |

Year 2019-20

| Sr. No | Paper Publication Details |
|--------|--|
| 1 | Pradnya Borkar, Merlyn Pulinthitha, Ashwini Pansare "Match Pose - A System for Comparing Poses", International Journal of Engineering Research & Technology (IJERT),ISSN: 2278-0181,Vol. 8 Issue 10, October-2019 |
| 2 | Mahendra Mehra, Dr. D. R. Kalbande, Shubham Mankar, Sohaa Mutsaddi," Data mining in Educational System for effective Student Mentoring", ICAC319 IEEE Conference, 20-21st December , Mumbai |
| 3 | Simran Gadkari, Jenell, Ashwini Pansare," Analysis of pre trained Convolutional Neural Networks to Build a Flower Classification System", IJRASET, Volume 7, Issue XI, Nov 2019, ISSN:2321-9653 |
| 4 | Monali Shelly, Ashley Lobo, Kartick Hariharan , Suyash Sreekumar , " Time Optimal long distance trip planning for electric vehicles", IEEE 2019 5th International Conference on Computing Communication Control and Automation ICCUBEA- IEEE conference,2019. ISSN: 978-1-7281-4042-1/19.hllp://doi.one/10.1729/Journal.23359 |
| 5 | Dipali K.Bhise, Bhushan T.Patil, Vasim A.Shaikh, Sujata P.Deshmukh, "Investigating the micro lubrication flow inside the nozzle using computational fluid dynamics", Materials Today: Proceedings, Volume 27, Part 1, 2020, Pages 492-496, ScienceDirect 2020. |
| 6 | Preeti Jain, Sunil K Surve "Evaluating Resource Centric Behavior of Workloads and Performance Analysis in CMPs due to Shared Resources" International Journal of Engineering and Advanced Technology (IJEAT) ISSN: 2249-8958, Volume-8, Issue-6, August 2019. Retrieval Number F8872088619/2019©BEIESP DOI: 10.35940/ijeat.F8872.088 |
| 7 | Preeti Jain, Sunil K Surve, "Resource Centric Characterization and Classification of Applications Using K-Means for Multicores" 978-1-5386-8350-7/19/\$31.00 ©2019 IEEE, ICOIN 2019. DOI: 10.1109/ICOIN.2019.8717981 |
| 8 | Preeti Jain, Sunil K Surve "Coordination and Synchronization in Multiagent System Based On Tilman Model of Resource Sharing" |
| 9 | Preeti Jain, Sunil K Surve, Dinesh Kumar Gautam "Modelling Shared Resource Competition for Multicores Using Adapted Tilman Model" January 2020 DOI: 10.1007/978-981-32-9515-5 38 |
| 10 | Preeti Jain, Sunil K Surve"A Review of Shared Resource Contention in Multicores and its Mitigating Techniques" Int. J. of High Performance Systems Architecture, Vol. x, No. x, 2019 |
| 11 | Mahendra Mehra, Vedant Sahai, Pratik Chowdhury, Elvis Dsouza "Home Security System using IOT and AWS Cloud Services" 2019 IEEE International Conference on Advances in Computing, Communication and Control, 20-21ST December 2019 |
| 12 | Kamoji S., Koshti D., Peter R. (2020) Analysis of Growth and Planning of Urbanization and Correlated Changes in Natural Resources. In: Raj J., Bashar A., Ramson S. (eds) Innovative Data Communication Technologies and Application. ICIDCA 2019. Lecture Notes on Data Engineering and Communications Technologies, vol 46. Publisher Springer, Cham. Print ISBN: 978-3-030-38039-7, Online ISBN: 978-3-030-38040-3, DOI: https://doi.org/10.1007/978-3-030-38040-3 23 |
| 13 | Dipali Koshti , Supriya Kamoji, Nehal Kalnad , Sreekumar Suyash, Shreya Bhujbal, , " Video Anomaly Detection using Inflated 3D Convolution Network", 5th IEEE International Conference on Inventive Computation Technologies (ICICT-2020) organized by RVS Technical Campus , 26-28 February 2020 at Coimbatore. |

| | |
|----|--|
| 14 | Supriya Kamoji, Dipali koshti, Alphaeus Dmonte, Solomon Jose George, Clayton Sohan Pereira, "Vehicle Identification and Speed Measurement", 5th IEEE International Conference on Inventive Computation Technologies (ICICT-2020) organized by RVS Technical Campus , 26-28 February 2020 at Coimbatore. |
| 15 | Kalpna Deorukhkar, Gauri Jare, Aishwarya Sebin, Wensita Rodrogues," Speech Assistance for the Deaf", Journal of Emerging Technologies and Innovative Research, Volume 7, Issue 4, March 2020, DOI: http://doi.one/10.1729/Journal.23359 |
| 16 | Dr Brijmohan Daga, Juhi Checker, Sayali Deo, Anne Rajan," Computer Science Career Recommendation System using Artificial Neural Network", IJCTT, 20 March 2020. |
| 17 | Yashom Dhige, Yash Turkar, Cristo Aluckal, Yogesh Agarwadkar, Dr. Sunil Surve, "Dynamic path planning system for UAV remote sensing in urban environments", National Symposium on Innovations in Geospatial Technology for sustainable Development with special emphasis on NER, ISG, ISRS, Shillong, Meghalaya, India, November 20-22, 2019, |
| 18 | CristoAluckul, Yash Turkar, Yashom Dhige,, Sumedh Deshpande,, B. K. Mohan, Yogesh Agarwadkar, Sunil Surve, Brijmohan Daga, "Dynamic real- time indoor environment mapping for Unmanned Autonomous Vehicle navigation", IEEE International Conference on Advances in Computing, Communication & Control, Fr. Conceicao Rodrigues College of Engineering, Mumbai, India, December 20-21, 2019. |
| 19 | Roshni Padate, Dhanajay Chobhe, Davina Pinto," Fire detection system using convolutional neural network", International Journal Of Scientific & Technology Research, Volume 9, Issue 04, ISSN 2277-8616, APRIL 2020, doi: 10.14445/22312803/IJCTT-V68I3P115 |
| 20 | Ashwini Pansare, Merlin P, Jenell Mathians, Simran Gadkari" Diabetic retinopathy classification and extraction of features for diagnosis" Aalochan chakra Journal ugc care journal group 1, ISO 7021-2008 certified journal, volume xi, issue vi, June 2020,issn no 2231-3990 |
| 21 | Prof. Monali Shelly, Christina A. Daniel, Manthan K.Bhatkar, Ofrin P. Lopes, "Virtual Mouse Using Object Tracking", IEEE 5th International Conference on Communication and Electronics Systems (ICCES), 2020 |
| 22 | Merly Thomas, Kenrick Fernandes, Jerome Nicholas, "Analysis of Semantic and Stylistic mage Generation", JETIR May 2020, Vol 7, Issue 5 |
| 23 | Merly Thomas, Nerissa Pereira, Simran Dabreo, Linnet Rodrigues, "Comparative Analysis of Fake News Detection using Machine Learning and Deep Learning Techniques.", JETIR April 2020, Vol 7, Issue 4 |
| 24 | American Sign Language Translator using Convolutional Neural Networks, International Journal of Advanced Science and Technology, 2020, Amandeep Singh Saini, Anuj Singh, Prajakta Dhamanskar, Sunny Patel |
| 25 | Human Computer Interaction using Hand Gestures and Voice, IEEE Xplore, Prajakta Dhamanskar, Aniket Poojari, Harshita Sarawade, Renita Dsilva, 2019 |
| 26 | M. Khanore, S. Unnikrishnan, Convergence and BER approximation of HIC detector for DS-CDMA system in Rayleigh fading multipath environment. Int. J. Innov. Technol. Explor. Eng. (IJITEE) 9(6), 2082-2088 (2020) |
| 27 | M. Khanore, S. Unnikrishnan, Hybrid interference cancellation for static and non-static users in OS-CDMA system, in 6th International Conference on Advances in Computing Communication and Control 2019 (ICAC3'19) (2020) |
| 28 | SatyaSathvik Kadambari, Gauraang Prabhu, Deep Mistry, Monica Khanore, "Automation of Attendance System Using Facial Recognition", in 6th International Conference on Advances in Computing Communication and Control 2019 (ICAC3'19) (2020) |
| 29 | Rochelle Cordeiro, Anol Kurian, Brinel Dsouza, Brijmohan Daga, "Automated training for Job Interviews", International journal of computer trends and technology (IJCTT), 68(3),74-79.March 2020, doi: 10.14445/22312803/IJCTT-V68I3P115 |

| | |
|----|--|
| 30 | Kalpana Deorukhkar, Deljin Jaison, Sanjeev Hippurgikar, Shubham Ambilkar, "Text summarization on Amazon food reviews" , International Journal of Emerging Trends & Technology in Computer Science (IJETTCS), Volume 9, Issue 2, March -April 2020, pp. 010-012 |
|----|--|

Books Published:

| S.No. | Title with page no. | Type of Book & Authors Name | Publisher & ISSN/ ISBN No. | Whether Peer Reviewed | No. of Co-authors and date of publication | Whether you are the main author | International/ National/ State/ Local publisher |
|-------|--|--|--|-----------------------|---|---------------------------------|---|
| 1 | Computer Network and Network Design | Technical Prof. Monali Shelly | Techknowledge Publication ISBN - 978-93-90428-23-6 | Yes | 13/2/2021 | Equally contributed | National publisher |
| 2 | Advanced System Security and Digital Forensic | Technical Co-author Prof. Monali Shelly | Techknowledge Publication ISBN - 978-93-89503-14-2 | Yes | 15/7/2019 | Equally contributed | National publisher |
| 3 | Artificial Intelligence & Soft Computing | Technical Co-Author Dipali Koshti | Techknowledge Publication ISBN: 978-93-89424-35-5 | Yes | 1 July 2019 | Equally contributed | National |
| 4 | Neural Network and Fuzzy Logic | Technical Co-Author Dipali Koshti | Techknowledge Publication ISBN: 978-93-89503-34-0 | Yes | 2 October 2019 | Equally contributed | National |
| 5 | Mobile Communication and Computing | Technical Co-Author Dipali Koshti | Techknowledge Publication ISBN: 978-93-89424-36-2 | Yes | 1 July 2019 | Yes, equally contributes | National |
| 6 | 2019 international Conference on Advances in Computing, Communication and Control (ICAC3 2019) | Dr. Srija Unnikrishnan, Dr. Sunil Surve, Dr. Deepak Bhoir | Institute of Electrical and Electronics Engineers (IEEE) ISBN: 9781728123875 | | | | Curran Associates, Inc. (Jul 2020) |
| 7 | 2021 international Conference on Advances in Computing, Communication, and Control | Dr. Srija Unnikrishnan, Dr. Bhushan Patil, Dr. Jagrutl Save, Dr. Sujata Deshmukh | Institute of Electrical and Electronics En meers (IEEE) ISBN: | | | | Curran Associates, Inc. (Apr 2022) |

| | | | | | | |
|--------------|--|---------------|--|--|--|--|
| (ICAC3 2021) | | 9781665426350 | | | | |
|--------------|--|---------------|--|--|--|--|

Book Chapters:

| S No. | Title with page no. | Type of Book & Authors Name | Publisher & ISSN/ ISBN No. | Whether Peer Reviewed | No. of Co-author s and date of publication | Whether you are the main author | International/ National/ State / Local publisher |
|-------|--|---|---|-------------------------------|--|---|--|
| 1 | Object Oriented Programming using Java Edition 6 | Technical Addition of a chapter. Prof. Swati Ringe | Tata Mc Graw Hill ISBN:9789353162344 | Yes reviewed by Balaguruswamy | 25 March 2019 | Addition of New Chapter "Object Oriented Methodology in Java" and corrections in 3 chapters | American educational publishing company |
| 2 | Intelligent Cyber Physical Systems and Internet of Things Chapter 45 | Chapter Title: A Brief Review of Network Forensics Process Models and a Proposed Systematic Model for Investigation Prof. Merly Thomas | Springer (Verlag) 978-3-031-18496-3 (ISBN) | Yes IColCI 2022 | 6am. February 2023 | Yes | International DOI: 10.1007/978-3-031-18497-0 |

Patents:

1. Dr. Sujata Deshmukh and team filed a design patent with Application Ref Number-374640-001, cbr Filing Date-25/11/2022 -Indian Patent Office, Article for Printing 3d parts using Electrochemical Deposition
2. Dr. Sujata Deshmukh published a patent with Application Ref Number-202241051449, Filing Date-08/09/2022 -Indian Patent Office, IoT and Artificial Intelligence based fruit recognition, calorie estimation and suggestion for healthy life using Deep learning algorithms
3. Prof. Monali Shelly and team published a patent with Application Ref Number-202221060823, Publication date - 18/11/2022 - Indian Patent Office, Blockchain based system for project funding and CSR funding.

List of Faculty Guiding the Ph.D. students

| S.No. | Ph. D Student Name | Faculty Name | Research Area | University and Year of Registration / Date of Defense |
|--------------|------------------------------|---------------------|---|--|
| 1. | Mr. Jayen Modi | Dr. Sunil Surve | Congestion mitigation & Alleviation in wireless sensor networks | Mumbai University 24-Sep-18 / Pursuing |
| 2. | Ms. Preeti Jain | Dr. Sunil Surve | Coordination And Synchronization of Shared Resources for MultiAgent Systems | Mumbai University 18-Apr-17 / 2-Mar-22 |
| 3. | Mr. Rohan Appasaheb Borgalli | Dr. Sunil Surve | Learning Algorithm for Facial Expression Recognition (FER) System | Mumbai University 7-May-21/Pursuing |

List of Faculty Awarded Ph.D.

| S. No. | Ph. D. Student's Name | Faculty Name | Research Area | University and Year of Registration / Date of Defense |
|---------------|------------------------------|---------------------|----------------------|--|
| | | | | |

List of faculty Pursuing Ph.D.

| Sr.No | Name of Faculty |
|--------------|-----------------------------|
| 1 | Prof. Merly Thomas |
| 2 | Prof. Monica Khanore |
| 3 | Prof. Roshni Suresh Padate |
| 4 | Prof. Kalpana Deorukhkar |
| 5 | Prof. Ashwini Pansare |
| 6 | Prof. Supriya Kamoji |
| 7 | Prof. Nagdeote Sushma |
| 8 | Prof. Monali Shelly |
| 9 | Prof. Sangeeta Parshionikar |
| 10 | Prof. Prajakta Dhamnaskar |
| 11 | Prof. Lokhande Unik |

5.5.1 Sponsored Research (5)

Institute Marks : 0.00

2021-22 (CAYm1)

| Project Title | Duration | Funding Agency | Amount |
|---------------|----------|----------------|-----------------------|
| | | | 0.00 |
| | | | Total Amount(X): 0.00 |

2020-21 (CAYm2)

| Project Title | Duration | Funding Agency | Amount |
|---------------|----------|----------------|-----------------------|
| | | | 0.00 |
| | | | Total Amount(Y): 0.00 |

2019-20 (CAYm3)

| Project Title | Duration | Funding Agency | Amount |
|---|-----------|-------------------|----------------------------|
| Unmanned Aerial Vehicle - Logistics for medical and food supply | 12 months | Mumbai University | 30000.00 |
| Smart cradle for reducing risk of SIDS | 12 months | Mumbai University | 25000.00 |
| Real Time Fire Detection and Suppression System using AI | 12 months | Mumbai University | 25000.00 |
| Assistant to the Hearing Impaired (Speech Recognition) | 12 months | Mumbai University | 30000.00 |
| "Audio Classification With Wireless Sensor Networks Using Machine Learning for Home Security" | 12 months | Mumbai University | 40000.00 |
| | | | Total Amount(Z): 150000.00 |

Cumulative Amount(X + Y + Z) = 150000.00

5.5.2 Development Activities (10)

Institute Marks : 7.00

- **Product Development**

Students work on a project over an extended period of time - over two semesters as a part of course "major/mini project" and individual subject mini project - that engages them in solving a real-world problem or answering a complex question as well as participating in competitions. Some of the student groups carry out product based projects. Product development is the process required to bring a product from concept stage to market, Faculty is providing necessary guidance and training for the students to realize this objective.

Some sample product based projects are discussed here

1. ERP Solutions Using SaaS

Project emphasizes the potential of SaaS-based ERP systems for SMEs through an affordable solution. It is based on the organizations need to become more competitive, efficient, and productive. On cloud computing Small and Medium-sized Enterprises (SMEs) can implement an ERP system in a short time frame in a cost-effective way so that investment and management costs associated with the on-premise model can be reduced.

2. Video Captioning Web Application with the Ability to Read out the Video Captions

Real-world videos often have complex dynamics; and methods for generating open-domain video descriptions should be sensitive to temporal structure and allow both input (sequence of frames) and output (sequence of words) of variable length. Additionally, access to the descriptions of such videos is quite limited. To approach this problem, the project employs an end-to-end sequence- to-sequence model to generate captions for videos. After being trained on video-sentence pairs and learning to associate a sequence of video frames to a sequence of words in order to generate a description of the event in the video clip the model naturally is able to learn the temporal structure of the sequence of frames as well as the sequence model of the generated sentences, i.e., a language model. Further, the text to speech module is used and deploying the working model as a web application.

3. Coconut Harvesting

Coconut harvesting has always been a risky profession being the reason for hundreds of deaths each year. The Robot will then automatically guide itself near the coconuts' branch and then the robotic arm will position itself to cut it. The robot will then climb down the tree.

The robot will climb the tree using a suspension mechanism and high torque motors, by placing the wheels vertically along the bark they will exert a perpendicular force against it and the bot will climb up.

The deep learning models are used to identify the coconut bunch and the branch. It will then use ROS to control the arm, and then it will automatically cut it.

Cheaper alternative to manual climbing. Fulfilling the shortage of manual labor and eventually eliminating it. The robot can work for longer hours as compared to humans. The robot will replace manual climbing and therefore save lives.

The project creates value for the coconut farm owners and firms which need to harvest coconuts by providing a cheaper solution and eliminating the problems caused labor shortage

4. Integrity Verification for Digital Assets

The application implements and develops an audit trail for any input passed to it by using the following steps:-

Here it is to be noted that the input passed to the proposed solution can be any digital assets such as videos, an image, an audio stream and documents like pdf, spreadsheets, etc.

a. The app generates the corresponding hash value of the input digital asset and also watermarks the content piece using a digital signature. Perceptual hash of the video is calculated after converting the frames to grayscale images to reduce the impact of pixel variance on similarity score.

b. This cryptographic hash value is then passed to the decentralized network so that it can be stored on the distributed ledger i.e., blockchain ledger. Now, any duplicate video, audio, or tampered digital document can be simply checked by uploading it on the application. The algorithm checks the authenticity and integrity of the digital asset by verifying the hash value and scrutinizing it against various smart contract constraints.

c. If all the requirements are fulfilled, the application will display a message stating that the integrity of the digital asset is maintained. Likewise, it will also mention if the data is tampered with in case of data integrity being compromised. with and reject it simultaneously.

The application leverages the use of blockchain technology to reliably store confidential information; It automatically logs all interactions taking place within the application as transactions and also writes the identifier-hash mappings on the distributed ledger for each of these log entries.

- **Research Centre/Lab**

- Department has applied for a PhD research center under Mumbai university and 3 Ph. D Guides are available in Computer Engineering Department
- Department has Received Grants from MRG and MODROB.
- Department has advance computing facilities like ML Server, Cloud computing Server, and D Link Kit
- Department has started offering the Honours courses-Blockchain and cyber security in order to facilitate the students to choose additionally the specialized courses in the emerging areas of their choice and build their competence in such domain.
- Currently 3 faculty members with PhD Degree and 11 faculty members are pursuing PhD. in different domains Research domains and the facilities in CE department

| Research domain | Description | Facility |
|-----------------|-------------|----------|
|-----------------|-------------|----------|

| | | |
|---|---|---|
| Data Science, Artificial Intelligence and Computing | Machine Learning, Deep Learning, Natural Language Processing, Big Data Analytics, Data and Web Mining, Machine Vision, Cloud Computing | Advanced Computing Lab supported with ML server and Cloud server. |
| Cyber Physical Systems | Blockchain Technology, Cryptography and Network Security, Cybernetics, Human- Computer Interaction, Robotics, Quantum Computing, Internet of Things | Network and Security Lab supported with D Link DCS wireless kit and switches. |
| Software and System Engineering | Algorithms, Computer Architecture, Operating system, Database Systems Software Engineering | Programming and Database Lab |

Research Lab (508) details are as given below:

Machine Configuration:

Lenovo Neo SOT gen 3(Think Centre) Desktop Tower i3 12th gen/ 1TBHDD / 7200rpm/dos
 Lenovo 8GB DDR4 Desktop RAM, Lenovo 19 inch monitor 18.5"/46.99cm C 19-10
 (D19185AD0) Monitor HDMI, With USB keyboard & Mouse.

No. of Machines - 10

Softwares Installed:

| | |
|---|--|
| OS - Ubuntu 20.04 (Xubuntu) Programming Languages - GCC9 Java 11 Python 3.8 php 7.4 Scilab R Umbrella IDE Arduino Android-Studio Code:Blocks Eclipse Jupyter Notebook Netbeans IDE 8.1 VScode | Networking - apache ssh ftp gftp Filzilla NS2 Vmware Wireshark Cisco PacketTracer 6.3 gns3 Database- Mysql-workbench Postgresql-PgAdmin3 Mining, ML and Analytics Weka R-Studio, Python Libraries |
|---|--|

Instructional materials

- Instructional materials provide the core information that students will experience, learn, and apply during a course. Such materials, faculty planned, selected, organized, refined carefully and used in a course for the maximum effect. The planning and selection of instructional materials should take into consideration both the breadth and depth of content so that student learning is optimized.

- **Instructional materials include**

- Print Materials: Readings, Syllabus, Assignments, Lab Manuals, Rubrics Digital Media/Recorded Lectures (Audio or Video)
- Presentation Materials: Lecture Notes, PowerPoint, Handouts
- Open Educational Resources (OER): Textbooks, Online Articles, Audio or Video Clips, Links to Online Resources, Databases, Examples; Simulations
- The faculty provide instructional materials through google classroom or moodle to the students.

Working models/charts/monograms etc.

In every lab appropriate charts are available

5.7.3 Consultancy (from Industry) (5)

Institute Marks : 0.00

2021-22 (CAYm1)

| Project Title | Duration | Funding Agency | Amount |
|---------------|----------|----------------|-----------------------|
| | | | 0.00 |
| | | | Total Amount(X): 0.00 |

2020-21 (CAYm2)

| Project Title | Duration | Funding Agency | Amount |
|---------------|----------|----------------|-----------------------|
| | | | 0.00 |
| | | | Total Amount(X): 0.00 |

2020-21 (CAYm3)

| Project Title | Duration | Funding Agency | Amount |
|---------------|----------|----------------|-----------------------|
| | | | 0.00 |
| | | | Total Amount(X): 0.00 |

5.8 Faculty Performance Appraisal and Development System (FPADS) (30)

Total Marks 25.00

Institute marks: 25.00

FRCRCE established an Internal Quality Assurance Cell (IQAC) that adheres to the detailed standards of the National Assessment and Accreditation Council, an independent organisation created by the UGC. The central administrative framework for the college is developed through the IQACs efforts.

The Internal Quality Assurance Cell of FRCRCE was constituted in 2018. It is performing following tasks on regular basis

1. Improvement in quality of teaching and research by regular inputs to all concerned based on feedback from various stakeholders.
2. Providing inputs for best practices in administration for efficient resource utilisation and better services to students and staff.
3. Providing inputs for Academic and Administrative Audit and analysis of results for improvement in areas found weak.

A. Assessment of the performance:

1. Teaching, learning and evaluation related activities

Teaching: (Classes taught include session tutorials, lab and other teaching related activities): Regular and punctuality to class, remedial teaching, clarifying doubts, counselling and mentoring, additional teaching etc.

2. Examination, Evaluation Activities and Administrative Support & Participation in Students' Research, Co-curricular & Extracurricular Activities:

- (a) Administrative responsibilities such as Head, Co-ordinator, Class teacher etc.
- (b) Examination and evaluation duties assigned by the University or attending the examination paper evaluation.
- (c) Student related co-curricular, extension and field based activities such as students clubs, career counselling, study visits, student's seminars and other events, cultural, sports, NSS and community services.
- (d) Organising seminars/conferences/workshops, other universities activities.
- (e) Evidence of actively involved in guiding Ph.D. students.
- (f) Conducting minor or major research projects sponsored by national or international agencies.
- (g) At least one single or joint publication in peer reviewed or UGC list of Journals.
- (h) Presentation of papers and chairing of sessions
- (i) Guiding and carrying out research projects and publishing the research output in national and international journals

B. Process followed:

- IQAC prepares self-appraisal form as per UGC guidelines considering following parameters:
- Curriculum Coverage (Theory and practical)
- Development of Course Material
- Students Attendance Register Record
- Academic Results
- Projects Guided
- Mentoring and Student Counseling

- Student Feedback
- Faculty Development
- Interaction with the Outside World
- Courses/Seminars/Conference Organized in College
- Publications
- Faculty members fill a self-appraisal form and evaluate
- Faculty member submits a self-appraisal form in the office.
- Principal announces dates of self-appraisal.
- Panel consisting of Director, Principal and HOD interviews Faculty members.
- Principal and HODs assess the performance of each faculty member.
- The assessment process is transparent and faculty members are informed about the assessment results and the areas of improvements.
- Accordingly, faculty decides the corrective measures to improvise the performance and follows the same in the following year.

C. Impact of self-appraisal

A self-appraisal tool aids faculty in identifying their strengths, flaws, and opportunities for academic progress. To address these challenges, the panel supports faculty growth in all areas. The panel encourages involvement in research and consulting projects in order to fulfil the institutes vision and mission. As a result of this appraisal system, the faculty of the computer department appeared in the PET and GATE exams for further study in order to improve their academic performance. In accordance with the self-evaluation, the majority of the faculty is presently pursuing Ph.D. The faculty achieves promotions and rewards through a self appraisal system.

5.9 Visiting/Adjunct/Emeritus Faculty etc. (10)

Total Marks 1.00

Institute Marks : 1.00

The College believes in conveying knowledge through a variety of methods. In addition to regular lectures and labs, students participate in several technical and non-technical committees/councils. They are encouraged to participate in various events such as Hackathon, Robotics, Project Competition, Automobile Design and Manufacturing, Workshops, Guest Lectures by Industry professionals and famous professors, Industrial Visits, etc.

6 FACILITIES AND TECHNICAL SUPPORT (80)

Total Marks 69.00

6.1 Adequate and well equipped laboratories, and technical manpower (30)Total Marks

25.00 Institute Marks: 25.00

| Sr. No | Name of the Laboratory | Number of students per set up (Batch Size) | Name of the Important Equipment | Weekly utilization status (all the courses for which the lab is utilized) | Technical Manpower Support | | |
|--------|---|--|--|---|-----------------------------|--------------------|------------------------------------|
| | | | | | Name of the Technical staff | Designation | Qualification |
| | Database management Lab(603) | 20 | Lenovo Neo 50T gen3(Think Centre) Desktop Tower i3 12th gen/1TBHDD / 7200rpm/dosLenovo 8GB DDR4Desktop RAMLenovo 19 inch monitor18.5"/46.99cm C 19-10(D19185AD0) MonitorHDM With USS keyboard Mouse. | 24 | | | |
| | | | | | Ajay Kali | Sr. Lab Assistant. | Diploma In Industrial Electronics |
| 2 | Analysis of Algorithm (604) | 20 | Lenovo Neo 50T gen3(Think Centre) DesktopTower i3 12th gen/1TBHDD / 7200rpm/dosLenovo 8GB DDR4Desktop RAMLenovo 19 inch monitor18.5"/46.99cm C 19-10(D19185AD0) MonitorHDM With USS keyboard Mouse. | 30 | | | |
| | | | | | Ajay Koli | Sr. Lab Assistant | Diploma In Industrial Electronics |
| 3 | Computer Network & System Security Lab (609) | 20 | Dell 3020MT Optiplex, Core i3 4th Gen. Intel CPU + M/B, 4GB Ram, 500GB H/D, USB KeyBoad + Optical Mouse, Dell 18.5" LED TFT Monitor | 22 | | | |
| | | | | | Pooja Banekar | Lab Assistant | Diploma in Electronics Engineering |
| 4 | Web Technology and software engineering Lab (611) | 20 | HP Desktop 202 G1 MTFOK63AV, Intel i3 4Ghz CPU, 4GB RAM, 500GB HOD, USB Keyboard & Optical Mouse, Compaq 18.5" LED Monitor | 26 | | | |
| | | | | | Pooja Banekar | Lab Assistant | Diploma in Electronics Engineering |

| | | | | | | | |
|---|---|----|--|----|--------------|--------------------|-----------|
| 5 | Computer Programming Lab (710) | 50 | <p>1. DELL Desktop Optilex 3050MT, Processor i3(7100), 8GB DDR4 RAM, 1TB SATA HOD.</p> <p>2. Lenovo Desktop V530-10TWA006IH 8th Generation Intel @Core#i3-8100 Processor @ 3.6 GHz, 2400MHz, 6MB Smart Cache, 64 Bit/ 4 GB DDR4 2400RPMRAM 11TB SATAHDD.</p> | 26 | | | |
| | | | | | Jiten Naik | Sr. Lab Assistant. | B.Sc.I.T |
| 6 | Advanced Computing & Machine Learning Lab (601) | 20 | <p>ACER VERITON MT DESKTOP, CORE i3 6100 H110-M4 PROCESSOR, 8GB DDR4 RAM, 1TB HOD, Integrated graphics, 19.5" WTFT Display, USB Keyboard & Optical Mouse, Gigabit LAN</p> | 28 | | | |
| | | | | | Pankaj Yadav | Mechanic | CCNA, LLB |
| 7 | Distributed Computing Lab(602) | 20 | <p>LENOVO THINK CENTER E73 DESKTOP, CORE i3, H81 CHIPSET, 4GB DDR3 RAM,500GB SATA HOD, HD GRAPHICS</p> | 30 | | | |
| | | | | | Pankaj Yadav | Mechanic | CCNA, LLB |

6.2 Additional facilities created for improving the quality of learning experience in laboratories (25) Total Marks 20.00

Institute Marks: 20.00

| Sr. No | Facility Name | Details | Reason(s) for creating facility | Utilization | Areas in which students are expected to have enhanced learning | Relevance to POs/PSOs |
|--------|--|---|---|--|--|-----------------------|
| 1 | Machine Learning Server-ThinkSystem SR650 Lenovo | Server: ThinkSystem SR650 RAM: 16GBX4 qty(64GB) Processor: Intel Xeon Silver 4208 8C 85W 2.1GHz GPU: ThinkSystem NVIDIA Tesla V100S 32GB PCIe Passive GPU HDD-3TB | With the rise of big data, AI and machine learning methods have rapidly moved from purely conceptual to powerful business tools. Businesses are producing more data than ever before, all of which will need processing, classification, and analysis. AI and machine learning projects need to process high volumes of unstructured data with sophisticated mathematical models which demand the highest level of computing power and performance. The newly built lab facility with dedicated servers offers the possibility of implementing various AI software solutions to begin AI projects in the cloud. This facility helps accelerating ML projects and ML based applications. It helps to improve research capabilities in the ML domain. It is used to serve the diverse needs of undergraduate classes as well as research workloads. | Research Development and Projects. It will be useful for conducting advanced experiments for course code CSC701(ML),CSC702(BDA), CSDC8011(DL) & ; CSDC8021(Optimization in ML) Also will be useful for Mini Project and B. E Major project implementation. | ML and AI Application Development, Deep Learning based Applications. | PO3, PO5, PSO1 |

| | | | | | | |
|---|--------------|---|--|--|--|----------|
| 2 | Cloud server | Server 3.3 Ghz / 8 mb / 80 w 1xB GB Intel Xenon E3 -1225 v5 3.3 / 5 mb / 1x8 GB DDR 4/ DVD writer 2900ps (S/N G2TY1272) | <p>Cloud Computing is a quickly growing segment of the technology industry and is an incredibly popular and beneficial data storage resource. Cloud computing has made it easier for businesses to access their data and benefit from computing resources without having to buy and maintain physical data centers and servers, as data is stored in the cloud. Businesses have almost reached the point where working within the cloud is a necessity. Be it for data storage, data synchronization, web-based apps, or even cloud-based operating systems, for businesses to keep up with the rapidly changing world around them, they must ride the cloud. However, that doesn't mean you need to depend upon a third-party to host your cloud. This facility is created to eliminate the dependency of third party to host the cloud and for efficient data storage.</p> | Projects and academics. It will be useful for conducting advanced experiments for course code CSL605(CC) | AWS Certification and Advance study in Cloud Computing | PO3.PO5. |
|---|--------------|---|--|--|--|----------|

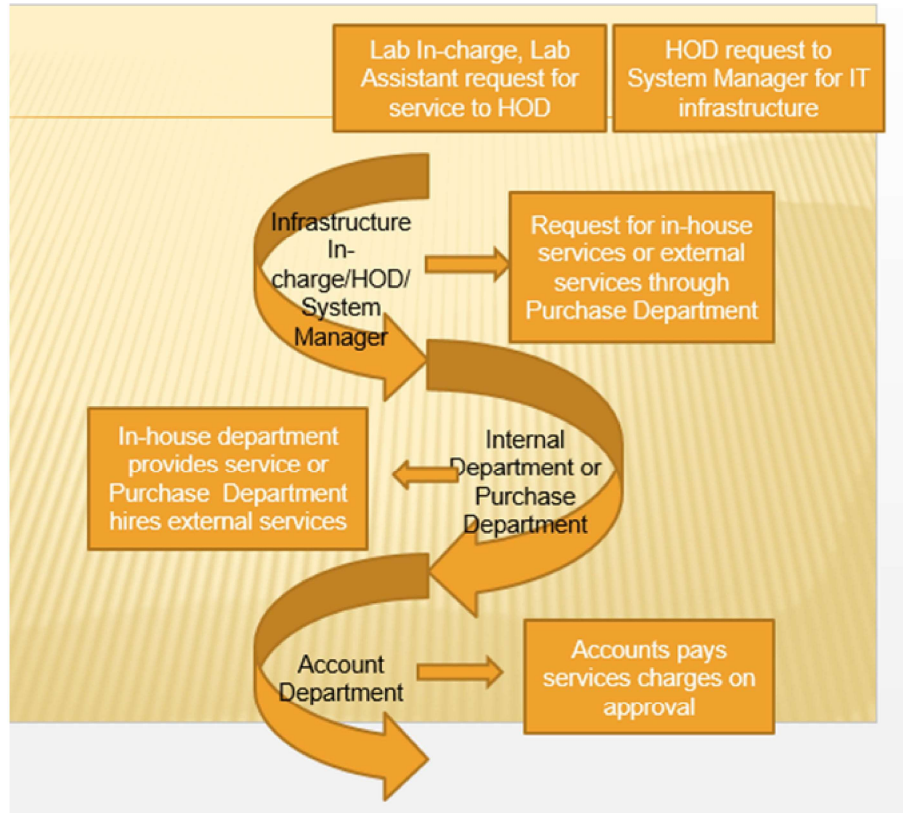
6.3 Laboratories: Maintenance and overall ambiance (10)

Total Marks 9.00
Institute Marks : 9.00

Maintenance

- Department ensures regular maintenance of equipment, systems, software maintenance, electrical accessories, air conditioners, etc.
- Most of the computer related maintenance is done in-house by technical staff.
- In case external service is required, external service providers are called by purchase department.
- Most of the services are available in the campus. Internal services which are available in the campus are availed by internal requests. Major services available in campus are: carpentry, civil, electrical, welding, etc.

- The Institute has well defined process to use internal or external service:
 - For internal services, interdepartmental request can be send. On receiving the request,the concerned department provides service. On completing the work, the concerned department raise the bill which is paid by office.
 - For external service, the request is send to purchase department. Purchase department calls the service provider as per the list available with department. The concerned service provider submits the quotation. If quotation is as per the MOU signed, the work is assigned to the concerned service provider. On completion of the job, concerned service provider raises the bill which is paid by office.



- Institute has Infrastructure In-Charge who is responsible for maintenance of the common infrastructure which includes corridors, washrooms, classrooms, etc.
- A faculty member is appointed as floor in charge who is responsible to identify maintenance requirement for common infrastructure and report to Infrastructure in-charge. Depending on type of maintenance, Infrastructure head hires either internal service or external service following the procedure as described above.
- Institute has appointed external agencies for maintenance of infrastructure, equipment and other facilities such as lifts, fire extinguishers, fire systems, UPS, water purifiers, water coolers, photocopy machines, etc. Some of them are maintained through an annual maintenance contract.
- Housekeeping service is hired for day-to-day cleaning of common facilities such as washrooms, corridors, etc.

Ambiance:

- All laboratories are air-conditioned and have minimum 20 terminals.
- Every student performs practicals independently, i.e., every student uses independent computer for performing practical.
- Internet is available of every system.
- Every lab has white board installed.
- Laboratories are designed such a way that sufficient moving space is available.
- Lab manuals of all experimental procedures for concerned labs are provided.

6.4 Project laboratories (5)

Total Marks 5.00
Institute Marks : 5.00

Project Laboratory resources

- Total number of computers: 50
- Mainly used for project work like Mini project, Major project.
- Remote access to Machine Learning server
- Following softwares/tools are available in the Lab:
 - OS: Lubuntu 20.04
 - Compilers: C, C++, JDK 11 , Python 3x, PhP
 - Tools: Network Simulator 2, Wireshark 2.0.2, CISCO packet tracer
 - Database: pgAdmin IV, PostgreSQL 1.22.0
 - IDE: Eclipse Mars Release 4.5, Netbeans 8.0, VS-code, Pycharm, Code Blocks
 - QtOctave 0.10.1, Spyder 2.3.8, SCILAB, QT5, WEKA
 - RStudio 1.0.136
 - UML Tools: Umbrello 2.18.3, Violet UML Editor 2.1,
 - VirtualBox 5
- As per the project requirement, the required open source tools, IDE, libraries are installed.
- Students are allowed to carry their laptops and work in the lab
- All softwares are regularly updated
- Subscribed e-journals available through Institute IP address

Utilization

- Used at least 6 hours per day
- Kept open up to 6 PM everyday
- Students can work late in evening by taking prior permission

6.5 Safety measures in laboratories (10)

Total Marks 10.00

Institute Marks: 10.00

| Sr. No | Laboratory Name | Safety Measures |
|--------|---|---|
| | Advanced Computing and Machine Learning Lab | <ol style="list-style-type: none">1. Fire extinguisher is available on every floor and refilled regularly.2. Proper branded MCBs are provided in the lab3. Structured cabling is provided in the lab.4. Fire hose pipes for fire protection General Safety Measures in all laboratories.<ul style="list-style-type: none">• Triple protection to all electrical accessories• Regular maintenance of electrical network• Fire Extinguishers available near to labs and classrooms and are refilled periodically.• Workshop on Fire and electrical safety conducted periodically• The locations and operating procedures of all safety equipment including first aid kit(s), and fire extinguishers are displayed on notice board. |
| 2 | Distributed Computing Lab | <ol style="list-style-type: none">1. Proper branded MCBs are provided in the lab2. Structured cabling is provided in the lab. |
| 3 | Database management Lab | <ol style="list-style-type: none">1. Proper branded MCBs are provided in the lab2. Structured cabling is provided in the lab. |
| 4 | Analysis of Algorithm Lab | <ol style="list-style-type: none">1. Proper branded MCBs are provided in the lab2. Structured cabling is provided in the lab. |
| 5 | Computer Network and Security Lab | <ol style="list-style-type: none">1. Proper branded MCBs are provided in the lab2. Structured cabling is provided in the lab. |
| 6 | Web Technology and Software Engineering Lab | <ol style="list-style-type: none">1. Proper branded MCBs are provided in the lab2. Structured cabling is provided in the lab. |
| 7 | Computer Programming Lab | <ol style="list-style-type: none">1. Proper branded MCBs are provided in the lab2. Structured cabling is provided in the lab. |

7 CONTINUOUS IMPROVEMENT (50) Total Marks 46.00

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

Total Marks 18.00

Institute Marks: 18.00

POs Attainment Levels and Actions for Improvement- (2021-22)

| POs | Target Level | Attainment Level | Observations |
|--|--------------|------------------|--|
| PO 1 : Engineering Knowledge | | | |
| PO 1 | 2.7 | 2.76 | Target level has been achieved. However, following observations were made: A competent computer graduate should have a solid foundation of theoretical and practical knowledge of science and mathematics, which they should correlate and apply in their projects and research. |
| <p>Action 1: Students are encouraged to participate in technical events where their basic knowledge converts to application matching, with defined level of requirements for solving real world problems. Action 2: Incorporation of more numerical problems during the regular lectures and as assignments for subjects like Applied Mathematics, DSGT, including application driven problem solving to strengthen their acquired knowledge. Action 3: Students are encouraged to register for online courses (Swayam, NPTEL, MOOCs) launched by AICTE. Moreover, they are given guidance and motivation for self-study. Action 4: In the course Computer Networks students learn about protocols and algorithms to facilitate communication between devices. But there are no pre-requisite subjects covered in the curriculum which deals with the basic communication elements and methods, so that they will be able to solve problems pertaining to the various protocols. So, in the lesson plan of CN additional lectures are taken to introduce the concepts of bandwidth-delay, multiplexing, and encoding, etc.</p> | | | |
| PO 2 : Problem Analysis | | | |
| PO2 | 2.7 | 2.68 | <p>Target level has not been achieved. And the following observations were made:</p> <ul style="list-style-type: none"> • The problem solving and analyzing skills, though gained through various courses, must be improved. • Research exposure to the students is less |
| <p>Action 1: Idea competition held for the students of all semesters to showcase the innovative elements in their project. Algorithmic 1.0 is an event conducted to promote out-of-the-box thinking and problem-solving skills of the students. Action 2: SEMI code event is the coding competition that was carried out over several rounds where students try and crack simple coding problems based on data structures and similar topics. Students acquired knowledge about how to find the best solution for the given problem statement by applying the programming and technical skills within the given time window. Action 3: Students are required to do a thorough literature study of the recent researches and publications as a requirement for the Project approval. They are encouraged to publish papers of their project accomplishments.</p> | | | |
| PO 3 : Design/development of Solutions | | | |
| PO 3 | 2.7 | 2.76 | Target level has been achieved. Many of the projects developed by the student as course projects, Mini projects/ major projects (final year) are considering the social and environmental issues. |
| <p>Action 1: Conducted Webinars on various topics like "Design Thinking, Critical thinking and innovation Design", "Design Thinking for Web Based Projects" and on "Developing A Corona Virus Tracker Software" for the students to understand the system design components and constraints. Action 2: A workshop on Chatbot Designing was held for the students to learn and implement simulation Software and use open source tools. 'Design thinking for web-based projects' is another event conducted for Project design.</p> <p>Action 3: The various design options and comparative studies are presented for project evaluations and published as research papers also.</p> | | | |

PO 4 : Conduct Investigations of Complex Problems

| | | | |
|-----|-----|-----|---|
| PO4 | 2.7 | 2.8 | <p>Target level has been achieved. However, following observations were made:</p> <ul style="list-style-type: none">• Less number of students have taken up research-based projects. Only few projects turned up into research publications. Steps should be taken to inculcate research skills.• Students must analyse and synthesize the data, produce results and derive specific conclusions for complex problems. |
|-----|-----|-----|---|

Action 1: Students are required to do a thorough literature study of the recent researches and publications as a requirement for the Project approval. They are encouraged to publish papers of their project accomplishments. Action 2: Seminar for final year students on 'Writing Research Paper and Patent application' was organized to promote research publication. Action 3: In the preliminary coding subjects of Java and OSL (Python Programming) as well as in Data Structures and algorithms the students are continually encouraged to write good code which is efficient and robust. Action 4: In the technical events of Synergy and Unscript hackathons, the evaluation criteria include Feasibility, Practicability, Sustainability of the code written by the students.

PO 5 : Modern Tool Usage

| | | | |
|-----|-----|-----|---|
| PO5 | 2.7 | 2.7 | <p>Target level has been achieved. It is observed that knowledge and advanced tool and resources usage are necessary to meet the industry standards and research.</p> |
|-----|-----|-----|---|

Action 1: Continued association with professional bodies like CSI and Google Developers Student Club (GDSC). CSI and ACM arranged expert talks to create more awareness among the students about professional engineering practice. (For example: Get Started with Deep Learning organised by ACM where Students acquired knowledge about the best platform and prerequisite to get started for ML and Deep Learning and hardware requirement for deploying applications). Action 2: Workshop on Game Development using Java and Unreal Engine where Game Development using Java Programming Language and different packages such as Swing, AWT, Applets, etc. were demonstrated. Action 3: WAMP server downloads and usage was a part of Web Development Design thinking seminar. Moreover, Workshops on Linux Security and Hacking by Mozilla club and Expert talk on Tools like Wireshark, packet analyzer etc. were also conducted. Action 4: Students have taken advanced online courses on the topics like AWS, Blockchain, Smart Contracts R programming, Google Data Analytics, Google Machine Learning, .Ethereum & Solidity: The complete developers guide etc. and got certified.

PO 6 : The Engineer and Society

| | | | |
|-----|-----|------|--|
| PO6 | 2.7 | 2.88 | <p>Target level has been achieved. However, following observation were made:</p> <ul style="list-style-type: none">• Syllabus does not include any course which addresses concerns related with professional engineering practices used to evaluate societal, health, safety, legal, and cultural issues• The students are found to be less aware about the basic health and safety issues with an engineering point of view. |
|-----|-----|------|--|

Action 1: Conducted a Webinar on Legal & Ethical Steps to be followed for start-ups. Action 2: To understand the safety concerns and social aspects, industry-visit is planned to expand their practical knowledge with the effect of improved practices in engineering. Action 3: Women Healthcare Awareness programs organized for the overall development of women health. For example: Dr. Pallavi Raut gave a brief introduction 'Polycystic Ovarian Syndrome' a disease that can occur in female reproductive system; its cause, symptoms and how to take proper precautions. Action 4: Plagiarism checks are made mandatory and conducted for Final Year project documentations.

PO 7 : Environment and Sustainability

| | | | |
|------|-----|-----|--|
| PO 7 | 2.7 | 2.9 | Target level has been achieved. However, following observation were made: •None of the course addresses understanding the impact of professional engineering solutions on society and the environment, as well as the need for sustainable development. |
|------|-----|-----|--|

Action 1: Students are encouraged to take up mini projects/projects where societal and environmental issues can be addressed. The environment related projects like MedoNation, Stray animal rescue, Illegal Land acquisition using image processing are done by students. Action 2: National Pollution Control Day is observed under NSS. Other activities like beach clean-up, Blood donation camp instill the sense of social commitment in students.

PO 8: Ethics

| | | | |
|-----|-----|------|--|
| PO8 | 2.7 | 2.57 | Target level is not achieved. The curriculum does not cover ethics and accountabilities for engineering practices. |
|-----|-----|------|--|

Action 1: Projects and mini projects are scrutinized, code reviews are conducted, plagiarism checks are done to determine the originality of the project to ensure professional ethics. Turnitin reports are mandatory to be attached with their project reports and synopsis. Action 2: Staff members participated in UHV-FDP which prepared the educators to teach the students with holistic value-based education and promoting national development.

PO 9 : Individual and Team Work

| | | | |
|-----|-----|------|---|
| PO9 | 2.7 | 2.56 | Target level is not achieved. Students are required to inculcate leadership quality, and to improve interpersonal skills to work as a team. |
|-----|-----|------|---|

Action 1: Workshop on "Entrepreneurship and Innovation as Career Opportunity" (2021-22) Action 2: To promote team work, projects are evaluated on the basis of individual contribution as well as team coordination. Action 3: Students are encouraged to be the part of various technical and non-technical teams/councils.

PO 10: Communication

| | | | |
|-------|-----|------|--|
| PO 10 | 2.7 | 2.64 | Target level is not achieved Students from vernacular medium find it hard to communicate effectively and are timid to express the ideas. |
|-------|-----|------|--|

Action 1: Emphasis is given for individual communication and participation in all presentations of their project work. Student seminars are conducted in many subjects as a part of teaching/learning process. Action 2: To enhance the employability skills of the students, training programs conducted on the topics: how to face the interview, GD, career development, higher studies, entrepreneurship development. Action 3: In the event 'Business Model Canvas', students have presented Design models and Business plans for their project ideas and these project ideas have been presented in front of marketing professionals by teams. Action 4: Fr. Conceicao Rodrigues Memorial Debate (CRMD) is a platform where students can improve their communication and interpersonal skills. Students organize, participate and debates on a national relevant topic from multiple perspectives.

PO 11: Project Management and Finance

| | | | |
|------|-----|------|--|
| PO11 | 2.7 | 2.56 | Target level has not been achieved. The Programme includes minimal multidisciplinary approach and no course related to financial management. |
|------|-----|------|--|

Action 1: Students are taught oriented to prepare project proposals, analysis and design documentations as well as timeline projections, with the guidance of faculty for Project work and IRG. Students are asked to maintain logbook to showcase timeline required for smooth functioning of project execution. Action 2: A Workshop on Project Management -A step towards Innovative Product was conducted as part of IIC events.

PO 12: Life-long Learning

| | | | |
|-------|-----|------|--|
| PO 12 | 2.7 | 2.62 | Target level has not been achieved. • Internship which promotes life-long learning is not emphasized in the curriculum. Students must be motivated to explore, learn and grow. • Students to be encouraged to improve their own quality of life and sense of self-worth by paying attention to the ideas and goals that inspires them. |
|-------|-----|------|--|

Action 1: Students are encouraged to take up online courses on new technologies which would help them in continuous learning. Students were asked to register for online courses (Swayam, NPTEL, MOOCs) launched by AICTE. Action 2: Students are encouraged to publish research papers in various national and international journals/conferences. Action 3: An E-Symposium on 'Building Innovation Ecosystem in Educational Institutions'- Day 1 (11th Jan 2022) was held to improve innovative thinking. IIC-FrCRCE cell is established as per the guidelines issued by MoE Innovation Cell at the institute. In order to support pre-incubation; IPR cell, Startup cell, E-cell and Student clubs have been set up for facilitating and mobilizing resources from different sources. Action 4: My Story - Motivational Session by Successful Entrepreneurs/Start-up founders, is conducted frequently in the campus to encourage students to think in the direction of becoming an entrepreneur. The NISP team in the campus is formulated to achieve this agenda.

PSOs Attainment Levels and Actions for Improvement- (2021-22)

| PSOs | Target Level | Attainment Level | Observations |
|------|--------------|------------------|--------------|
|------|--------------|------------------|--------------|

PSO 1 : Apply fundamental computer science knowledge to solve real world problems.

| | | | |
|--|-----|------|--|
| PSO1 | 2.7 | 2.42 | Target level is not achieved. Students are required to adapt computer engineering fundamentals in depth and apply the same to achieve real-world challenges. |
| <p>Action 1: Workshops and technical activities were included for students to acquire the knowledge of real-world design issues. Some examples are El REST API- Technical Webinar for understanding the microservice architectures, as compared to monolithic architectures. Action 2: During the Event 'Proof of Concept' students have presented innovative ideas that formulated problems and designs for solutions with help of all theoretical and literature knowledge. Also identified basic tools required to implement solutions.</p> | | | |

PSO 2: Design and Implement software systems of varying complexity in multidisciplinary scenarios that meet specified requirements with appropriate consideration to architectural, algorithmic and security aspects

| | | | |
|--|-----|------|--|
| PSO2 | 2.7 | 2.41 | Target level is not achieved. The Programme includes minimal multidisciplinary approach and hence to design a complex system with multidisciplinary aspects, students are required to acquire core programming and interdisciplinary technical skills. |
| <p>Action 1: Workshops and technical activities were included as co-curricular activities to enhance the capability of students to relate it to the classroom lectures. For e.g., Training on Arduino programming Action 2: 'Design Thinking For Web Based Projects' was designed to introduce students to design thinking for web based projects (using CSS and bootstrap). Action 3: 'SEMI code' event is the coding competition that was meant for Students to acquire knowledge about how to find the best solution for the given problem statement by applying the programming and technical skills within the given time window. Action 4: On 'Demo Day' organized by E-cell, students present a working prototype model for technical projects. These projects are implemented by a team of students by using various core technologies, modern tools. These prototypes are presented in front of a panel of entrepreneurs.</p> | | | |

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

Total Marks 9.00
Institute Marks 9.00

Academic audit is planned at the end of academic year. An expert from academia is invited to conduct academic audit. Auditor verifies and discusses the teaching plan, its execution and outcome evaluation.

Process for Academic Audit:

- IQAC prepares academic audit form considering following parameters:
- Teaching Plan
- Content quality and depth
- Delivery mechanism

- Content beyond syllabus
- Quality of lab manuals, newly added experiments
- Evaluation methods, Assessment rubrics and assessment analysis
- CO-PO mapping
- Knowledge of tools used
- Identification of weak and bright students
- Help rendered to student
- Collaboration with colleagues
- Projects guided
- Head of the department appoints external auditor.
- HOD circulates external audit form among faculty members
- HOD announces dates of the external audit.
- Faculty member presents their course files to external auditor.
- External auditor assesses the course files and assigns marks as per audit form, puts appropriate remarks.
- External auditor gives suggestion to concerned faculty member.
- Based on the feedback from external auditor, faculty member takes remedial actions if necessary.

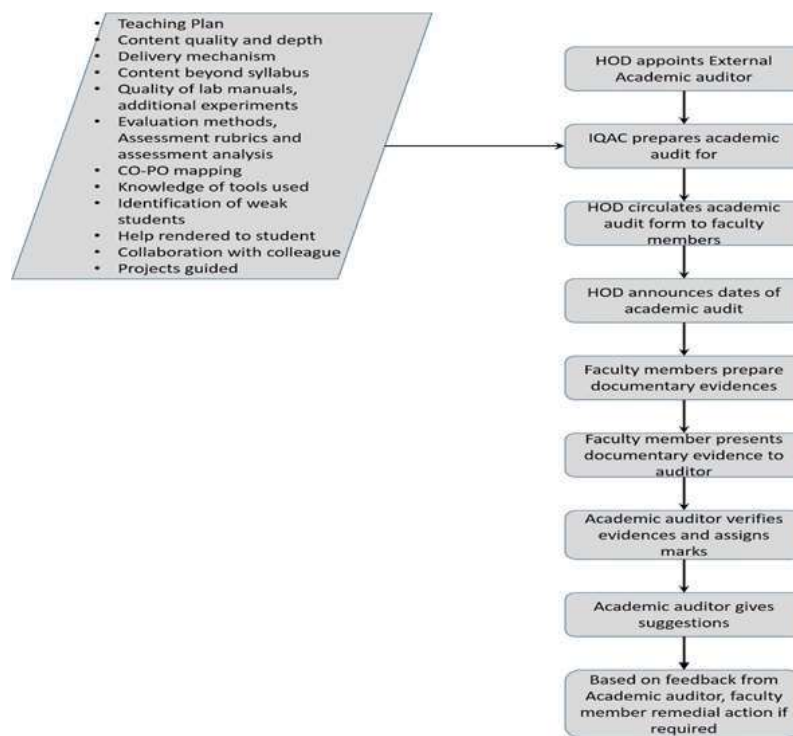


Fig: Academic Audit Process

Observations/suggestions reported by the External Auditor (CAY 2021 - 22):

1. Provide additional resources to the students
2. Need improvement in the content beyond syllabus
3. CO-PO mapping justification needs refinement
4. Incorporate more innovative teaching-learning methods
5. Invite industry expert for mini-project evaluation

6. Include End Semester Exam paper solution in course file
7. Include innovative experiments

Observations /suggestions reported by an External Auditor (CAY 2020 - 21):

1. In some of the cases the target level needs to be revised at program level, if they are attained.
2. The question paper quality for term test is good. Some of the faculty members are doing exceptionally well.
3. Paper publication should be increased in quality journals/conferences.
4. Faculty members are aware of the processes and what they need to do.
5. In few cases, asked to revise CO-PO mapping.

Observations /suggestions reported by an External Auditor (CAY 2019 - 20):

1. Help rendered to students with respect to career/skill development /mentoring need to be improved.
2. Need to share additional online **TL** resources with students w.r.t subjects taught
3. Moodle platform can be adopted for the conduct of Tests and examinations.
4. More Guest Lectures can be conducted.
5. Track of weaker students & their progress is missing.
6. CO-PO mapping is to be assessed by PAC.
7. Some of the faculty members need to adapt process to identify weak students.
8. Attainment analysis needs to be improved.

Following actions are taken in the current academic year:

IQAC has formulated processes to improve the learning experience of the students which includes the following:

- Identification of innovative and appropriate teaching method/tool for each topic in the syllabus must be implemented and documented accordingly.
- Interact and take regular feedback from the students to judge the impact of the various tools
- Process has been formulated to identify the weak and strong students based on various assessment parameters.
- Research policies has been revised and is being followed from the current academic year.

Department Quality Assurance Committee (DQAC) review Process:

- Department Quality Assurance Committee (DQAC) reviews COs and mappings and give feedback to the concerned faculty member.
- New exam reform policy has been followed from current academic year with PO relevant competency and their appropriate performance indicators (PI).
- The quality, mapping and difficulty level of the question papers is verified by the DQAC members.
- DQAC analyzes PO and CO attainment levels to identify program level curriculum gap or course level gap.
- DQAC suggested remedial measures to bridge program level gaps

Faculty Members follows some processes for maintaining continuous improvement in the quality.

- Google classroom was used to upload the learning resources and conduct online evaluation of tests and assignments
- Golab platform was used to write and execute python code through the browser during online practical sessions
- Target Levels have been revised from the current academic year (2022-23).

- Guest lectures are conducted for content beyond syllabus to provide a wide aspect of course subject from the application point of view.
- Faculty paper publications have been increased with quality. More papers are published in Scopus indexed journals, IEEE Explore and UGC care journals.

7.3 Improvement in Placement, Higher Studies and Entrepreneurship (10)

Total Marks 10.00

Institute Marks 10.00

Many multinational and well-known Indian companies regularly visit our campus for their requirements. Morgan Stanley, JP Morgan, IBM, Capgemini, ATOS, Amazon, Quantiphi, Jio Digital, Infosys, Amdocs are to name few. Also core industries like Tech Mahindra, L & T, Godrej, Selec Control, Johnson control are recruiting our students. Most of the eligible students get placement through campus recruitment drive. About 20% students opt for higher education immediately after graduation while almost 80% students pursue for higher studies after one- or two-years of industrial experience. Students get admitted to reputed universities like the University of Texas, Georgia Tech, Arizona State University, Clemson University, Boston University, Northern Illinois, SUNY Buffalo etc.

The statistics for past three years is as follows:

Academic year 2021 - 22:

- Total number of Final Year Students: 72
- Number of students placed in companies or government sector . 49
- Dual or more placements: 30
- Minimum Salary: 3.15Lacs per annum
- Maximum Salary: 14.4Lacs per annum
- Number of students admitted to higher studies with valid qualifying scores (GATE or equivalent state or national level tests, GRE, GMAT, etc.): 18
- Number of students turned entrepreneur/technology: 1

Academic year 2020 - 21:

- Total number of Final Year Students: 72
- Number of students placed on campus in companies or government sector : 54
- Dual or more placements: 34
- Minimum Salary: 3.18 Lacs per annum
- Maximum Salary: 9 Lacs per annum
- Number of students admitted to higher studies with valid qualifying scores (GATE or equivalent state or national level tests, GRE, GMAT, etc.) : 8

Academic year 2019 - 20:

- Total number of Final Year Students: 78
- Number of students placed in companies or government sector: 47
- Dual or more placements: 62
- Minimum Salary: 3.00 Lacs per annum
- Maximum Salary: 6.70 Lacs per annum
- Number of students admitted to higher studies with valid qualifying scores (GATE or equivalent state or national level tests, GRE, GMAT, etc.): 18
- Placement Statistics:

| | 2022 -23 | 2021 -22 | 2020 - 21 | 2019 -20 |
|---|----------|----------|-----------|----------|
| Total No. of Students. | 142 | 72 | 77 | 78 |
| No. of Eligible students | 141 | 70 | 77 | 47 |
| No. of Eligible and registered students | 105 | 49 | 60 | 47 |
| No. of Students placed | 95 | 48 | 60 | 41 |
| No. of Students Opting for Higher studies | 29 | 18 | 15 | 18 |
| No. of students opting for other career options | 7 | 4 | 2 | 0 |

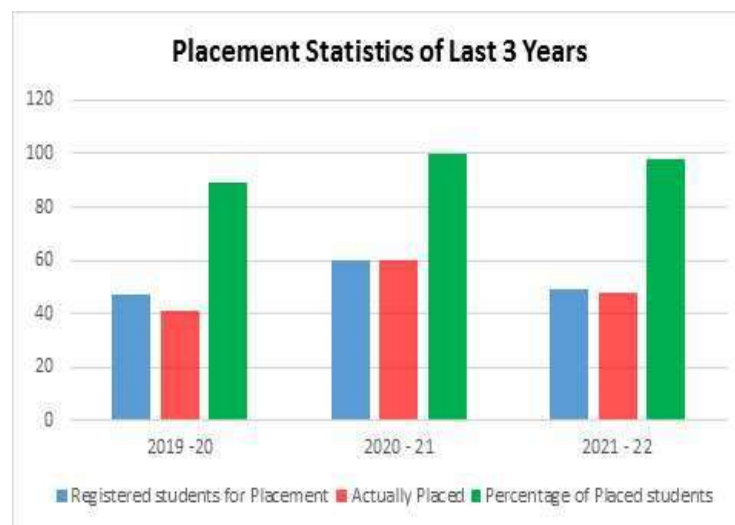


Fig: Placement Statistics of Last 3 Years

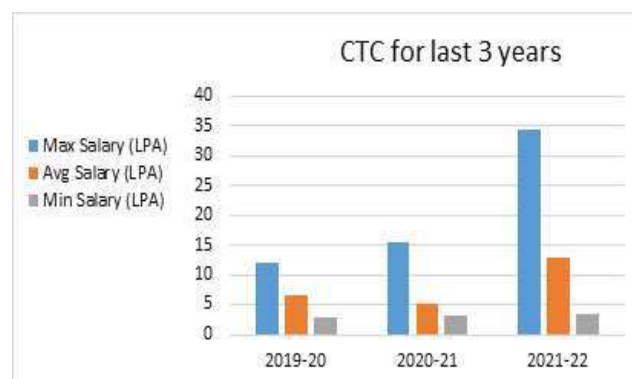


Fig - Placement statistics showing last 3 years in terms of CTC (in lakhs)

List of Entrepreneurs:

| | | | |
|-------------------|--|-------------------------------|------|
| Ritika Rumde | Co-founder | Game developers association | 2024 |
| Bariq Wani | Founder & CEO | Foodhung | 2023 |
| Vedant Sahai | CTO, Co-Founder | DataCertus | 2021 |
| Shantanu Iyengar | CEO/Founder | Siti Solutions | 2019 |
| Shantanu Iyengar | Co-Founder/Technical Lead | Rent Pe | 2019 |
| Manpreet Krishan | Founder/Tech Head | Solo Tech | 2018 |
| Abhishek Kateliya | Co-founder | StockUp | 2018 |
| Abhishek Kateliya | Founder | Third Block Community | 2018 |
| Sumeet Darade | Entrepreneur, CTO | The Contrast India | 2015 |
| Gaurav Sen | Founder & Managing Partner | InterviewReady | 2014 |
| Darpan Negandhi | Entrepreneur, Founder | BehindBars | 2011 |
| Tanmay Shah | Co-Founder | Sphinx Systems | 2011 |
| Prashant Borana | Co-Founder & Partner | Invizio Solutions LLP | 2009 |
| Mihir karkare | Co founder and Evp | Mirum India | 2007 |
| Lester Fernandes | Founder & Managing Director | Cloud native Startup | 1998 |
| Vipul Rajdev | Founder & Managing Partner | SatvaSys Solutions | 1996 |
| Parag Gadhia | Founder, Director | LEGO SERIOUS PLAY Facilitator | 1996 |
| Parag Gadhia | Personal Leadership & Accountability Coach | DEEP ABILITY CONSULTING | 1996 |

7.6 Improvement in the quality of students admitted to the program(10) Total Marks 9.00

Institute Marks : 9.00

| Item | | 2022-23 | 2021-22 | 2020-21 |
|---|-------------------------|---------|---------|---------|
| National Level Entrance Examination | No of students admitted | 5 | 3 | 7 |
| | Opening Score/Rank | 95 | 88 | 95 |
| JEE Main | Closing Score/Rank | 85 | 83 | 69 |
| | No of students admitted | 123 | 127 | 122 |
| State/ University/ Level Entrance Examination/ Others | Opening Score/Rank | 99 | 98 | 98 |
| | Closing Score/Rank | 90 | 81 | 76 |
| MH CET | | | | |
| Name of the Entrance Examination for Lateral Entry or lateral entry details | No of students admitted | 12 | 12 | 13 |
| | Opening Score/Rank | 92 | 97 | 94 |
| | Closing Score/Rank | 84 | 95 | 84 |
| DSE | | | | |
| Average CBSE/Any other board result of admitted students (Physics, Chemistry & Maths) | | 261 | 268 | 229 |

8 FIRST YEAR ACADEMICS (50)

Total Marks 46.18

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

Total Marks (4)

Please provide First year faculty information considering load for the particular program

| Name of the faculty member | PAN No. | Qualification | Date of Receiving Highest Degree | Area of Specialization | Designation | Date of joining | Teaching load (%) | | | Currently Associated (Yes / No) | Nature Of Association (Regular / Contract) | Date Of leaving(In case Currently Associate is 'No') |
|----------------------------|------------|--------------------|----------------------------------|---|---------------------|-----------------|-------------------|-------|-------|---------------------------------|--|--|
| | | | | | | | CAY | CAYm1 | CAYm2 | | | |
| Mr. Dileep Cha | AEYPN2392G | M.Sc | 22/04/1996 | Electronics | Assistant Professor | 22/12/1997 | 100 | 100 | 100 | Yes | Regular | |
| Dr. Hemant Ma | AJGPK4849J | M.Sc. and PhD | 27/12/2001 | Chemistry | Assistant Professor | 21/12/2000 | 100 | 100 | 100 | Yes | Regular | |
| Dr. Sunil Shripa | ABZPY1509L | M.Sc. and PhD | 10/02/2012 | Organic Chemistry | Assistant Professor | 01/04/2013 | 100 | 100 | 100 | Yes | Regular | |
| Mr. Prasad Nar | ACCPL8232B | M.Sc | 06/11/2006 | Mathematics | Assistant Professor | 01/07/2004 | 64 | 25 | 25 | Yes | Regular | |
| Mr. Pradeep Vi | BOOPS9671C | M.Sc | 15/05/2004 | Mathematics | Assistant Professor | 17/07/2006 | 0 | 75 | 75 | Yes | Regular | |
| Miss Aastha Bt | DKWPB1442J | MA | 14/07/2015 | English | Assistant Professor | 12/09/2022 | 50 | 0 | 0 | Yes | Regular | |
| Anant Namdeo | ACFPT6518F | M.E/M.Tech | 01/11/2008 | ME Production | Assistant Professor | 16/01/2012 | 0 | 81 | 100 | Yes | Regular | |
| Mrs, Archana F | ACSPL4613L | M,E/M,Tech | 30/09/2009 | Electronics | Assistant Professor | 07/08/2009 | 0 | 28 | 0 | Yes | Regular | |
| Dr. Bhushan Tr | AGSPP9212H | ME/M. Tech and PhD | 06/03/2014 | Production | Professor | 01/04/2014 | 100 | 75 | 71 | Yes | Regular | |
| Mrs. Dipali Yog | AZDPS1967L | M.E/M.Tech | 10/12/2010 | Computer Engineering | Assistant Professor | 05/07/2005 | 0 | 0 | 53 | Yes | Regular | |
| Mrs, Gauree U | AMAPJ9254B | M,Sc | 30/04/2013 | Pure Mathematics | Assistant Professor | 10/10/2022 | 50 | 0 | 0 | Yes | Regular | |
| Mrs, Monali Nit | BCRPS5046Q | M,E/M,Tech | 04/08/2012 | Network Security | Assistant Professor | 20/02/2006 | 0 | 0 | 53 | Yes | Regular | |
| Dr. Sunil Kuma | AHTPD5110G | ME/M. Tech and PhD | 02/09/2020 | Six Sigma Operational Quality Performance | Associate Professor | 27/07/1999 | 33 | 0 | 0 | Yes | Regular | |
| Mrs. Sangeeta | BBMPS8352R | M.E/M.Tech | 15/06/2015 | Electronics | Assistant Professor | 09/07/2007 | 0 | 71 | 38 | Yes | Regular | |
| Mr. Saurabh At | BKGPK5917B | M.E/M.Tech | 01/06/2013 | CAD CAM with Specialisation | Assistant Professor | 02/07/2012 | 0 | 62 | 44 | Yes | Regular | |
| Mrs. Shilpa Jite | AANPP6418J | M.E/M.Tech | 31/03/1996 | Power System | Assistant Professor | 16/01/1996 | 67 | 28 | 38 | Yes | Regular | |
| Mrs. Supriya S | AROPK1602K | M.E/M.Tech | 31/12/2012 | Computer | Assistant Professor | 05/07/2005 | 0 | 0 | 53 | Yes | Regular | |
| Dr. Vedavyasra | ADKPJ8809M | ME/M. Tech and PhD | 17/07/2017 | Job Shop scheduling problems | Associate Professor | 01/08/1995 | 43 | 0 | 0 | Yes | Regular | |
| Dr. Vasim Abdu | FTCPS3412L | ME/M, Tech and PhD | 17/08/2013 | Materials Science and Engineering | Associate Professor | 01/10/2015 | 40 | 0 | 0 | Yes | Regular | |
| Dr. Surendrasir | AGUPR6242D | ME/M. Tech and PhD | 12/11/2011 | VLSI Design | Professor | 01/07/2022 | 100 | 0 | 0 | Yes | Regular | |
| Mrs. Archana F | ADFPJ8586J | M,Sc | 02/12/1998 | Mathematics | Assistant Professor | 01/08/2003 | 0 | 75 | 75 | No | Regular | 04/07/2022 |
| Mr. Hitendra B | AGUPV6868M | M,E/M.Tech | 15/07/2013 | Robotics | Assistant Professor | 13/07/2015 | 0 | 43 | 50 | No | Regular | 06/06/2022 |
| Dr. Vijay Santu | AEZPB8642J | ME/M. Tech and PhD | 14/06/2014 | Operation Management | Professor | 14/08/1995 | 0 | 38 | 79 | No | Regular | 17/11/2022 |

| | | | | | | | | | | | | |
|-------------------|------------|---------------|------------|----------------------------------|---------------------|------------|-----|-----|-----|-----|-------------|------------|
| Ms. Dipali Kisa | ARPPB4156J | M,E/M,Tech | 07/07/2015 | CAD CAM | Assistant Professor | 02/01/2015 | 0 | 50 | 44 | Yes | Regular | |
| Mr. Sudhakar S | AHEPD3979L | M.E/M.Tech | 08/08/2003 | Design in Mechanical Engineering | Associate Professor | 01/09/1994 | 75 | 69 | 85 | Yes | Regular | |
| Mr. Narayanan | AAMPK1958M | M.E/M.Tech | 14/12/1997 | Electrical Engineering | Associate Professor | 27/08/1987 | 60 | 14 | 0 | Yes | Regular | |
| Mr. Sunil Dilip C | AKWPC0981C | M.E/M.Tech | 15/09/2010 | Wireless Communication | Assistant Professor | 20/07/2009 | 0 | 30 | 0 | No | Regular | 26/05/2022 |
| Mr. Akshay Pra | FXCPS9098Q | M.E/M.Tech | 06/10/2021 | Energy Engg | Assistant Professor | 16/07/2022 | 69 | 0 | 0 | Yes | Regular | |
| Mrs. Prajakta N | ASOPD7928C | M.E/M.Tech | 17/07/2013 | Information Technology | Assistant Professor | 09/07/2012 | 0 | 28 | 0 | Yes | Regular | |
| Mr. Veerabhadri | AJEPM3761H | M.E/M.Tech | 15/07/2011 | Manufacturing Engg | Assistant Professor | 02/01/2013 | 33 | 42 | 44 | Yes | Regular | |
| Dr. Joseph Roc | AGOPR5840D | MA | 09/03/2013 | English Communication skills | Assistant Professor | 02/05/2016 | 50 | 50 | 50 | Yes | Regular | |
| Ms. Deepika Si | BRSPS7329L | M.E/M.Tech | 31/12/2011 | Design Engineering | Assistant Professor | 01/04/2014 | 44 | 13 | 71 | Yes | Regular | |
| Mrs. Parshvi Zi | BUNPS5891K | M.E/M.Tech | 24/01/2015 | Electronic Engineering | Assistant Professor | 18/09/2006 | 0 | 50 | 100 | Yes | Regular | |
| Mr. Anant Nam | ACFPT6518F | M.E/M.Tech | 01/11/2008 | Production | Assistant Professor | 16/01/2012 | 0 | 81 | 60 | Yes | Regular | |
| Mrs. Binsy Josi | AIOPJ4444P | M.E/M.Tech | 08/09/2005 | Power Electronics | Assistant Professor | 27/02/2006 | 56 | 34 | 83 | Yes | Regular | |
| Ms. Prachi Kun | AIKPC6786H | M.E/M.Tech | 31/05/2012 | Computer | Assistant Professor | 10/07/2006 | 0 | 0 | 53 | Yes | Regular | |
| Mr. Jayen Suni | AOIPM6979E | M.E/M.Tech | 28/02/2005 | Electronics Instrumentation | Assistant Professor | 01/04/2014 | 0 | 22 | 0 | Yes | Regular | |
| Dr. Dipak Anan | BGZPB7080B | M.Sc. and PhD | 07/01/2016 | Material Science | Assistant Professor | 01/08/2018 | 100 | 100 | 100 | Yes | Regular | |
| Ms. Prahelika F | FIQPP3025M | MA | 30/05/2018 | English | Assistant Professor | 01/07/2021 | 0 | 50 | 0 | No | Contractual | 30/06/2022 |

| Year | Number of Students (approved intake strength) N | Number of Faculty members (considering fractional load) F | FYSFR (N/F) | * Assessment= (5*20)/FYSFR (Limited to Max.5) |
|----------------|---|---|-------------|---|
| 2020-21(CAYm2) | 300 | 13.36 | 22.45 | 4.45 |
| 2021-22(CAYm1) | 300 | 13.02 | 23.03 | 4.34 |
| 2022-23(CAY) | 300 | 14.74 | 20.35 | 4.91 |
| Average | 300 | 13.7 | 21.94 | 4.57 |

8.2 Qualification of Faculty Teaching First Year Common Courses (5)

Total Marks 3.00

Institute Marks: 3.00

| Year | x (Number of Regular Faculty with Ph.D) | y (Number of Regular Faculty with Post graduate Qualification) | RF (Number of Faculty Members required as per SFR of 20:1 | Assessment of Faculty Qualification [(5x + 3y) / RF] |
|-----------------|---|--|---|---|
| 2020-21 (CAYm2) | 6 | 17 | 15 | 5.4 |
| 2021-22 (CAYm1) | 7 | 23 | 15 | 6.93 |
| 2022-23 (CAY) | 10 | 18 | 15 | 6.93 |

Average Assessment: 6.42

8.3 First Year Academic Performance (10)

Total Marks 9.18

Institute Marks: 9.18

| Academic Performance | 2021-22 | 2020-21 | 2019-20 |
|---|---------|---------|---------|
| Mean of CGPA or mean percentage of all successful students(X) | 9.14 | 9.71 | 8.83 |
| Total Number of successful students(Y) | 114.00 | 129.00 | 129.00 |
| Total Number of students appeared in the examination(Z) | 130.00 | 129.00 | 129.00 |
| API [X*(Y/Z)] | 8.02 | 9.71 | 8.83 |

Average API [(AP1+AP2+AP3)/3] : 8.853

Assessment [1.5 • Average API] : 13.28

8.4 Attainment of Course Outcomes of first year courses (10)

Total Marks: 10.00

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

Institute Marks: 5.00

The process to Measure CO attainment

- Faculty member identifies tools required to measure CO attainment for each CO.
- Faculty member assigns weightage for each tool.
- Faculty member formulates equation to calculate attainment.

- Faculty member sets target level for CO attainment.
- DQAC verifies the method/tools/target value of CO attainment calculation and suggests tools, target values, etc. if required.
- Based on feedback from DQAC, faculty member makes appropriate changes.
- Faculty member collects the data throughout the semester as per the tools selected for measuring CO attainment.
- Faculty member organizes data.
- Faculty member calculates CO and PO attainments for said course.
- Faculty member analyzes CO attainment to identify remedial actions if necessary.
- DQAC verifies attainment and suggests remedial action.
- Faculty member implements remedial measures the following year to improve CO attainment or set new target value.

Assessment tools used for CO attainment.

Unit Test: Two tests are conducted in each semester. The questions are set pertaining to the relevant COs. The marks earned by the students are analyzed for the attainment of CO.

Lab Experiments: Lab experiments are evaluated regularly according to rubrics designed. These rubrics are communicated to the students in advance.

Assignments: Assignments are evaluated regularly according to rubrics designed. These rubrics are communicated to the students in advance.

Quiz (Optional): Quiz is used to evaluate the CO. Generally, it is conducted online.

Presentations (Optional): Students give presentations on topics assigned to them. Assessment of the presentation is done in accordance with the rubrics provided.

End Semester Examination (Theory and Practical): End semester examination results are used per the guidelines of the NBA.

Course Exit Survey: The course exit survey is conducted and analyzed at the end of the semester. The result of the analysis is used for the calculation of the attainment of CO.

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

Institute Marks : 5.00

| Target Range | | |
|-------------------------------|----------------------|---|
| >=80% | High | 3 |
| 70-80 % | Medium | 2 |
| 60 - 70 % | Low | 1 |
| <60% | Not Attended (N.A.*) | |
| * Action Plan required | | |

CO Attainment: First Year Engineering, Semester I, 2021-22

| Course | CO | Attainment |
|---|----------|------------|
| FEC 101: Engineering Mathematics I | FEC101.1 | 3 |
| | FEC101.2 | 3 |

| | | |
|---|-----------|------|
| | FEC101.3 | 3 |
| | FEC101.4 | 3 |
| FEC 102: Engineering Physics I | FEC102.1 | 3 |
| | FEC102.2 | 3 |
| | FEC102.3 | 3 |
| | FEC102.4 | 3 |
| | FEC102.5 | 3 |
| FEC103: Engineering Chemistry I | FEC103.1 | 2.4 |
| | FEC103.2 | 2 |
| | FEC103.3 | 2 |
| | FEC103.4 | 2.16 |
| | FEC103.5 | 2.56 |
| FEC104: Engineering Mechanics | FEC104.1 | 2.95 |
| | FEC104.2 | 3 |
| | FEC104.3 | 2.92 |
| | FEC104.4 | 3 |
| | FEC104.5 | 3 |
| | FEC104.6 | 2.91 |
| FEC105: Basic Electrical and Electronics Engineering | FEC105.1 | 3 |
| | FEC105.2 | 3 |
| | FEC105.3 | 3 |
| | FEC105.4 | 2.8 |
| | FEC105.5 | 3 |
| FEL105: Basic Workshop Practice I | FEL105.1 | 2.9 |
| | FEL105.2 | 2.9 |
| | FEL105.3 | 2.9 |
| | FEL105.4 | 2.9 |
| | FEL105.5 | 2.9 |
| | FEL105.6 | 2.9 |
| | FEL105.7 | 2.9 |
| | FEL105.8 | 2.9 |
| | FEL105.9 | 2.9 |
| | FEL105.10 | 2.9 |

CO Attainment: First Year Engineering, Semester 2, 2021-22

| Course | CO | Attainment |
|--|----------|------------|
| FEC201: Engineering Mathematics II | FEC201.1 | 2.52 |
| | FEC201.2 | 2.6 |
| | FEC201.3 | 3 |
| | FEC201.4 | 3 |
| FEC202: Engineering Physics II | FEC202.1 | 3 |
| | FEC202.2 | 3 |
| | FEC202.3 | 3 |
| | FEC202.4 | 3 |
| | FEC202.5 | 3 |
| | FEC202.6 | 3 |
| FEC203: Engineering Chemistry II | FEC203.1 | 2.5 |
| | FEC203.2 | 2.8 |
| | FEC203.3 | 2.85 |
| | FEC203.4 | 2.1 |
| | FEC203.5 | 2.3 |
| FEC204: Engineering Graphics | FEC204.1 | 2.15 |
| | FEC204.2 | 2.15 |
| | FEC204.3 | 2.07 |
| | FEC204.4 | 2.15 |
| | FEC204.5 | 2.15 |
| | FEC204.6 | 2.13 |
| FEC205: C - Programming | FEC205.1 | 3 |
| | FEC205.2 | 2.76 |
| | FEC205.3 | 2.76 |
| | FEC205.4 | 3 |
| | FEC205.5 | 3 |
| FEC206: Professional Communication and Ethics I | FEC206.1 | 3 |
| | FEC206.2 | 3 |
| | FEC206.3 | 3 |
| | FEC206.4 | 3 |
| | FEC206.5 | 3 |
| FEL206: Basic Workshop Practice II | FEL206.1 | 2.9 |
| | FEL206.2 | 2.9 |
| | FEL206.3 | 2.9 |

| | | |
|--|-----------|-----|
| | FEL206.4 | 2.9 |
| | FEL206.5 | 2.9 |
| | FEL206.6 | 2.9 |
| | FEL206.7 | 2.9 |
| | FEL206.8 | 2.9 |
| | FEL206.9 | 2.9 |
| | FEL206.10 | 2.9 |

8.5 Attainment of Program Outcomes from first year courses (20)

Total Marks 20.00

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

Institute Marks: 15.00

POs Attainment:

| Course | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 |
|--------|------|------|------|-----|-----|-----|-----|-----|-----|------|------|------|
| FEC101 | 3 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 |
| FEC102 | 3 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 |
| FEC103 | 2.39 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 |
| FEC104 | 2.97 | 2.96 | 2.95 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 |
| FEC105 | 2.96 | 3 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 |
| FEL105 | 2.9 | PO2 | 2.9 | PO4 | 2.9 | 2.9 | PO7 | PO8 | 2.9 | PO10 | PO11 | PO12 |
| FEC201 | 2.78 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 |
| FEC202 | 3 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 |
| FEC203 | 2.39 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 |
| FEC204 | 2.13 | 2.13 | 2.13 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | 2.13 | PO11 | PO12 |
| FEC205 | 2.9 | 2.88 | 2.88 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | 2.9 |
| FEC206 | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | 3 | PO11 | PO12 |
| FEL206 | 2.9 | PO2 | 2.9 | PO4 | 2.9 | 2.9 | PO7 | PO8 | 2.9 | PO10 | PO11 | PO12 |

PO Attainment Level

| Course | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 |
|-------------------|------|------|------|-----|-----|-----|-----|-----|-----|------|------|------|
| Direct Attainment | 2.78 | 2.74 | 2.75 | 0 | 2.9 | 2.9 | 0 | 0 | 2.9 | 2.57 | 0 | 2.9 |
| CO Attainment | 2.78 | 2.74 | 2.75 | 0 | 2.9 | 2.9 | 0 | 0 | 2.9 | 2.57 | 0 | 2.9 |

PSOs Attainment:

| Course | PSO1 | PSO2 |
|--------|------|------|
| | PSO1 | PSO2 |

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

Institute Marks : 5.00

POs Attainment Levels and Actions for Improvement- (2021-22)

| POs | Target Level | Attainment Level | Observations |
|-----|--------------|------------------|--------------|
|-----|--------------|------------------|--------------|

PO 1 : Engineering Knowledge

| | | | |
|------|---|------|--|
| PO 1 | 3 | 2.78 | Attainment is moderate due to lower performance in Engineering Chemistry I (FEC103), Engineering Chemistry II (FEC203), and Engineering Graphics |
|------|---|------|--|

| | | | |
|--|--|--|----------|
| | | | (FEC204) |
|--|--|--|----------|

Tutorial sessions need to be conducted in Engineering Chemistry I and II (FEC103 and FEC203).
More drawing practice sessions must be conducted for Engineering Graphics (FEC204).

PO 2 : Problem Analysis

| | | | |
|------|---|------|---|
| PO 2 | 3 | 2.74 | Attainment is moderate due to lower performance in Engineering Graphics (FEC204). |
|------|---|------|---|

More drawing practice sessions must be conducted for Engineering Graphics (FEC204).

PO 3 : Design/development of Solutions

| | | | |
|------|---|------|---|
| PO 3 | 3 | 2.75 | Attainment is moderate due to lower performance in Engineering Graphics (FEC204). |
|------|---|------|---|

More drawing practice sessions must be conducted for Engineering Graphics (FEC204).

PO 4 : Conduct Investigations of Complex Problems

| | | | |
|-----|---|---|-----------------|
| P04 | 3 | 0 | Not applicable. |
|-----|---|---|-----------------|

Not applicable

PO 5 : Modern Tool Usage

| | | | |
|------|---|-----|-----------------------------|
| PO 5 | 3 | 2.9 | Attainment is satisfactory. |
|------|---|-----|-----------------------------|

Not applicable

PO 6 : The Engineer and Society

| | | | |
|------|---|-----|-----------------------------|
| PO 6 | 3 | 2.9 | Attainment is satisfactory. |
|------|---|-----|-----------------------------|

Not applicable

PO 7 : Environment and Sustainability

| | | | |
|------|---|---|-----------------|
| PO 7 | 3 | 0 | Not applicable. |
|------|---|---|-----------------|

Not applicable

PO 8: Ethics

| | | | |
|------|---|---|-----------------|
| PO 8 | 3 | 0 | Not applicable. |
|------|---|---|-----------------|

Not applicable

PO 9 : Individual and Team Work

| | | | |
|------|---|-----|-----------------------------|
| PO 9 | 3 | 2.9 | Attainment is satisfactory. |
|------|---|-----|-----------------------------|

Not applicable

PO 10: Communication

| | | | |
|---|---|------|--|
| P010 | 3 | 2.57 | Attainment is moderate due to lower performance in Engineering Graphics (FEC204) |
| More drawing practice sessions must be conducted for Engineering Graphics (FEC204). | | | |

PO 11 : Project Management and Finance

| | | | |
|----------------|---|---|-----------------|
| PO 11 | 3 | 0 | Not applicable. |
| Not applicable | | | |

PO 12 : Life-long Learning

| | | | |
|----------------|---|-----|-----------------------------|
| PO 12 | 3 | 2.9 | Attainment is satisfactory. |
| Not applicable | | | |

PSOs Attainment Levels and Actions for Improvement- (2021-22)

| PSOs | Target Level | Attainment Level | Observations |
|--|--------------|------------------|-----------------|
| PSO 1 : Apply fundamental computer science knowledge to solve real world problems. | | | |
| PSO1 | 3 | 0 | Not applicable. |
| Not applicable | | | |

PSO 2 : Design and Implement software systems of varying complexity in multidisciplinary scenarios that meet specified requirements with appropriate consideration to architectural, algorithmic and security aspects

| | | | |
|----------------|---|---|-----------------|
| PSO2 | 3 | 0 | Not applicable. |
| Not applicable | | | |

9 STUDENT SUPPORT SYSTEMS (50) Total Marks 44.00

9.1 Mentoring system to help at individual level (5)

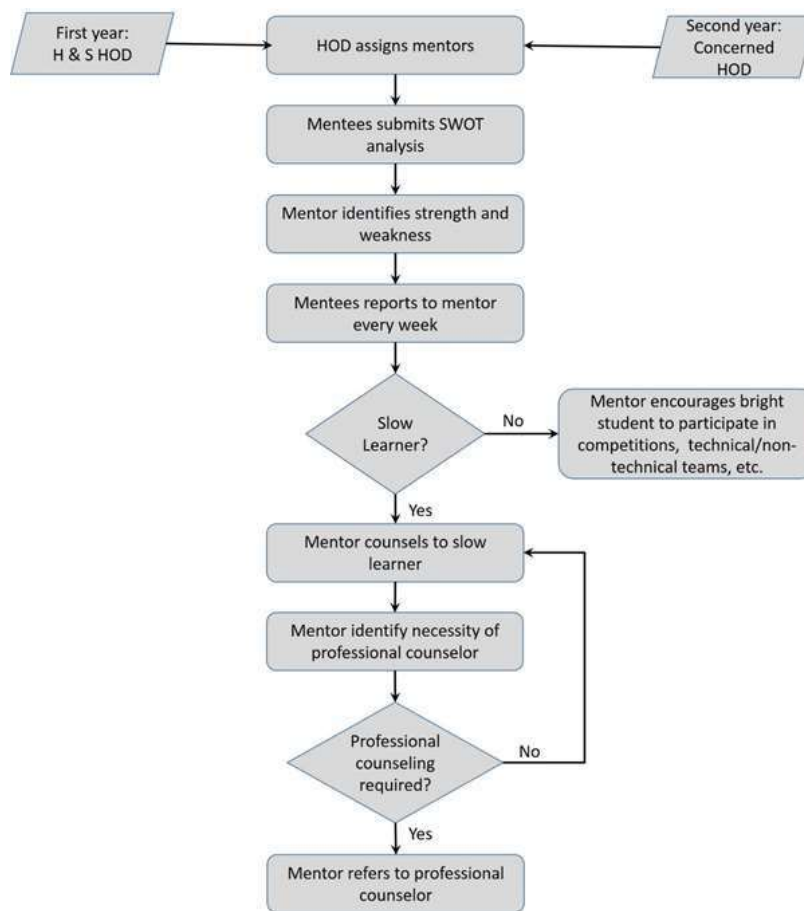
Total Marks 4.00

Institute Marks: 4.00

The teacher mentors guide the students (mentees) to make correct career choices. The mentoring process starts in the first year with 20 students allotted to one mentor teacher who guides them throughout the year.

Mentoring process

- At entry, the head of the department of Humanities and Science assigns mentors to mentees (Approximately 20 students are assigned to one mentor).
- During the third semester, the concerned HOD assigns mentors to mentees (Approximately 6 students are assigned to one mentor). The mentor continues mentoring till the students successfully graduate.
- If any faculty member resigns/retires, HOD reassigns mentors to respective students.
- Mentees report to mentors once a week.
- Mentees submit SWOT analysis to mentors.
- Mentor identifies the weakness and strengths of the student and accordingly guides the student.
- Mentor counsels the slow learner to enhance performance. If a mentor finds the need for professional counseling, then he directs the student to a professional counselor.
- Mentor encourages fast learners to participate in various competitions and technical/non-technical councils/teams.
- Mentor continuously monitors the performance of the mentee and takes remedial measures if necessary.



Type of mentoring: All-round development Career advancement

Number of faculty mentors: 03 per class

Number of students per mentor: 20

Frequency of meeting: Once a week

Every year the college conducts an Induction Programme for first-year students which serves as a series of reliable experiences for the holistic development of students such as; Universal Human Values, Creativity and Innovation, and Career Guidance, to mention a few. The aforesaid sessions were conducted by eminent personalities from the relevant fields.

The alumni committee of the college has organized various events such as career guidance sessions, Spotlight Series, and Webinars which help to nurture the students of CRCE (Alumni I CRCE (frcrce.ac.in) (<https://alumni.frcrce.ac.in/>)).

9.2 Feedback analysis and reward /corrective measures taken, if any (10) Total Marks
9.00

Institute Marks : 9.00

- Feedback collected for all courses: YES;
- Feedback collection process:
- The mid-term feedback serves as a pivotal step towards enriching the teaching-

learning process. The feedback is collected by the head of the department (HOD) from a few students in each class. The feedback is then discussed with the teacher and the HOD takes corrective measures, if required.

- The students are provided with a link which enables them to give end-semester feedback for the concerned faculties.
- The feedback is further communicated to the individual teachers for necessary action to be taken. At the end of the academic year, a faculty appraisal meeting is held with the HOD and Principal to reflect upon the areas of improvement.
- Average Percentage of students who participate: 20%

Feedback analysis process:

- The parameters for grading the faculty members include Subject knowledge, Communication abilities, Punctuality, Unbiased approach, ability to hold attention etc., on a scale of 0-5.
- Self-corrective measures from faculty members are expected if the average grade is less than 3 in any of the above parameters.
- Basis of reward / corrective measures, if any: The college focuses on open door policy where both appreciation and constructive criticisms are discussed for enhanced teaching- learning.
- Feedback from Students, Alumni, Teachers and Parents are analyzed by the respective departments. The detailed analysis is available on the following link.

<https://drive.google.com/drive/folders/1TpF4HfrXex2KYKs9DjRap7Klzu0lnTki>
(<https://drive.google.com/drive/folders/1TpF4HfrXex2KYKs9DjRap7Klzu0lnTki>)

9.3 Feedback on facilities (5)

Total Marks 4.00

Institute Marks: 4.00

Feedback on facilities was collected from Students.

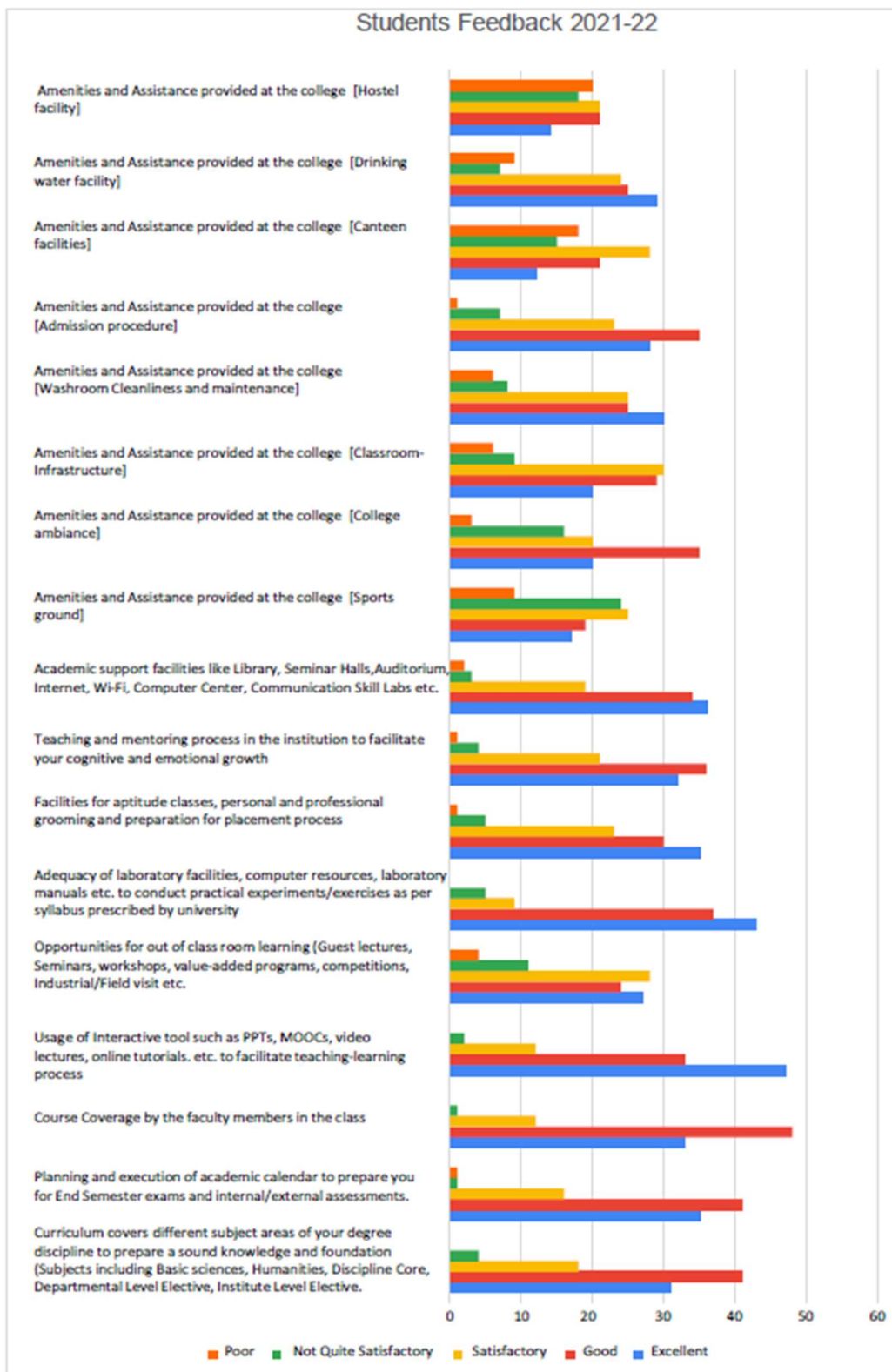
The suggestion box placed near the office facilitated the suggestions from the students on the facilities. The Principal and HODs also collect informal feedback from their interactions with the students and alumni.

The suggestions given by the Local-Inquiry Committee of Mumbai University are implemented from time to time. The feasible suggestions given by the other stakeholders are implemented from time to time.

Sample feedbacks are shown below:

STUDENTS FEEDBACK ANALYSIS -YEAR 2021-2022

| Sr. No | Topic | Excellent | Good | Satisfactory | Not Quite Satisfactory | Poor | Total |
|--------|--|-----------|------|--------------|------------------------|------|-------|
| 1 | Curriculum covers different subject areas of your degree discipline to prepare a sound knowledge and foundation (Subjects including Basic sciences, Humanities, Discipline Core, Departmental Level Elective, Institute Level Elective, Project Work, Internships etc. | 31 | 41 | 18 | 4 | 0 | 94 |
| 2 | Planning and execution of academic calendar to prepare you for End Semester exams and internal/external assessments. | 35 | 41 | 16 | 1 | 1 | 94 |
| 3 | Course Coverage by the faculty members in the class | 33 | 48 | 12 | 1 | 0 | 94 |
| 4 | Usage of Interactive tool such as PPTs, MOOCs, video lectures, online tutorials. etc. to facilitate teaching-learning process | 47 | 33 | 12 | 2 | 0 | 94 |
| 5 | Opportunities for out of class room learning (Guest lectures, Seminars, workshops, value- added programs, competitions, Industrial/Field visit etc. | 27 | 24 | 28 | 11 | 4 | 94 |
| 6 | Adequacy of laboratory facilities, computer resources, laboratory manuals etc. to conduct practical experiments/exercises as per syllabus prescribed by university | 43 | 37 | 9 | 5 | 0 | 94 |
| 7 | Facilities for aptitude classes, personal and professional grooming and preparation for placement process | 35 | 30 | 23 | 5 | 1 | 94 |
| 8 | Teaching and mentoring process in the institution to facilitate your cognitive and emotional growth | 32 | 36 | 21 | 4 | 1 | 94 |
| 9 | Academic support facilities like Library, Seminar Halls, Auditorium, Internet, Wi-Fi, Computer Center, Communication Skill Labs etc. | 36 | 34 | 19 | 3 | 2 | 94 |
| 10 | Amenities and Assistance provided at the college [Sports ground] | 7 | 9 | 25 | 2 | 9 | 94 |
| 11 | Amenities and Assistance provided at the college [College ambiance] | 20 | 35 | 20 | 16 | 3 | 94 |
| 12 | Amenities and Assistance provided at the college [Class room-Infrastructure] | 20 | 29 | 30 | 9 | | 94 |
| 13 | Amenities and Assistance provided at the college [Washroom Cleanliness and maintenance] | 30 | 25 | 25 | 25 | 6 | 94 |
| 14 | Amenities and Assistance provided at the college [Admission procedure] | 28 | 35 | 23 | 7 | 1 | 94 |
| 15 | Amenities and Assistance provided at the college [Canteen facilities] | 12 | 21 | 28 | 15 | 18 | 94 |
| 16 | Amenities and Assistance provided at the college [Drinking water facility] | 29 | 25 | 24 | 7 | 9 | 94 |
| 17 | Amenities and Assistance provided at the college [Hostel facility] | 14 | 21 | 21 | 18 | 20 | 94 |



The feedback obtained from the students was carefully studied and the following amendments are done in the infrastructure:

- Interactive boards are installed in all classrooms.

- LCD projectors are installed in the laboratories for presentations.
- WiFi is installed in the staffrooms, library, the internet center, office floor and some laboratories.
- A contract is made with a house-keeping agency for regular cleaning and maintenance of washrooms, classrooms, and corridors.

9.4 Self-Learning (5)

Total Marks 4.00
Institute Marks: 4.00

1. The institution provides infrastructure, technical guidance, and financial assistance to support activities such as an annual inter-collegiate technical festival, CRESCENDO, an annual inter-collegiate technical paper presentation and project competition, TECHNOMANIA, inter-collegiate coding competitions, HACKATHON.
2. The Institute support students to participate in various competitions such as hackathon, code competitions, debate, etc.
3. The institute also encourages students to participate in inter-disciplinary competitions through teams such as Robocon, Vayushastra, Team Abada, etc. As members of such teams, students learn technical and management skills.
4. Many technical chapters are in existence, which are responsible to organize workshops, technical events on advanced technologies.
5. The students learn management skills through the annual cultural festival EUPHORIA and Sports.
6. The library is well-equipped with reference books, and journals. A cell is dedicated to online courses such as NPTEL. The college has a tie-up with Coursera for online courses and membership with IITB.
7. The course material made available to students through Google classrooms, MOODLE.
8. The expert talks are arranged in diverse fields.
9. The institute provides a wired internet facility on all computers in the laboratories apart from campus-wide Wi-Fi connectivity to mobile devices.

| Sr. No. | Name of the event | Duration | Achievements | Link |
|---------|--------------------|----------|---|---|
| 1 | BRAINWRECK-ROBOCON | | First place as National Winners Awarded Best Circuit Design | https://roboconcrce.org/achievements |
| 2 | ROBOCON | 2020 | Secured AIR 11 in stage 1 of the competition successfully implemented Try Robot and Pass Robot Successfully done passing and receiving of rugby ball by the bots. Achieved a kicking range of 15 m with Try robot. | https://roboconcrce.org/achievements |
| 3 | Maverick UAS | 2019 | Sumedh Deshpande, | |

| | | | | |
|---|--|-----------------------|---|---|
| | team | | Karan Rao, Yashom Dighe, Christo Thomas, Yash Turkar (Maverick UAS team) received the Just joe sportsmanship award (\$500.00) in 17th annual Student Unmanned Air Systems Competition held at Webster field, St Inigoes, Maryland USA, 12 -15 June 2019 | https://mavericks-7734b.firebaseio.com/#achievements |
| 4 | All India level coding Competition by ICPC Foundation | 26-28 December 2019 | Nehal Kalnad, Ashley Lobo and Kartick Hariharan (Final Year) selected for Final round of Prestigious all India level coding Competition by ICPC foundation, 26-28 December 2019 | https://crceiic.github.io/events.html |
| 5 | TSEC 36 Hours CodeStorm Hackathon on “Blockchain & Social Courses” | 20-21 September, 2019 | Pranay Lobo, Pranay Bagrecha and Sahil Gupta (Third year) secured First position at TSEC 36 Hours CodeStorm Hackathon on “Blockchain & Social Courses”, 20-21 September 2019, project Firestation. | https://crceiic.github.io/events.html |
| 6 | India Singapore Hackathon 2019 | 28-30th September | Vedant Sahai (Third Year), Team TEACH-AI in “Singapore India Hackathon 2019”, 28-30 September won the prize of (\$2000). Secured 5th Position out of 20 teams in India Singapore Hackathon 2019 | https://crceiic.github.io/events.html |
| 7 | Hackathon, St. John Engineering College, Palghar | Jan, 2020 | Pranay Lobo, Pranay Bagrecha and Sahil Gupta (Third year) won the Most Innovative Idea award at Hackathon, St. John Engineering College, Palghar in January 2020 | https://crceiic.github.io/events.html |
| 8 | DMCE Navi Mumbai Hackathon, | Jan 2020 | Pranay Lobo, Pranay Bagrecha and Sahil Gupta (Third year) won First prize at DMCE Navi Mumbai Hackathon, Jan 2020. | https://crceiic.github.io/events.html |

| | | | | |
|----|--------------------------|-----------------------|--|---|
| 9 | Synergy hackathon | 31st August,2019 | First Place in Synergy hackathon, 31st August,2019 at FR. CRCE Bandra. Darlene Nazareth, Dishank Oza, Abhishek Kollat (Android domain) Mehek Male, Sherwin Pillai, Cassia Vaz (Web domain) | https://crceiic.github.io/events.html |
| 10 | Cyber Security Hackathon | 31st Jan-1st Feb 2020 | Darlene Nazareth, Elita Menezes, Sherwyn D'souza, Kevlyn Kadamala (Third year) won first prize in Cyber Security Hackathon on 31st Jan-1st Feb 2020 at SPIT, Mumbai | https://crceiic.github.io/events.html |

9.5 Career Guidance, Training, Placement (10)

1. Induction Programme has been conducted since 2019 as per the norms laid down by Mumbai University and AICTE for the first-year engineering students. The sessions on universal human values, creativity, personality, development and career guidance are conducted as a part of this program.
2. For the final and pre-final year students, the Career Guidance sessions and sessions to guide students for international exams such as GRE, GMAT are conducted regularly by the respective departments in association with the training and placement cell.
3. Our alumni are invited for career guidance sessions.

Training

Soft skill development and technical skill development training are imparted to the students.

Soft skills:- Expert HR professionals from reputed corporates are invited to conduct sessions on key aspects like attitude, emotional quotient, presentation, etc.

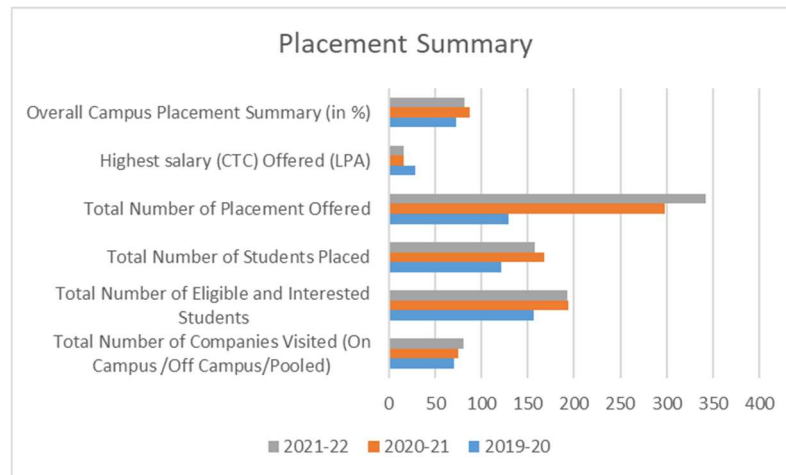
Technical Skills:- To enhance the technical skills of the students, aptitude test training and mock tests are conducted by professionals. Respective departments and technical societies organize workshops/courses on latest technologies to enhance technical skills.

Placement

Placement Process

1. Principal formulates a Training and placement team consisting of a Training and Placement Officer (TPO), one faculty member from each department, and two student representatives from each third-year.
2. End of the sixth semester, faculty representatives collect data about the interest of the students like whether they are interested in placement or higher studies or other.
3. TPO sends a request to submit the profile of interested students.

4. Students submit their profiles to TPO through faculty representatives.
5. TPO approaches different industries and negotiates dates of a campus visits.
6. TPO announces placement process dates for a particular industry.
7. TPO announces company criteria and asks for the list of students interested in that industry.
8. Student submits his/her response through the student representative.
9. Students attend the placement process on a scheduled date.
10. Industry conducts placement processes as per schedule.
11. Industry announces results at the end of the process.
12. Steps 6 to 10 are repeated for different industries.



Link for the Company information: [Our Recruiters \(frcrce.ac.in\)](http://frcrce.ac.in/index.php/students/placements/our-recruiters)
 (http://frcrce.ac.in/index.php/students/placements/our-recruiters)

Website link: Overview- Campus Placements (frcrce.ac.in)
 (http://frcrce.ac.in/index.php/students/placements/campus-placement-overview)

9.6 Entrepreneurship Cell (5)

Total Marks 4.00

Institute Marks: 4.00

E-Cell started with the intention of inculcating entrepreneurship culture among the students to look into avenues that can generate marketable business ideas, motivate and groom them to translate these

ideas into start-ups and expose them to the experiences of young entrepreneurs.

E-Cell organizes various activities and events to promote the above objectives - Industrial/Company visits, two events in our technical festival, Crescendo, Master-Chef CRCE-exhibition, Internship fair, and Idea generation workshop.

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

Total Marks 10.00
Institute Marks: 10.00

Activities in the year 2022-23

| Sr. No. | Name of the Activity | Duration | Link |
|---------|---|---|---|
| 1 | Fr, Conceicao Rodrigues Memorial Debate | October 07-08, 2022 | |
| 2 | Session on fire safety and first aid | October 19, 2022 | |
| 3 | A session on Jagrut Mumbaikar | October 01, 2022 | |
| 4 | A session on financial literacy | October 01, 2022 | |
| 5 | Workshop on Research, Funding and IPR | October 15, 2022 | |
| 6 | One-day workshop on teaching learning practices and examination reforms | August 20, 2022 | |
| 7 | Interactive session Swami Sachidanand Bharathi | July 13, 2022 | |
| 8 | Rotaract Club: Beach Clean Up | 9th October, 2022 | https://www.rotaractcrce.com/events.html |
| 9 | IIC-WRO Regional meet | 1st August, 2022 | https://www.agnelashram.org/images/Agnel_Ashram_News_PDF/Fr_Agnel_Ashram_News_September_22_Issue.pdf |
| 10 | Intra-college Sports Events Table Tennis Carom Badminton Football | September 10, 2022 September 10, 2022 September 25, 2022 October 01-02, 2022 | |

Activities in the year 2021-22

| Sr. No. | Name of the Activity | Duration | Link |
|---------|---|--|--|
| 1 | NSS Refurbishing college stairs Tree plantation Tree plantation in St. Joseph's college Peace day Cardiac arrest Dog safety webinar Marine pollution Eco friendly diwali COVID 19 documentary Sustainable living Road safety Importance of mangroves Say no to smog Social activism Art of living Bhajan sandhya Say no to drugs Azadi ka amrit mahotsav (Surya Namaskar) Youth's choice, Global voice NSS orientation Small industry day Teacher's day Poster making Ganesh utsav Old age home Nature trails Article writing Blood donation | February 22, 2022 February 15, 2022 March 12, 2022 September 21, 2022 September 26, 2021 October 04, 2021 October 13 and 16, 2021 November 04-05, 2021 November 18, 2021 December 17, 2021 December 21, 2021 January 19, 2022 February 03, 2022 February 27, 2022 August 24-26, 2021 October 02, 2021 January 07, 2022 March 06, 2022 February 25, 2022 August 21, 2021 August 30, 2021 September 04, 2021 September 18, 2021 November 13, 2021 December 11, 2021 January 23, 2022 February 17, 2022 | |
| 2 | Conceicao Rodrigues Memorial Debate | October 08-10, 2021 | |
| 3 | International Conference on Advances in Computing, Communication and Control (ICAC'21) | 3rd and 4th December 2021 | |
| 4 | Fragmag (College Magazine) | | http://www.frcrce.ac.in/index.php/students/students-council/fragmag-2022 (http://www.frcrce.ac.in/index.php/students/students-council/fragmag-2022) |
| 5 | TEDxCRCE First event - Sharing idea and experiences with fellow youth Resume building workshop (Internship Expo event) Annual conference Bounce Back | October 23, 2021 January 17, 2022 April 10, 2022 | Failing is not wrong, repeating the same mistakes is Lakshay Narula TEDxCRCE (https://youtu.be/9G4FmS1yARK?list=PLFgTdxXPndPT1v2BFtRqUbqbj-4MmYjko) |
| 6 | ACM-CRCE UNSCRIPT 2K22 Fr. Conceicao Rodrigues Memorial Hackathon | January 22-23, 2022 | http://frcrce.acm.org/ (http://frcrce.acm.org/) |
| 7 | Debsoc - The Debate Society, FR, CRCE | | |

| | | | |
|----|--|--|---|
| 8 | Rotaract Club of CRCE Cleanliness Drive Treks Open Mic Awareness programs | Foot Slog 12 feb 22 Micdrop AL-Fresco 13-14 Mar 2022 | https://www.rotaractcrce.com/events.html (https://www.rotaractcrce.com/events.html) |
| 9 | Technical teams Team Abadha Formula Racing SAE Aero team | | https://teamabadhaofficial.web.app (https://teamabadhaofficial.web.app/) https://instagram.com/teamabadha?igshid=YmMyMTA2M2Y= (https://instagram.com/teamabadha?igshid=YmMyMTA2M2Y=) https://docs.google.com/document/d/1zgpurnf_6XcysWT_XF4vTM-OhK3Jc0gWetORddwuH-o/edit (https://docs.google.com/document/d/1zgpurnf_6XcysWT_XF4vTM-OhK3Jc0gWetORddwuH-o/edit) https://www.sae.org/attend/student-events/sae-aero-design-west/awards-results (https://www.sae.org/attend/student-events/sae-aero-design-west/awards-results) |
| 10 | The Alumni Association of Fr, Conceicao Rodrigues College of Engineering Alumni Meet | February 26, 2022 | |
| 11 | Team Vaayushastra A face of FR, CRCE in SAE Aero design competition | | |
| 12 | Convocation Ceremony | February 19, 2022 | |
| 13 | Insignia - Ceremony of Students Council | October 02, 2021 | |
| 14 | Institute Innovation Council (IIC) (57 events) | Throughout the academic year | |
| 15 | ASME Electric Vehicles – Your opportunity to grow Webinar on Project Management Crescendo How it works (a weekly series of 15 episodes of Engineering and Technology related Items/ components) | November 12, 2021 November 13, 2021 March 17, 2022 | |

10. GOVERNANCE, INSTITUTIONAL SUPPORT AND FINANCIAL RESOURCES (120)

Total Marks 117.00

10.1 Organization, Governance and Transparency (40)

Total Marks 40.00

10.1.1 State the Vision and Mission of the Institute (5)

Institute Marks 5.00

Vision:

"Moulding Engineers who can build the Nation"

Fr. Conceicao Rodrigues College of Engineering (CRCE) will be a Center-of-Excellence in Engineering Education, moulding engineers with state-of-the art technologies, innovative skills and human values, matching with the growing expectations of the corporate and the society and thus play an effective role in nation building.

Mission:

- Create an excellent scholastic ambience for students and faculty, by providing facilities with state-of-the-art technologies and continuously updating based on the needs of user organizations.
- Attract, develop and retain teaching faculty of academic excellence, dedication and commitment.
- Design the academic administration system to ensure effective teaching-learning process facilitating participation from students & teachers; enabling continuous improvement through evaluation and feedback.
- Provide avenues for holistic development of students to become competent engineers with interpersonal skills, leadership qualities and social concern.
- Maintain economic discipline; continuously work for optimal utilization of resources and resource generation through consultancy to make quality education affordable. Inculcate ethical values and integrity by observing fairness and transparency in all dealings.

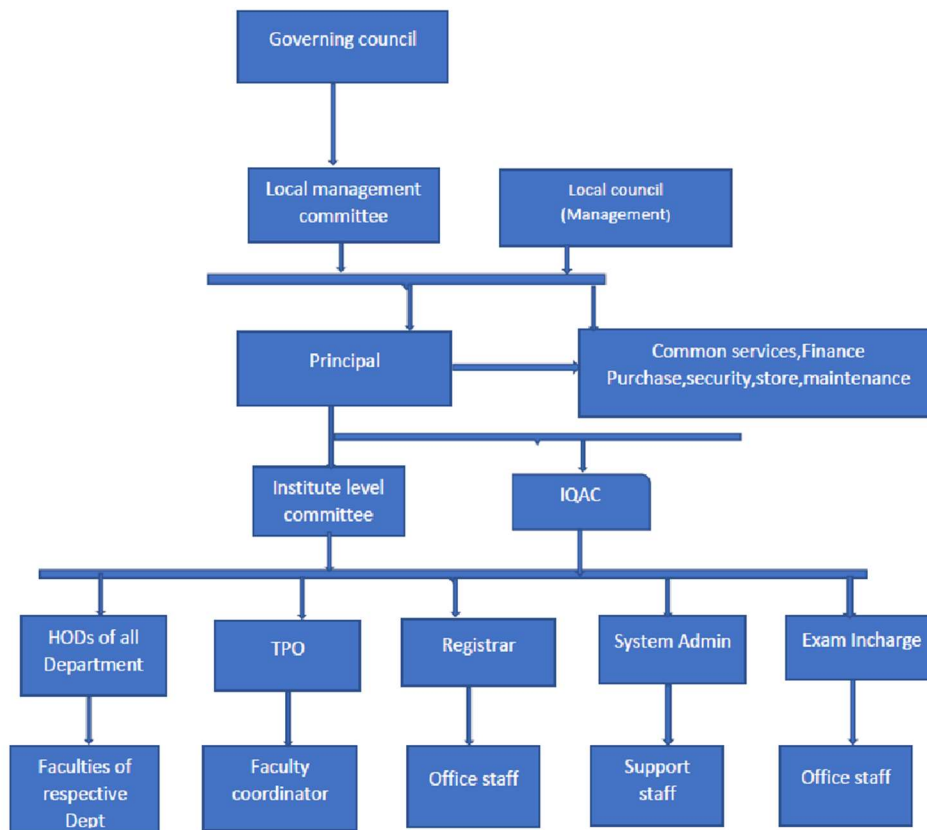
10.1.2 Governing body, administrative setup, functions of various bodies, service rules, procedures, recruitment and promotional policies (10)

Institute Marks : 10.00

Fr. Conceicao Rodrigues College of Engineering was established by the Society of St. Francis Xavier, Pilar, a Public and Charitable Trust. The college is managed by a Governing Council (as per AICTE norms), a Local Management Committee (as per the guidelines of Mumbai University), and Local Council Management (as per the guidelines of the Trust).

Administrative Set Up

The following figure illustrates the administrative setup of the institute.



Functions of various bodies:

| Sr. No | Committee | List of Members | Functions & Responsibilities |
|--------|------------------------|--|---|
| 1 | Governing Council (GC) | <ol style="list-style-type: none"> Chairman- 1. Rev. Fr. Saturnine Almeida Chairman of the Society/ Trust. Two members nominated by the Registered Society/ Trust (02 in number)- 2. Rev. Fr. Valerian DSouza. Director of Agnel Technical Education Complex / Trustee of the Society/Trust. Dr. S.M. Khot, Principal. Fr. Conceicao Rodrigues Institute of Technology, Vashi, Navi Mumbai. Nominee of the All India Council for Technical Education - Regional Officer (Ex-Officio)- 4. Regional Officer, Western Region, AICTE, Mumbai. An Industrialist/ Technologist/ Educationist from the Region to be nominated by the concerned Regional Committee as nominee of the Council, out of the panel approved by the Chairman of the Council - 5. Mr. P.N. Jumle. Director | <p>The Governing Council sets guidelines for academic and administrative policies. It reviews and recommends Program initiatives, Annual budget, infrastructural development, admissions, results, placements, Staff development activities and Staff</p> |

| | | | |
|--|--|---|--|
| | | <p>Board of Apprenticeship Training, Western Region, Ministry of HRD, Govt. of India</p> <ol style="list-style-type: none"> 5. Nominee of the Affiliating Body/ University/ State Board of Technical education - 6. Dr. Deven Navinchandra Shah, Principal Shree LR. Tiwari College of Engineering Mira Road (E), DIST. THANE 401 107. 6. Nominee of the State Government - Director of Technical Education (Ex-officio) -7. Director of Technical Education, Maharashtra State. 7. An Industrialist/ Technologist/ Educationist from the Region nominated by the State Government - 8. Dr. R.S. Iyer, Director SP Jain Institute of Management & Research & Retired Principal of Fr CRCE, Bandra. 8. Principal Director of the concerned technical Institution (as a nominee of the Society/Trust) - Member Secretary - 9. Dr. Surendra Rathod, Principal of Fr CRCE, Sandra. 10. Two Faculty members to be nominated from amongst the regular staff one at the level of Professor and one at the level of Assistant Professor - 10. Dr. D.V. Bhoir, Professor Electronics & Computer Science Dept. 11. Mr. D.S.S. Sudhakar Associate Professor Mechanical Engineering Dept. 11. The number of members can be increased equally by adding nominees of the registered Society and by adding an equal number of educationists from the Region keeping in view the interest of the Technical Institution. The total number of members of a Governing Body shall, however not exceed 21 12. Mr. Suresh Ramanan, ZS Associates, World Trade Centre, Kharadi, Pune-411014. 13. Mr. Paresh Shelly, President, Sales - CtrlS Datacenters. | |
|--|--|---|--|

| | | | |
|----|---|---|--|
| | 2. College Development Committee (CDC) | <ol style="list-style-type: none"> 1. Chairman - Rev, Fr. Satumino Almeida 2. Director - FR. CRCE, Bandra / Secretary of the Management - Fr. Valerian DSouza. 3. Special Invitee - Fr. Eleuterio Fernandes and Fr. Trevor Pereira. 4. HOD, Nominated by the Principal - Dr. Sapna Prabhu. 5. Representative of the Teachers - Dr. Jagruti Save, Ms. Garima Tripathi and Dr. Sunil K. Surve. 6. Representative of the Non-Teaching Staff - Mr. Deepak Gaikwad. 7. Local member from field of Education - Dr. Shubha Pandit. 8. Local member from the field of Industry - Mr. James Maslamani. 9. Local member from field of Research - Dr. Kushal Tuckey. 10. Local member from the field of Social Service - Fr. Joe Pereira. 11. Co-ordinator, Internal Quality Assurance Committee - Dr Bhushan Patil. 12. President of the College Students Council - Mr. Ninad Shetty. 13. Secretary of the College Students Council - Mr. Taransingh Rajpal. 14. Principal - Dr. Surendra Rathod. | CDC ensures that college administration adheres to the norms of the Mumbai University. It reviews the activities of the college and recommends measures for better functioning |
| 3. | Local Committee Meeting (LCM) | <ol style="list-style-type: none"> 1. Local Superior of Agnel Technical Complex, Bandra -Fr. Valerian DSouza. 2. Assistant Director of Agnel Technical Complex, Bandra - Fr. Eleuterio Fernandes. 3. Administrator, Balbhavan & Fr. Agnel School (Fr. Agnel Ashram) - Fr. Trevor Pereira 4. Financial Controller - Ms. Christina Simon. 5. In-charge, Samadhi Seva & Hospitality - Bro. Edison Pereira. 6. Principal (Fr. CRCE) - Dr. Surendra Rathod. 7. In-charge Principal, Polytechnic -Mr. Mangesh Mohan. 8. Principal, ITI - Mr. Mushtaq Malgundkar. | LCM meets to process and approve the proposals from different units of the complex. All major policy decisions are reviewed and approved by LCM |
| | | <ol style="list-style-type: none"> 1. Member of the Management - Fr. Valerian Dsouza 2. Chairman - Dr. Surendra Rathod. 3. Member (Teaching) - Prof. Shilpa Patil 4. Member (Teaching) - Prof. Kranti Wagle 5. Member (Teaching) - Prof. Garima Tripathi | Development and application of quality benchmarks. Parameters for various academic & administrative activities of the institution. |
| 4. | Internal Quality Assessment Cell (IQAC) | <ol style="list-style-type: none"> 6. Member (Teaching) - Dr. D.V. Bhoir 7. Member (Teaching) - Dr. V.S. Jorapur 8. Member (Teaching) - Dr. Bhushan Patil 9. Senior Administrative Office - Dr. Sapna Prabhu 10. Senior Administrative Officer - Dr. B.S. Daga | Collection and analysis of feedback from all stakeholders on quality- related institutional processes. |

| | | | |
|---|---------------------------------|--|---|
| | | 11. Senior Administrative Officer - Dr. Jagruti Save 12. Nominee of the students - Mr. Taransingh Rajpal 13. Alumni - Mr. Mihir Karkare. 14. Employers Nominee - Mr. James Maslamani 15. Nominee from Industry - Mr. Lester Fernandes 16. Stakeholders Nominee (Parent) - Mr. Vikram Dingra 17. Co-ordinator - Dr. Sunil K. Surve. | Preparation and submission of the Annual Quality Assurance Report (AQAR) as per the guidelines and parameters of the NAAC |
| 5 | Institute level Committee (ILC) | 1. Local Superior of Agnel Technical Complex, Bandra -Fr. Valerian DSouza. 2. Assistant Director of Agnel Technical Complex, Bandra - Fr. Eleuterio Fernandes. 3. Principal (Fr. CRCE) - Dr. Surendra Rathod. 4. Financial Controller - Ms. Christina Simon. 5. Dr. Sapnu U. Prabhu (Department of Electronics & Computer Engineering) 6. Dr. Sujata Deshmukh (Department of Computer Engineering) 7. Dr. Bhushan Patil (Department of Mechanical & Production Engineering). 8. Dr. Jagruti Save (Department of Artificial Intelligence & Data science). 9. Mr. Dileep C.C. (Department of Humanities and Science). 10. Mr. Mahesh Sharma - System Administrator. 11. Registrar - Mr. C.B. Shetty. 12. Sr. Clerk / Asst. Accountant - Robert Luzar. | ILC meets to process and approve the proposals of the institution. All major policy decisions are reviewed and approved by ILC. |

10.1.3 Decentralization in working and grievance redressal mechanism (10)

Institute Marks: 10.00

The Head of Departments are as follows:

Dr. Sapna U. Prabhu (Department of Electronics & Computer Science)

Dr. Sujata Deshmukh (Department of Computer Engineering)

Dr. Bhushan Patil (Department of Mechanical Engineering)

Dr. Jagruti Save (Department of Artificial Intelligence & Data science)

Mr. Dileep C.C. (Department of Humanities and Science).

The following faculty are entrusted with additional responsibilities:

Incharge - Examination Cell: **Dr. Dipak Bhoir.**

Incharge - Student Affairs: **Dr. S. S. Sudhakar.**

NBA & NAAC Coordinator - **Dr. Sunil Surve.**

Head Consultancy & Revenue Generation: **Dr. V. S. Jorapur**

In-charge - Research & Development: **Dr. Ketaki Joshi.**

In-charge - Infrastructure: **Mr. Mahesh Sharma.**

In-charge - Ambience: **Mrs. Monica Khanore.**

In-charge - Public Relations: **Mr. Jayen Modi.**

Re-constitution of Internal Complaints Committee (ICC) (Gender Sensitisation Prevention

and Prohibition of Sexual Harassment of Women Employees and Students and Redressal of Grievances in Technical Institutions)

Ref.: 1. NCTE Notification No.F-AICTE/WH/2016/01 dated 10.06.2016

2. University of Mumbai Circular No.CONCOU24/of 2014-15 dt. 12.11.2014

In compliance with the above referred AICTE Notification and the Circular received from University of Mumbai, the management has formulated Internal Complaints Committee under the above Act.

Internal Complaints Committee

Internal Complaints Committee has been constituted in the college for the sexual harassment of women at the workplace (prevention, prohibition, and redressal) and University of Mumbai Circular No. CONCOU24/ of 2014-15 dated 12/11/2014. ICC is headed by a senior female faculty of the institute. ICC meets on a need basis to address any complaints from students, teaching and nonteaching members and takes necessary action. The College has a zero-tolerance policy towards any such transgression. The college is committed to providing a safe and conducive work and academic environment to students and its employees and is extremely alert to matters pertaining to any kind of harassment and gender sensitivity. Posters are displayed at strategic places within the campus to communicate the philosophy of the institute in such matters.

| Sr. No | Name of the Member | Designation | Contact Nos. | Email Address |
|---------------|---|---------------------|---------------------|--|
| 1 | Prof. Merly Thomas Associate Professor — Computer Engg. | Presiding Officer | 9820755087 | merly@frcrce.ac.in |
| 2 | Prof. Binsy Joseph Associate Professor- Electronics Engg | Member Faculty | 9833503363 | binsy_joseph@frcrce.ac.in |
| 3 | Prof. Sarika Davare Assistant Professor- Info. Tech. Dept. | Member Faculty | 9969935306 | sarika.davare@frcrce.ac.in |
| 4 | Mr. Robert Dias, Office Superintendent | Member NonTeaching | 9730943327 | dias@frcrce.ac.in |
| 5 | Mrs. Jyoti Kargutkar, Lab. Technician | Member Non-Teaching | 9867724555 | jyoti@frcrce.ac.in |
| 6 | Mr. Tarasingh Ragnal | Member Student | 9082343049 | Taranrajpa111@gmail.com |
| 7 | Nangani Anthony Benno | Member Student | 9137811659 | bennoanthony4@gmail.com |
| 8 | Ms. Sachi Verma | Member Student | 7506054956 | sachiverma00@gmail.com |
| 9 | Rev, Fr. Joe H. Pereira Founder & Managing Trustee - Kripa Foundation, Bandra | Member - NGO | 9820199298 | kripabandra@gmail.com |

Women Development Cell

In an effort to promote the well being of the girl students, Teaching and Non-Teaching Women Staff of the Institute, to deal with the cases/ complaints of sexual harassment and to implement the womens' policies in general, a Womens Development Cell has been reconstituted in the College. This is in compliance with the decision of the Supreme Court of India. The College Womens Development Cell shall consist of the following members:-

| Sr. No. | Name of the Member | Designation | Contact Nos. |
|----------------|-----------------------------|-------------------------|---------------------|
| 1 | Dr. Surendrasingh S. Rathod | President | 99202 28275 |
| 2 | Dr. Sapna Prabhu | Co-ordinator | 9833545743 |
| 3 | Dr. Jagruti Save | Member | 9869621900 |
| 5 | Mrs. Sushma Nagdeote | Member | 8879626260 |
| 6 | Mrs. Yvonne Fernandes | Member | 98921 18413 |
| 7 | Ms. Neha Prakash | NGO Representative | 8419996979 |
| 8 | Ms. Palak Joseph | Students Representative | 9130006547 |

Functions & Responsibilities:

1. To create social awareness about the problems of women and in particular regarding gender discrimination.
2. To develop the self-confidence of female students, teaching and non-teaching women staff of the College.
3. To prevent sexual harassment and to promote general well-being of female students, teaching women staff of the College.
4. To organize seminars, workshops relating to women development.
5. To organize awareness programmes, skill development programmes, inspirational and motivational lectures and personality development programmes for stakeholders.

Anti-Ragging Squad & Anti-ragging Comittee

Anti-Ragging Committee to ensure compliance with the provisions of Regulations as well as the provisions of any law for the time being in force concerning ragging; and also, to monitor and oversee the performance of the Anti-Ragging Squad in prevention of ragging in the institution.

Roles and responsibilities

Any act of Indiscipline, Teasing or Handling with Rudeness.

- Any act that Prevents, Disrupts the Regular Academic Activity. (<https://www.ipeindia.org/>)
- Any activity which is likely to cause Annoyance, hardship, Psychological Harm or creates Fear or Apprehension.
- Any Act of Financial Extortion or Forceful Expenditure.
- Any Act of Physical Abuse causing Assault, Harm or danger to Health.
- Any Act of abuse by spoken words, emails, SMS or public insult etc.
- Any Act of Wrongful Confinement, Kidnapping, molesting or committing unnatural

- offenses, use of criminal forces, trespass or intimidation.
- Any unlawful assembly or conspiracy to ragging.

Anti Ragging Squad: Anti Ragging Squad consists of the following members of the faculty :

Dr. V.S. Jorapur -Associate Professor - Production Engg. Dept. (9869288147) - Coordinator

Dr. Sapna Prabhu - Professor- Electronics and Computer Science Engineering Department (9833545743).

Dr. B.S. Oaga -Associate Professor - Computer Engineering Department (9869776377)

Merly Thomas -Associate Professor - Computer Engineering Department (9820755087).

Anti Ragging Committee: Anti Ragging Committee will consist of the following members of the faculty and students:

Dr. Surendrasingh S. Rathod - Head of the Institution (9869005457)

Ms. Pallavi Kulkarni - Representative of Civil & Police Administration (8689888655)

Mr. Amit Kocharekar - Representative of Local Media (9820500110)

Ms. Juhi Chaudhari - Representative of Non-Government Organisation (9137630073)

Dr. Jagruti K. Save - Representative of Faculty Member (9869621900)

Dr. Bhushan Patil - Representative of Faculty Member (98203 69797)

Dr. Sapna Prabhu - Representative of Faculty Member (98335 45743)

Dr. Dr. B. S. Oaga - Representative of Faculty Member (87796 48719)

Ms. Rajeshwari Iyer - Representative of Parents (9987263283)

Ms. Vishakha Fernandes - Representative of Parents (9819624346)

Mr. Taransingh Rajpal Representative of Students (90823 43049)

Ms. Nicole Dias - Representative of Students (9892093890)

Mr. Vallance Alvares - Representative of Students (7045633289)

Mr. C.B. Shetty - Representative of Non Teaching Staff (99872 88538).

10.1.4 Delegation of financial powers (10)

Institute Marks : 10.00

1. Management/ Director initiates the process of annual budgeting by calling a meeting of Principal, HODs, Unit Heads and Financial Controller.
2. Principal has powers for purchase/ spending for infrastructure development related to academic activity.
3. Heads of Departments scrutinize proposals received from the staff members and the lab-in-charges based on the need and merit and forward them to the Principal for approval.
4. The Coordinators of various student related activities, Librarian, Hostel wardens etc. have powers for spending money pertaining to their activities after obtaining the approval from the Principal.

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

Institute Marks : 5.00

- A well delegated, democratic system has been developed and followed, to facilitate

decision making which ensures transparency through participation and involvement of all stakeholders.

- Admission, administration, placement, recruitment, infrastructure and faculty details are available on the website.
- Students are provided with the information about policies, rules, processes related to admission, examination and others (such as anti-ragging notification, grievance redressal notification etc.) on the college website.
- Mandatory disclosure is made available on the website as per AICTE norms.

10.2 Budget Allocation, Utilization, and Public Accounting at Institute level (30) Total Marks 30.00

10.2.1 Adequacy of budget allocation (10)

Institute Marks: 10.00

Approximately 10% of planned expenditure is allocated for improving the Institutes infrastructure and approximately 20% is used for the institutes recurring expenses.

In order to prepare the budget, indicative figures from the previous three years expenses are gathered, which serve as the baseline for the aforementioned expense heads. While preparing the budget, expenses anticipated to be incurred for the proposed development activities as well as due to inflation adjustments are taken into account.

Department heads propose a departmental budget for the fiscal year, in consultation with faculty members. Estimated expenses for student activities are prepared by the Principal after deliberating with the faculty in-charge of various activities.

The recurring expenditure is estimated and budgeted in accordance with the estimates. By consulting the department heads and based on the departments' needs, the non-recurring component of the budget is prepared. Distribution of the non-recurring procurement funds is done based on need and priority.

The proposed budget is discussed and finalized in the Institute Level Committee meeting. The budget is then submitted for approval to the Local Council Management, Local Management Committee, and Governing Council.

Previous years budgeted and actual expenditure figures show that the budgetary provisions for various heads were sufficient.

Average budget allocated for past three years is as follows:

| Items | Percentage of the budget |
|--|--------------------------|
| Infrastructure built-up | 14.33 |
| Library | 0.14 |
| Laboratory equipment | 4.11 |
| Laboratory consumables | 0.18 |
| Teaching and non-teaching staff salary | 76.72 |
| Maintenance and spares | 3.32 |
| R&D | 0.78 |
| Training and Travel | 0.37 |

| | |
|------------------------|------------|
| Miscellaneous expenses | 0.05 |
| Others | 0.00 |
| Total | 100 |

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

Institute Marks : 5.00

Audited statements for the financial years 2019-20, 2020-21, and 2021-22 are available on the college website. Link: <http://www.frcrce.ac.in/index.php/audited-statements>

10.2.2 Utilization of allocated funds (15)

Institute Marks : 15.00

The budgetary allocations are made after careful consideration of the institute's future needs. Every year, the recurring expenses budget is met. Capital investments are made concurrently with infrastructure readiness. A portion of the capital budget is set aside as carry forward resources for the purchase of equipment and machinery once the infrastructure is in place. A well-defined procurement process is in place, in accordance with industry best practices.

However, due to Pandemic during the academic year 2019-20, 2020-21 the budgeted amount was not be utilized. Also, due to shortage of computer parts the vendors were unable to supply the required computers/equipment.

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

Total Income at Institute level: For CFY, CFYm1, CFYm2 & CFYm3 CFY: (Current Financial Year),

CFYm1: (Current Financial Year minus 1), CFYm2: (Current Financial Year minus 2) and CFYm3: (Current Financial Year minus 3)

Table 1 - CFY 2022-23

| | | | | | | | |
|---------------------------------|-------|---|-------------------------------------|------------------------------------|------------------|---|-------------------------------|
| Total Income 22,55,52,334.42 | | Actual expenditure (till...): 20,25,12,751.98 | | | | | Total No. of Students 1324 |
| Fee | Govt. | Grants | Other sources(specify) Others | Recurring including salaries | Non Recurring | Special Projects/Any other, specify | Expenditure per student |
| 20,05,63,439.75 | 0 | 0 | 2,49,88,894.67 | 18,17,25,954.98 | 1,51,86,797 | 0 | 1,52,955.25 |

Table 2 - CFYm1 2021-22

| | | | |
|--------------|--|---|--------------|
| Total Income | | Actual expenditure (till. .): 16,40,82,916.52 | Total No. of |
|--------------|--|---|--------------|

| | | | | | | | |
|-----------------|-------|--------|--------------------------------|------------------------------|---------------|-------------------------------------|-------------------------|
| 20,49,39,739.44 | | | | | | | Students 1274 |
| Fee | Govt. | Grants | Other sources (specify) Others | Recurring including salaries | Non Recurring | Special Projects/Any other, specify | Expenditure per student |
| 18,29,86,326.50 | 0 | 0 | 2,19,53,412.94 | 16,10,20,296.92 | 30,02,619.60 | 0 | 1,28,746.40 |

Table 3 - CFYm2 2020-21

| | | | | | | | |
|------------------------------|-------|---|--------------------------------|------------------------------|---------------|-------------------------------------|----------------------------|
| Total Income 19,37,65,484.12 | | Actual expenditure (till ..): 13,84,26,513.37 | | | | | Total No. of Students 1251 |
| Fee | Govt. | Grants | Other sources (specify) Others | Recurring including salaries | Non Recurring | Special Projects/Any other, specify | Expenditure per student |
| 17,43,75,232 | 0 | 0 | 1,93,90,252.12 | 13,82,74,887.37 | 1,51,626 | 0 | 1,10,652.69 |

Table 4 - CFYm3 2019-20

| | | | | | | | |
|------------------------------|-------|---|--------------------------------|------------------------------|---------------|-------------------------------------|----------------------------|
| Total Income 17,83,49,279.93 | | Actual expenditure (till ..): 15,73,90,254.57 | | | | | Total No. Of Students 1127 |
| Fee | Govt. | Grants | Other sources (specify) Others | Recurring including salaries | Non Recurring | Special Projects/Any other, specify | Expenditure per student |
| 15,28,58,177.75 | 0 | 0 | 2,54,91,102.18 | 15,46,44,703.12 | 27,45,551.45 | 0 | 1,39,654.17 |

| Items | Budgeted in CFY | Actual expenses in CFY | Budgeted in CFYm1 | Actual Expenses in CFYm1 | Budgeted in CFYm2 | Actual Expenses in CFYm2 | Budgeted in CFYm3 | Actual Expenses in CFYm3 |
|--|------------------------|------------------------|------------------------|--------------------------|------------------------|--------------------------|------------------------|--------------------------|
| | 2022-23 | 2022-23 | 2021-22 | 2021-22 | 2020-21 | 2020-21 | 2019-20 | 2019-20 |
| Infrastructure Built-Up | 54,01,000.00 | 87,32,895.00 | 45,86,000.00 | 0.00 | 24,75,500.00 | 0.00 | 33,28,000.00 | 15,64,898.00 |
| Library | 3,00,000.00 | 2,48,817.00 | 3,00,000.00 | 40,054.60 | 2,71,000.00 | 2,630.00 | 2,00,000.00 | 81,536.25 |
| Laboratory equipment | 39,99,000.00 | 62,05,085.00 | 17,67,600.00 | 11,21,665.00 | 76,53,500.00 | 3,22,137.00 | 51,38,000.00 | 0.00 |
| Laboratory consumables | 3,00,000.00 | 2,46,379.88 | 3,00,000.00 | 51,693.54 | 3,50,000.00 | 15,661.56 | 3,50,000.00 | 2,44,201.24 |
| Teaching and non-teaching staff salary | 15,88,00,000.00 | 14,78,30,957.15 | 15,65,00,000.00 | 13,52,47,479.85 | 15,67,00,000.00 | 11,89,56,157.55 | 13,02,00,000.00 | 12,48,31,329.61 |
| Maintenance and spares | 58,00,000.00 | 1,11,19,042.26 | 60,00,000.00 | 45,85,884.44 | 78,00,000.00 | 17,38,421.50 | 60,00,000.00 | 50,51,765.53 |
| R & D | 15,00,000.00 | 19,11,036.00 | 15,00,000.00 | 16,12,111.50 | 15,00,000.00 | 15,95,334.00 | 14,00,000.00 | 4,82,218.00 |
| Training and Travel | 10,50,000.00 | 2,69,999.00 | 10,50,000.00 | 44,126.00 | 10,50,000.00 | 14,613.00 | 7,00,000.00 | 1,52,801.00 |
| Miscellaneous expenses | 1,00,000.00 | 60,465.00 | 1,00,000.00 | 23,595.00 | 1,00,000.00 | 14,212.00 | 1,00,000.00 | 64,933.00 |
| Others, specify | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 17,72,50,000.00 | 17,66,24,676.29 | 17,21,03,600.00 | 14,27,26,609.93 | 17,79,00,000.00 | 12,26,59,166.61 | 14,74,16,000.00 | 13,24,73,682.63 |

10.3 Program Specific Budget Allocation, Utilization (30)

Total Marks 27.00

Institute Marks:

Total Income at Institute level: For CFY, CFYm1, CFYm2 & CFYm3 CFY: (Current Financial Year), CFYm1: (Current Financial Year minus 1), CFYm2: (Current Financial Year minus 2) and CFYm3: (Current Financial Year minus 3)

Table 1: CFY 2022-23

| | | | | |
|---------------|--------------|--|--------------|---------------------------|
| 5221666.68 | | Actual expenditure (till ..): 3643027.23 | | Total No. of Students 424 |
| Non Recurring | Recurring | Non Recurring | Recurring | Expenditure per student |
| 1620000.00 | 36,01,600.00 | 12,71,785.00 | 60,75,324.00 | 17328.00 |

Table 2 : CFYm1 2021-22

| | | | | |
|---------------|--------------|--|--------------|---------------------------|
| 4956666.67 | | Actual expenditure (till ..): 4335274.22 | | Total No. of Students 355 |
| Non Recurring | Recurring | Non Recurring | Recurring | Expenditure per student |
| 1320000.00 | 36,36,600.00 | 1564182.00 | 27,71,092.00 | 12212.00 |

Table 3 : CFYm2 2020-21

| | | | | |
|---------------|--------------|--|--------------|---------------------------|
| 4151483.34 | | Actual expenditure (till ..): 1357156.68 | | Total No. of Students 292 |
| Non Recurring | Recurring | Non Recurring | Recurring | Expenditure per student |
| 838150.00 | 33,13,300.00 | 1052.00 | 13,56,100.00 | 4650.00 |

Table 4 : CFYm3 2019-20

| | | | | |
|---------------|--------------|--|--------------|---------------------------|
| 4585000.01 | | Actual expenditure (till ..): 2745280.02 | | Total No. of Students 226 |
| Non Recurring | Recurring | Non Recurring | Recurring | Expenditure per student |
| 915000.00 | 36,69,900.00 | 55330.00 | 26,89,900.00 | 12147.00 |

| Items | Budgeted in 2022-23 | Actual Expenses in 2022-23 till | Budgeted in 2021-22 | Actual Expenses in 2021-22 till | Budgeted in 2020-21 | Actual Expenses in 2020-21 till | Budgeted in 2019-20 | Actual Expenses in 2019-20 till |
|------------------------|---------------------|---------------------------------|---------------------|---------------------------------|---------------------|---------------------------------|---------------------|---------------------------------|
| Laboratory equipment | 1500000.00 | 1172258.00 | 1200000.00 | 1548160.00 | 729750.00 | 0.00 | 835000.00 | 22715.00 |
| Software | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Laboratory consumable | 425000.00 | 868200.00 | 425000.00 | 73600.00 | 608300.00 | 50700.00 | 591600.00 | 326400.00 |
| Maintenance and spares | 1933300.00 | 3483500.00 | 1966600.00 | 1312100.00 | 1500000.00 | 554100.00 | 1900000.00 | 1694500.00 |
| R&D | 600000.00 | 764400.00 | 600000.00 | 644900.00 | 600000.00 | 641600.00 | 560000.00 | 192900.00 |
| Training and Travel | 43300.00 | 15300.00 | 45000.00 | 8285.00 | 45000.00 | 8500.00 | 58300.00 | 20551.00 |
| | 720000.00 | 1043300.00 | 720000.00 | 748100.00 | 668400.00 | 102250.00 | 640000.00 | 488200.00 |
| Total | 5221600 | 7346958 | 4956600 | 4335145 | 4151450 | 1357150 | 4584900 | 2745266 |

10.3.1 Adequacy of budget allocation (10)

Institute Marks : 9.00

Laboratory upgradation happens once in five to six years with latest hardware. Allocated budget is sufficient to enable development of at least two labs each year. Faculty members, in consultation with laboratory staff develop the labs. In the last two years, we have added a Machine Learning server, and upgraded Distributed Computing Laboratory, Database Management Laboratory, Web Technology, and Software Engineering Laboratory. Also, we use open-source software to fulfill academic requirements. So, we do not need to budget for software.

| Academic Year | 2022-23 | | 2021-22 | | 2020-21 | |
|------------------------|-----------------------|---------------------------------|-----------------------|---------------------------------|-----------------------|---------------------------------|
| Items | Budgeted (in Lacs) | Actual Expenses (in Lacs) | Budgeted (in Lacs) | Actual Expenses (in Lacs) | Budgeted (in Lacs) | Actual Expenses (in Lacs) |
| Laboratory Equipment | 15 | 17.3 | 12 | 15.48 | 7.3 | 0 |
| Laboratory Consumables | 4.25 | 3.51 | 4.25 | 0.74 | 6.08 | 0.5 |
| Maintenance and Spares | 19.33 | 6.18 | 19.67 | 13.12 | 15 | 5.54 |
| R&D | 6 | 6.24 | 6 | 6.45 | 6 | 6.42 |

As shown in above table, adequate funds are budgeted for lab development sufficient. On an average 10 lakhs are budgeted for lab up-gradation. Budget for non-recurring expenses is also allocated sufficiently

10.3.2 Utilization of allocated funds (20)

Institute Marks : 18.00

The budgeted funds are utilized for the specified purposes in the same financial year. Latest hardware is procured to keep abreast with the industry requirements. Latest open- source softwares are used as required for the laboratory experiments. Laboratories are maintained and upgraded regularly.

Table 1: Budget and Expenditure for the last three years

| Year | Budgeted Amount (In Lacs) | Actual Expenditure (In Lacs) |
|---------|------------------------------|---------------------------------|
| 2022-23 | 52.22 | 36.43 |
| 2021-22 | 49.57 | 43.35 |
| 2020-21 | 41.51 | 13.57 |

10.4 Library and Internet (20)

Total Marks 20.00

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

Institute Marks: 10.00

- The Library is situated on the first floor of the college building.
- The total number of books available is 32270, which are from renowned publishers like Tata McGraw Hill, Pearson education, Wiley, Springer. Elsevier. PACKT, etc.
- Library has approximately 49 Indian Journals.
- Every year there is an addition of 720 books, 240 new titles, 130 new editions.
- Textbooks and Reference books prescribed by the University are available.
- E books are also available

- International Journals and magazines from respective fields of Engineering are subscribed either in Print or Electronic formats and is a very good source of information on latest and advanced technologies.
- Anti Plagiarism Software "Turnitin" is subscribed in the library.
- Institute provides open book access facility to students.
- The students have web online access of books catalogues through college web site under online library catalogue (Web OPAC)
- Students can access DELNET through the worldwide web at <http://delnet.nic.in>.
- Students can access IEEE Xplorer and ASME Digital library. * Knimbus ebook Virtual Library - Engineering collection has been added to the E- resources. The number of resources incorporated in the Knimbus e book engineering collection are:

| | | |
|---|------------------------|------|
| 1 | E- Journals | 1574 |
| 2 | E- Books | 906 |
| 3 | E- Magazines | 14 |
| 4 | Case Reports | 229 |
| 5 | Conference proceedings | 125 |

- Institute provides book bank facility
- Institute has IIT (Bombay) library membership for students and staff.

Support to students for self-learning activities

- 1) Availability of digital library content: NPTEL Video courses/E- journals with 220 CD's are available for 27 subjects (Production, Electronics, Computer, Information Technology)
- 2) Reference books, handbooks, conference and workshop proceedings are available.
- 3) The institute is an NPTEL local chapter, facilitating faculty and students to register and pursue NPTEL courses. Students get 50% concession in registration fees, while registering through the institute login. Online access for NPTEL courses is provided in the library.
- 4) Reference books, handbooks, workshop and conference proceedings are available.
- 5) Library facilities are extended beyond college hours for self-study.
- 6) Purchased new Anti Plagiarism software "Turnitin"
- 7) Library is a member of NDLI CLUB (National digital library)

10.4.2 Internet (10)

Institute Marks : 10.00

| | |
|---|--|
| Name of the Internet provider | ISP 7Star operated by OmSai |
| Available band width | 100 MBPS (1:1) Leased Line, 150 MBPS broadband |
| WiFi availability | Yes at strategic locations |
| Internet access in labs, classrooms, library and offices of all Departments | Yes |
| Security arrangements | UTM appliance, Caching service |

Annexure I
(A) PROGRAM OUTCOME (POs)

Engineering Graduates will be able to:

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

(B) PROGRAM SPECIFIC OUTCOME (PSOs)

| | |
|------|--|
| PSO1 | Develop Artificial Intelligence and Machine Learning systems. |
| PSO2 | Apply cyber security mechanisms to ensure the protection of information technology assets. |

Declaration

The head of the institution needs to make a declaration as per the format given -

I undertake that, the institution is well aware about the provisions in the NBA's accreditation manual concerned for this application, rules, regulations, notifications and NBA expert visit guidelines inforce as on date and the institutes hall fully abide by them.

It is submitted that information provided in this Self Assessment Report is factually correct.

I understand and agree that an appropriate disciplinary action against the Institute willbe initiated by the NBA. In case, any false statement/information is observed during pre-visit, visit, postvisit and subsequent to grant of accreditation.

Head of the Institute

Name: Dr. S. S. Rathod

Designation. Principal

Signature:



Seal ofThe Institution:



Place: Mumbai

Date: 23-12-2022 14:04:06

NATIONAL BOARD OF ACCREDITATION

NBCC Place, East Tower, 4th Floor, Bhisham Pitamah Marg,
Pragati Vihar, New Delhi-110 003
Tel: +91 11 2436 0620-22, 2436 0654 ; Telefax: +91 11 4308 4903
Website: www.nbaind.org



File No. 28-40-2010-NBA

Date: 05-03-2020

To,

The Principal
Fr. Conceicao Rodrigues College of Engineering,
Fr. Agnel Ashram Bandstand,
Bandra (W), Maharashtra-400050

Subject: Further accreditation status on the basis of Compliance Report of the program in Tier-II offered by Fr. Conceicao Rodrigues College of Engineering, Fr. Agnel Ashram Bandstand, Bandra (W), Maharashtra-400050.

Sir,

This is regarding Compliance Report submitted by **Fr. Conceicao Rodrigues College of Engineering, Fr. Agnel Ashram Bandstand, Bandra (W), Maharashtra-400050** for the UG Engineering programs which were accredited by NBA in Tier-II for academic years 2017-18 to 2019-20 whose validity is expiring on 30.06.2020.

2. An Expert Team conducted data verification of the programs on 7th February, 2020. The report submitted by the Expert Team was considered by the concerned Committees constituted for the purpose in NBA. The competent authority in NBA has approved the following accreditation status to the programs as given in the table below:

| Sl. No. | Name of the Program(s) (UG) | Basis of Evaluation | Accreditation Status | Period of validity | Remarks |
|---------|-----------------------------|---------------------|----------------------|--|---|
| (1) | (2) | (3) | (4) | (5) | (6) |
| 1. | Computer Engineering | Tier-II Document | Accredited | Academic Years 2020-2021 to 2022-2023 i.e. upto 30-06-2023 | Accreditation status granted is valid for the period indicated in Col. or till the program has approval of the competent authority, whichever is earlier. |
| 2. | Electronics Engineering | | Accredited | | |
| 3. | Production Engineering | | Accredited | | |

3. It may be noted that only students who graduate during the validity period of accreditation, will be deemed to have graduated with an NBA accredited degree.

4. The accreditation status awarded to the programs as indicated in the above table does not imply that the accreditation has been granted to **Fr. Conceicao Rodrigues College of Engineering, Fr. Agnel Ashram Bandstand, Bandra (W), Maharashtra-400050** as a whole. **As such the Institution should nowhere along with its name including on its letter head etc. write that it is accredited by NBA because it is program accreditation and not Institution accreditation. If such an instance comes to NBA's notice, this will be viewed seriously.** Complete name of the program(s) accredited, level of program(s) and the period of validity of accreditation, as well as the Academic Year from which the accreditation is effective should be mentioned unambiguously whenever and wherever it is required to indicate the status of accreditation by NBA.

Contd./...

5. The accreditation status of the above programs is subject to change on periodic review, if needed by the NBA. It is desired that the relevant information in respect of accredited programs as indicated in the table in paragraph 2, appears on the website and information bulletin of the Institute.
6. The accreditation status awarded to the programs as indicated in table in paragraph 2 above is subject to maintenance of the current standards during the period of accreditation. If there are any changes in the status (major changes of faculty strength, organizational structure etc.), the same are required to be communicated to the NBA, with an appropriate explanatory note.
7. A copy each of Report of the Visiting Team in respect of the above programs is enclosed.

Yours faithfully,



(Dr. Anil Kumar Nassa)
Member Secretary

Encls.: 1. Copy each of Report of the Visiting Team in respect of the programs.

Copy to:

1. The Director of Technical Education,
3, Mahapalika Marg,
Opp. Metro Cinema,
Chhatrapati Shivaji Terminus Area,
Mumbai, Maharashtra 400001
2. The Registrar,
University of Mumbai
M.G. Road, Fort
Mumbai-400 032,
3. Accreditation File.
4. Master Accreditation file of the State.



राष्ट्रीय मूल्यांकन एवं प्रत्यायन परिषद

विश्वविद्यालय अनुदान आयोग का स्वायत्त संस्थान

NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL

An Autonomous Institution of the University Grants Commission

Certificate of Accreditation

*The Executive Committee of the
National Assessment and Accreditation Council
is pleased to declare*

Fr. Conceicao Rodrigues College of Engineering

*Bandra (W), Mumbai, Dist. Mumbai Suburban,
affiliated to University of Mumbai, Maharashtra as*

Accredited

with CGPA of 3.18 on four point scale

at A grade

valid up to June 01, 2028

Date : June 02, 2023



Anil

Director

EC(SC)/156/1st Cycle/MHCOGN104679

AUTONOMOUS COLLEGE PORTAL

-
-
-
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-

View Details [Back](#)

Basic Information

| | | | |
|--|--|---|---------------------------------|
| College Name : | Fr. Conceicao Rodrigues College of Engineering | Affiliating University : | University of Mumbai, Mumbai |
| Type of College : | Private | Type of courses being run by college : | Engineering |
| Name of society/Trust/Company/BOG : | Society of St. Francis Xavier, Pilar's | Registration Number : | F-741 (BOM) |
| Registration date : | 1960-03-31 | Chairman Name : | Fr. Bento Rodrigues |
| Chairman Contact number : | 9811372252 | Chairman email ID : | bentord578@gmail.com |
| Secretary Name : | Fr. Valerian D'Souza | Secretary Contact number : | 9426116028 |
| Secretary email ID : | valusfx95@gmail.com | Details of the other members of the society/Trust/Company/BOG : | View |
| Name of the Principal : | Surendra Singh Rathod | Phone of the Principal : | 9920228275 |
| Email of the Principal : | principal.crce@fragnel.edu.in | Year of Establishment : | 1984 |
| Included in Section 2(f) | Yes | Date when the College was declared fit under section 2(f) and 12 (B) of UGC Act 1956 : | 03-03-2023 View |

| | | | |
|---|---|---|---------------------------|
| Included in Section 12(B) | Yes | Category | Co-Ed |
| NAAC accreditation | Yes | Valid up to | 02-06-2028 |
| Grade | A | Score | 3.18 View |
| Internal Quality Assurance Cell (IQAC) | Yes View | Internal compliant committee | Yes View |
| Students Grievances Redrassal Committee (SGRC) | Yes View | Registered with Academic Bank of Credits (ABC) | Yes View |
| About College | <p>Located in a picturesque environment in the heart of Mumbai, Fr. Conceicao Rodrigues College of Engineering is one of the renowned, premier and sought-after private Engineering colleges. The Institute is dedicated to making a difference in Engineering education, with its exclusive approach towards the ongoing momentum of trends in technology and holistic development. Beginning with an orphanage and a trade school in carpentry, the Agnel Ashram (1957) has today grown into a full-fledged Technical Complex. The Institute today proudly bears the founder's name as a fitting tribute to his impassioned faith in highly-qualified and fully-trained engineers and technicians in the service of the nation. The Institute started with only one program in Production Engineering in 1984 with an intake capacity of 60 students. In 1987. Today college offers courses in emerging technologies along with Honors/minor degree courses. College received 'A' grade by NAAC and have very good reputation in society.</p> | | |
| Vision | <p>Vision: "Moulding Engineers Who Can Build the Nation" CRCE will be a Centre-of-Excellence in Engineering Education, moulding engineers with state-of-the-art technologies, innovative skills, and human values matching with the growing expectations of the corporates and the society and thus play an effective role in nation building.</p> | | |
| Mission | <p>1. Create an excellent scholastic ambience for students and faculty by providing facilities with state-of-the-art technologies and continuously updating based on the needs of user organizations. 2. Attract, develop, and retain teaching faculty of academic excellence, dedication, and commitment. 3. Design the academic administration system to ensure an effective teaching-learning process facilitating participation from students and teachers and enabling continuous improvement through evaluation and feedback. 4. Provide avenues for the holistic development of students to become competent engineers with interpersonal skills, leadership qualities, and social concern. 5. Maintain economic discipline and continuously work for optimal utilization of resources and resource generation through consultancy to make quality education affordable. Everybody in the organization is a role model for integrity, upholding ethical values, fairness, and transparency in all dealings.</p> | | |
| Objectives | <p>1. To achieve holistic development for students by imparting quality education. 2. To promote research culture among Faculties and Students 3. To enhance and enable continuous Industry-Institute interaction. 4. Higher education to students of weaker sections of society by providing good infrastructure and a motivating environment 5. To inculcate benefits of the universal, cosmopolitan, and pluralistic nature of our society. 6. To support the students in expressing their talent and creativity in academics, sports, research, extension activities, and social fields. 7. To promote and foster mutually beneficial interaction between Alumni and the Institute. 8. To facilitate training in specific areas and to empower students for better employment opportunities. 9. To nurture various skills of students by providing them with a wide variety of Co-curricular and Extra-curricular activities.</p> | | |

| NBA accreditation Details | Name of the accredited course | Valid up to | Score | NBA Certificate (if accreditation expired then,proof of application) |
|---------------------------|-------------------------------|-------------|-------|--|
| | UG Computer Engineering | 2023-06-30 | 688 | View |
| | UG Electronics Engineering | 2023-06-30 | 683 | View |
| | UG Production Engineering | 2023-06-30 | 659 | View |

Infrastructure facilities

Land Details

Total land available (in acres) :

Total built up area(square meter) :

Total carpet area(square meter) :

Longitude and Latitude coordinates of the campus location :

Whether land is registered in the name of the College? : No

Whether the building is audited for fire safety by designated agency: Yes

Whether the building is barrier free for divyangjan : Yes

Land ownership proof (such as Sale/Lease deed in Name of Trust/Society/ Company)

Occupancy Certificate/ Completion Certificate/ Building License/ Form D

Approved Plan by competent Authority/Architect

Class Room Details

Number of class rooms :

Area in sq. Ft. of all class rooms :

Labs Details

Number of Laboratories :

Area in Square Feet of all Laboratories :

List of Lab equipments [View](#)

Central Library Details

Whether reading room available in Central Library? : Yes

Area in Square Feet of Central Library:

List of Books [View](#)

Total Number of Books :

Total Number of Computers :

Total Number of Print Journals (National/International) :

Total Number of e-Journals:

Departmental Library Details

Number of departments having departmental libraries

Area in Square Feet of Departmental Library

List of of Books (Department wise) [View](#)

Total Number of Books

Hostel Details

Whether Hostel Facility is available? : Yes

Total no of hostel(s):

Total Number of Rooms in mens Hostel:

Total Number of Rooms in Womens Hostel:

Number of residents in men's hostel :

Number of residents in women's hostel:

Administrative Block Details

No of rooms:

Area in Square Feet of total rooms :

Faculty room details

No of individual rooms:

Average area of the individual rooms(sq. ft.):

No of shared rooms:

Average area of the shared rooms:

Common rooms Details

No of common rooms for boys' :

Area in Square Feet of boys' common room:

No of common rooms for girls':

Area in Square Feet of girls' common room :

Canteen Details

Canteen : Yes

Seating capacity:

Area of the canteen (sq. ft.):

Air conditioning Facility available : No

Medical Facility Details

Whether the college is provided with medical facilities? : Yes

Number of doctors available:

Number of nurses available:

Number of beds available:

Number of rooms for medical facility:

Total area of medical facility (sq. ft.):

Availability of ambulance ? : No

Auditorium Details

Whether the college is having auditorium ? : Yes

No of auditorium:

Seating capacity:

Number of auditorium with A/C facility:

Number of auditorium without A/C facility:

Computational Facilities

Computers exclusively Available to Students :

Computers available in Library:

Computers available in Administrative Office:

Number of Computers in Language Lab:

Internet Bandwidth in mbps:

Number of Licensed Application Software:

Number of Licensed System Software:

Number of Open Source Software:

Percentage of area having wifi coverage

List of softwares [View](#)

Transport Details

Whether the college is having Transport Facilities ? : Yes

No of vehicles available :

Sports Facility Details

Sports Facilities in the College Campus (indoor / outdoor) : Yes

Number of Play grounds :

Area of the play ground (sq. ft.):

Number of coaches :

Whether the college is having Gym facility : Yes

List equipment's [View](#)

College website Details

Whether College website is available? : Yes

Frequency of updation:

URL of the website :

Academic Program Details

| S.No. | Academic Year | Name of the Course | Level of the Course | Sanctioned Intake | Actual enrolment | Number of passed out students | Number of students placed |
|-------|---------------|--------------------|---------------------|-------------------|------------------|-------------------------------|---------------------------|
| 1 | 2018-19 | PRODUCTION | UG | 60 | 41 | 73 | 10 |
| 2 | 2018-19 | ELECTRONICS | UG | 60 | 52 | 74 | 36 |
| 3 | 2018-19 | COMPUTER | UG | 60 | 65 | 74 | 51 |
| 4 | 2018-19 | INFO. TECH. | UG | 60 | 65 | 76 | 41 |
| 5 | 2018-19 | Mechanical Engg | PG | 18 | 7 | 5 | 0 |

| S.No. | Academic Year | Name of the Course | Level of the Course | Sanctioned Intake | Actual enrolment | Number of passed out students | Number of students placed |
|-------|---------------|--|---------------------|-------------------|------------------|-------------------------------|---------------------------|
| 6 | 2018-19 | ELECTRONICS | PG | 18 | 3 | 0 | 0 |
| 7 | 2019-20 | PRODUCTION | UG | 60 | 22 | 57 | 7 |
| 8 | 2019-20 | Electronics and Computer Science | UG | 60 | 56 | 65 | 22 |
| 9 | 2019-20 | COMPUTER | UG | 120 | 129 | 78 | 41 |
| 10 | 2019-20 | Mechanical Engg | UG | 60 | 52 | NA | NA |
| 11 | 2019-20 | Mechanical Engg | PG | 18 | 1 | 7 | 0 |
| 12 | 2020-21 | Artificial Intelligence and Data Science | UG | 60 | 63 | NA | NA |
| 13 | 2020-21 | Electronics and Computer Science | UG | 60 | 63 | 85 | 70 |
| 14 | 2020-21 | COMPUTER | UG | 120 | 129 | 78 | 84 |
| 15 | 2020-21 | Mechanical Engg | UG | 60 | 49 | NA | NA |
| 16 | 2020-21 | Mechanical Engg | PG | 18 | 1 | 1 | 0 |
| 17 | 2021-22 | Artificial Intelligence and Data Science | UG | 60 | 64 | NA | NA |

| S.No. | Academic Year | Name of the Course | Level of the Course | Sanctioned Intake | Actual enrolment | Number of passed out students | Number of students placed |
|-------|---------------|--|---------------------|-------------------|------------------|-------------------------------|---------------------------|
| 18 | 2021-22 | Electronics and Computer Science | UG | 60 | 59 | 70 | 40 |
| 19 | 2021-22 | COMPUTER | UG | 120 | 130 | 71 | 46 |
| 20 | 2021-22 | Mechanical Engg | UG | 60 | 37 | NA | NA |
| 21 | 2021-22 | Mechanical Engg | PG | 18 | 2 | 1 | 0 |
| 22 | 2022-23 | Artificial Intelligence and Data Science | UG | 60 | 64 | NA | NA |
| 23 | 2022-23 | Electronics and Computer Science | UG | 60 | 63 | NA | 40 |
| 24 | 2022-23 | COMPUTER | UG | 120 | 128 | NA | 95 |
| 25 | 2022-23 | Mechanical Engg | UG | 60 | 35 | NA | 20 |
| 26 | 2022-23 | Mechanical Engg | PG | 18 | 0 | 2 | 0 |

Number of Teachers Available

| | Senior Professor | Professor | Associate Professor | Assistant Professor | Others |
|----------------|------------------|-----------|---------------------|---------------------|----------|
| Regular | 0 | 7 | 8 | 46 | 0 |

| | Senior Professor | Professor | Associate Professor | Assistant Professor | Others |
|---|---------------------------|-----------|---------------------|---------------------|----------|
| Ad-hoc/Contractual | 0 | 0 | 0 | 2 | 0 |
| Guest faculty/Visiting faculty | 0 | 0 | 0 | 0 | 0 |
| Separate department-wise list of the faculty | View Data | | | | |

Sanctioned, working strength and vacant position of faculty members

| Category | Sanctioned | Working | Vacant |
|----------------------------|------------|-----------|----------|
| Professor | 7 | 7 | 0 |
| Associate Professor | 10 | 8 | 2 |
| Assistant Professor | 48 | 48 | 0 |

Non-teaching staff

| | | |
|---|-------------|-----------|
| Sanctioned: 46 | Working: 44 | Vacant: 2 |
| List of the non-teaching staff: View Data | | |

Qualification of Faculty Members

| Category | With Ph.D. Qualification | With PG (M.Tech/ M. Phil. etc.)Qualification | Other | Total |
|---------------------|--------------------------|--|----------|-----------|
| Professor | 7 | 0 | 0 | 7 |
| Associate Professor | 5 | 3 | 0 | 8 |
| Assistant Professor | 7 | 41 | 0 | 48 |
| Total | 19 | 44 | 0 | 63 |

Achievements of Students

| Academic Year | Number of Students passed with distinction | Number of Students passed with 1st division | Number of Students passed with 2nd division | Overall pass percentage | View |
|---------------|--|---|---|-------------------------|----------------------|
| 2018-19 | 216 | | 10 | 97.5 | View |
| 2019-20 | 276 | | 0 | 99.5 | View |
| 2020-21 | 315 | | 0 | 100 | View |
| 2021-22 | 268 | | 3 | 99.25 | View |
| 2022-23 | 0 | | 0 | 0 | View |

Achievements of Faculty Members

| Academic Year | Number of Research papers published in Journals | Number of patents granted | Number of papers published in National Conferences | Number of papers published in International Conferences | Number of Books Authored | Number of new externally funded research projects received | Fund received during this academic year | Number of book chapters authored | View |
|---------------|---|---------------------------|--|---|--------------------------|--|---|----------------------------------|----------------------|
| 2018-19 | 3 | 1 | 5 | 24 | 4 | 7 | 193000 | 1 | View |
| 2019-20 | 25 | 1 | 0 | 39 | 1 | 9 | 250000 | 0 | View |
| 2020-21 | 11 | 1 | 0 | 28 | 0 | 0 | 0 | 0 | View |
| 2021-22 | 13 | 0 | 0 | 33 | 0 | 0 | 0 | 1 | View |
| 2022-23 | 5 | 8 | 0 | 6 | 1 | 0 | 0 | 1 | View |

Bank Details

| | | |
|--|--|---------------------------------------|
| Account Number: 520141000955023 | Name of the account holder: Fr. C. Rodrigues College of Engineering | Bank Name: Union Bank of India |
| IFSC Code: UBIN0901202 | Swift Code: UBININBBMUB | MICR Code: 400026329 |
| Pancard Number: AABTS9182Q | GST Number: 27AABTS9182Q1ZI | |

Payment History

[Payment logs](#)

| S.No. | Amount | Payment Status | Bank Transaction Reference No | PaymentDate |
|-------|----------|----------------|-------------------------------|-------------|
| 1 | 50000.00 | Success | 586273018 | 16-06-2023 |

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SOCIETY OF ST. FRANCIS XAVIER, PILAR'S
FR. CONCEICAO RODRIGUES COLLEGE OF ENGINEERING

(Approved by AICTE & Affiliated to University of Mumbai)

Fr. Agnel Ashram, Bandstand, Bandra (W), Mumbai - 400 050.

Phone : (022) 6711 4000, 6711 4101, 6711 4104

Website : www.frcrce.ac.in • Email : crce@fragnel.edu.in



RESEARCH ETHICS POLICY

Effective from 17th Oct 2022



DR. B. S. DAGA
Member Secretary (Institutional Ethics Committee)

DR. SURENDRA RATHOD
Principal

Moulding Engineers Who Can Build the Nation



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Section 1: Objective

FR. CONCEICAO RODRIGUES COLLEGE OF ENGINEERING, a premier Engineering College, is committed to develop best quality technical personnel with sound knowledge in basic engineering principles, technical skills, innovative research capabilities and exemplary professional conduct to use technology for the benefit of society with the highest ethical values. The college is established to impart uninterrupted dissemination of knowledge to top ranking students from all sections of the society. The college is responsible to cultivate higher values of honesty, integrity, responsibility, mutual respect for persons and property and respect for human rights.

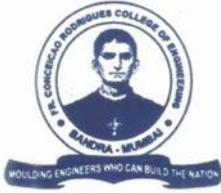
In order to achieve this, appropriate guidelines are framed to enforce professional ethics in the personal conduct which will be binding on all the students and staff in the college. Institutional Ethics Committee is constituted to formulate Research Ethics Policy for FR. CONCEICAO RODRIGUES COLLEGE OF ENGINEERING.

Section 2: Institutional Ethics Committee (IEC)

The Institutional Ethics Committee shall be comprised of senior faculty members with Principal as the Chairman of the committee. An IEC is established to formalize institutions commitment to the promotion of high scientific and ethical standards in the interest of communities and researchers. All research involving human subjects or data related to human subject as a patient should be conducted in accordance with the three basic principles, namely Beneficence, Respect for Persons and Justice.

Section 3: Responsibilities of Institutional Ethics Committee

- Formulate the Research Ethics Policy for Fr CRCE
- Provide independent and competent review of all ethical aspects of research proposals
- Review research proposals submitted to it within a reasonable time and document its views in writing to the applicant's
- Safeguard the dignity, rights, safety, and well-being of all study participants and communities paying special attention to investigations that may involve vulnerable participants
- Consider the suitability of Investigator(s) for the proposed study with respect to relevant qualification, training and experience.
- Report breaches of Research Ethics Policy or non-compliance of ethical practices among students, faculty and staff to the Principal for taking necessary actions.
- Recommend actions on non-compliance of ethical practices among students, faculty and staff
- Propose corrective actions on report of non-adherence to the Policy.
- Remain trained and up to date on the regulatory requirements



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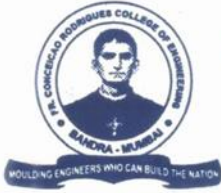
Website : www.frce.ac.in • Email : crce@fragnel.edu.in

- Make amendments and clarity to the Policy as and when required.
- If required then review following documents to arrive at the conclusion:
 - (i) Experimental Methodology
 - (ii) Protocols followed during experimentation
 - (iii) Investigators profile
 - (iv) Investigators agreement with sponsor
 - (v) Investigators undertaking

Section 4: Responsibilities of the Students/Scholars

It shall be the responsibility of the students and scholars to:

- (i) Read, understand and be aware of this Research Ethics Policy and subsequent amendments brought to it.
- (ii) Respect the laws of the country, rights of individuals and to conduct in a responsible and dignified manner at all times. One must show due respect to people while interacting for academic purposes by way of data collection, and surveys for student projects.
- (iii) Obtain written consent from human subjects/participants and prior approval of Research Ethics Committee in projects involving any kind of direct measurement of human physiological parameters such as ECG/EMG etc.
- (iv) Ensure that, the rights of an individual will be respected and their property and life will not be put under threat at any circumstances. Academic work must not pose a risk or danger to people or the environment. Necessary clearances and permits/licenses must be obtained while handling, storing and disposing of radioactive, toxic or harmful materials.
- (v) Follow ethical practices in publications/thesis/project reports etc. by checking plagiarism and by avoiding self-plagiarism. Be cautious to avoid so-called "predatory journals" which publish papers with minimal or no review. It is unethical to publish in such journals of this nature.
- (vi) Carefully avoid data fraud and all unacceptable forms of data manipulation, such as or subtracting data points at will, editing images to produce a false result, creating images artificially and presenting them as data or using the same figure or table to describe different experiments. The conclusions claimed in a research paper must be genuine.
- (vii) Honestly claim authorship of documents. The list of authors in research papers, reviews, books, monographs or policy documents should not be manipulated to give undue credit to those who have not contributed ("honorary authorship") or deny credit to those who have contributed sufficiently.



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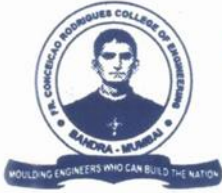
Website : www.frce.ac.in • Email : crce@fragnel.edu.in

(viii) Improve the balance of under-represented sections and provide supportive environment by avoiding bias, favouritisms and discrimination of any kind. Academic communities are enriched by the presence of people of different ethnicities, genders, religions, castes, tribes, socio- economic strata, affiliations, backgrounds and sexual orientations. There must not be direct or indirect bias or discrimination against any individual based on the above categories.

Section 5: Responsibilities of Staff

It shall be the responsibility of the members of staff to:

- (i) Read, understand and be aware of this Ethics Policy and subsequent amendments brought to this Research Ethics Policy.
- (ii) Respect the rights of individuals and to conduct in a responsible, unbiased and dignified manner at all times. One must show due respect to people while interacting for academic purposes by way of data collection, and surveys for student projects.
- (iii) Obtain written consent from human subjects/research participants and prior approval of Ethics Committee in projects involving direct measurement of human physiological parameters such as ECG/EMG etc.
- (iv) Ensure that, the rights of an individual will be respected and their property and life will not be put under threat under any circumstances. Academic work must not pose a risk or danger to people or the environment. Necessary clearances and permits/licenses must be obtained while handling, storing and disposing of radioactive, toxic or harmful materials.
- (v) Follow ethical practices in publications/thesis/project reports etc. by checking plagiarism and by avoiding self-plagiarism. Be cautious to avoid so-called "predatory journals" which publish papers with minimal or no review. It is unethical to publish in such journals.
- (vi) Avoid data fraud and all unacceptable forms of data manipulation, such as adding or subtracting data points at will, editing images to produce a false result, creating images artificially and presenting them as data or using the same figure or table to describe different experiments. The conclusions claimed in a research paper must be genuine.
- (vii) Honestly claim authorship of documents. The list of authors in research papers, reviews, books, monographs or policy documents should not be manipulated to give undue credit to those who have not contributed ("honorary authorship") or deny credit to those who have contributed sufficiently.



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Section 6: Procedures for Corrective Action

This Policy is envisaged to employ procedures for dealing with allegations of research misconduct, as well as any other kind of misconduct as described in this document, against its staff and students.

It is compulsory for researchers to adhere to norms of engineering practice and follow all safety guidelines. Researcher should take more pre-caution when human subjects are involved or design & development of products to be used on human subjects are involved. Institute strongly discourages the unethical practices or data collection, data analytics, data reproduction or drawing inference from the data.

(i) Corrective action:

If a publication or report/thesis is found to contain plagiarism or manipulated data, the concerned department must ensure that a correction or retraction is published in the same place as the original paper.

On the other side, if a decision is found to have been made based on a bias or conflict of interest, then it should be overturned and the process must be repeated from first step, if necessary.

In general, every effort must be made to ensure that an unethical action does not succeed in propagating false knowledge or incorrect decisions.

(ii) Punitive action

Should be as per the norms of regulating bodies, publication houses and government agencies.

Account
F 10,384
09 full pmt
date

AF 65
16/12/2022

ju

Agnel Education and Social Development Foundation



Fr. Agnel Ashram, Bandstand, Bandra(W)
Mumbai, Maharashtra - 400050.

UNDER CONTINUING EDUCATION PROGRAMME

APPLICATION FORM

IPK



Course Applied for CNE MILCING.

Name GANESH. VIJAY. PRAJAPATI

Address 301/2390, Mohilal Nagar No 2, M. G Road
Manthan Hotel, Goregaon(W) Mumbai - 400 104

Date of Birth: - 29/8/1995 Tel No. 8879474247


Education Qualifications: 9833749785

| | Name of the Institute | Board /University | Year of Passing | % of Marks |
|---------|-----------------------|-------------------|-----------------|------------|
| S.S.C | | | | |
| I.T.I | | | | |
| H.S.C | | | | |
| DIPLOMA | | | | |
| DEGREE | <u>Vidya Vikas</u> | <u>Mumbai</u> | | |
| OTHERS | | | | |
| | | | | |
| | | | | |

Date :- _____

Signature of the applicant

For office use only

| | |
|--|---------------------|
| Application Checked / Verified by | |
| Admitted to | |
|  Signature | _____ Director |
| Fee Receipt No. & Date | Form No. 181 |
| GST No. 27AARCA0471B1ZW | |

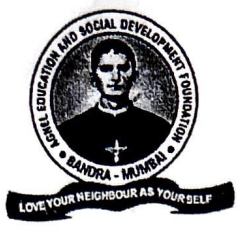
Accept
710,584
as full pay
get

online

AF 46
19/12/2022

Agnel Education and Social Development Foundation

Fr. Agnel Ashram, Bandstand, Bandra(W)
Mumbai, Maharashtra - 400050.



UNDER CONTINUING EDUCATION PROGRAMME

APPLICATION FORM



Course Applied for CNC MILLING

Name MOHAMMAD. IMTEYAJ

Address Bharoh, Post Bharoh, Gola, Gorakhpur
Uttar Pradesh. - 273408

Date of Birth: - 3/2/2004 Tel No. 7887228536


Education Qualifications: 9621534216

| | Name of the Institute | Board /University | Year of Passing | % of Marks |
|---------|-----------------------|-------------------|-----------------|------------|
| S.S.C | | | | |
| I.T.I | | | | |
| H.S.C | <u>VSAV Gollay</u> | <u>U.P</u> | | |
| DIPLOMA | | <u>U.P</u> | | |
| DEGREE | | | | |
| OTHERS | | | | |
| | | | | |
| | | | | |

Date :- _____

Mohammad Imteyaj
Signature of the applicant

For office use only

| | |
|--|---------------------|
| Application Checked / Verified by | |
| Admitted to | |
|  Signature | Director |
| Fee Receipt No. & Date | Form No. 182 |
| GST No. 27AARCA0471B1ZW | |

Receipt
710,384/
or full pay

(Online)

AF-47

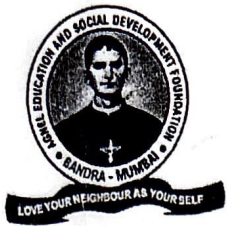
21/12/2020

Agnel Education and Social Development Foundation

Fr. Agnel Ashram, Bandstand, Bandra(W)
Mumbai, Maharashtra - 400050.

UNDER CONTINUING EDUCATION PROGRAMME

APPLICATION FORM



Course Applied for CNC MILLING

Name ROHIT JEETBAHADUR CHAND

Address Room no 1, Kashi Vishwanath Phule Chowk 1,
Valai Pimple Rd, Scrubsh Bhowan, Nallasopara (E) - 401209.

Date of Birth: - 11/05/2003 Tel No. 7397843177/9158524128

Education Qualifications:

| | Name of the Institute | Board /University | Year of Passing | % of Marks |
|---------|-----------------------|-------------------|-----------------|------------|
| S.S.C | | | | |
| L.T.I | | | | |
| H.S.C | | | | |
| DIPLOMA | | | | |
| DEGREE | <u>M.S College.</u> | <u>Mumbai</u> | | |
| OTHERS | | <u>Mumbai</u> | | |
| | | | | |
| | | | | |

Date :- _____

[Signature]
Signature of the applicant

For office use only

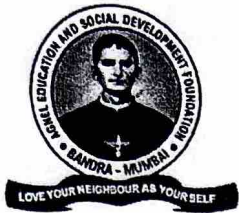
| | |
|-----------------------------------|---------------------|
| Application Checked / Verified by | |
| Admitted to | |
| <u>[Signature]</u> Signature | Director |
| Fee Receipt No. & Date | Form No. 183 |
| GST No. 27AARCA0471B1ZW | |

Accepted
7/10/23
Sahil Vartak

(Chy) = 650614
Amara Bank

AF-52
16/1/23

Agnel Education and Social Development Foundation



Fr. Agnel Ashram, Bandstand, Bandra(W)
Mumbai, Maharashtra - 400050.

UNDER CONTINUING EDUCATION PROGRAMME

APPLICATION FORM



Course Applied for CNC MILLING

Name SAHIL - SANDEEP - VARTAK

Address 6/1 A - Lakshmi Nivas, Cheriwadi, Agashi, Chalpeth Rd, Near Z.P. School, Agashi, Vihar (W) - 401301

Date of Birth: - 17/11/2001

Tel No. 9766585595

Education Qualifications:

9022307006


| | Name of the Institute | Board /University | Year of Passing | % of Marks |
|---------|-----------------------|-------------------|-----------------|------------|
| S.S.C | | | | |
| I.T.I | | | | |
| H.S.C | | | | |
| DIPLOMA | | | | |
| DEGREE | <u>V.Va. College</u> | <u>Mumbai</u> | | |
| OTHERS | | | | |
| | | | | |
| | | | | |

Date :- _____

Sahil Vartak

Signature of the applicant

For office use only

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|--|---------------------|
| Application Checked / Verified by | |
| Admitted to | |
|  Signature | Director |
| Fee Receipt No. & Date | Form No. 187 |
| GST No. 27AARCA0471B1ZW | |

Accept
710384/
9/11/2023

online

AF
9/11/2023

Agnel Education and Social Development Foundation

Fr. Agnel Ashram, Bandstand, Bandra(W)
Mumbai, Maharashtra - 400050.



UNDER CONTINUING EDUCATION PROGRAMME

APPLICATION FORM



Course Applied for CNC Turnw

Name SAMSHAD SHEKH

Address Mohau, Mudere, Deoria,
U: P - 274408

Date of Birth: - 15/8/2000 Tel No. 8601836803

7208558818

Education Qualifications:

| | Name of the Institute | Board /University | Year of Passing | % of Marks |
|---------|-----------------------|-------------------|-----------------|------------|
| S.S.C | | | | |
| I.T.I | | | | |
| H.S.C | SMS SAMIPAT | U.P | | |
| DIPLOMA | | | | |
| DEGREE | | | | |
| OTHERS | | | | |
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Date :- _____

Signature of the applicant

For office use only

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| Application Checked / Verified by | |
| Admitted to | |
| Signature | Director |
| Fee Receipt No. & Date | Form No. 185 |
| GST No. 27AARCA0471B1ZW | |

Accept
F10,3841
9/2/11/11

online
AF-51
13/1/2013

Agnel Education and Social Development Foundation

Fr. Agnel Ashram, Bandstand, Bandra(W)
Mumbai, Maharashtra - 400050.



UNDER CONTINUING EDUCATION PROGRAMME

APPLICATION FORM

12/11



Course Applied for C.N.C. LATHE

Name ATUL RAVINDRA SHINDE

Address B.D.D-29/G GANPATH JADHAW MARG WORLI, M-400018

Date of Birth: - 16-11-1998

Tel No. 8291811489
9224209355

Education Qualifications:

| | Name of the Institute | Board /University | Year of Passing | % of Marks |
|---------|----------------------------|-------------------|-----------------|------------|
| S.S.C | | | | |
| I.T.I | <u>GOV. I.T.I M-11</u> | | | |
| H.S.C | | | | |
| DIPLOMA | | | | |
| DEGREE | | | | |
| OTHERS | <u>Mahuchra, Mahuchra.</u> | | | |
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Date :- _____

Shinde
Signature of the applicant

For office use only

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| Application Checked / Verified by | |
| Admitted to | |
| <u>[Signature]</u> Signature | Director |
| Fee Receipt No. & Date | Form No. 186 |
| GST No. 27AARCA0471B1ZW | |

02/04/22
124

710384
7 Full marks

Agnel Education and Social Development Foundation

Fr. Agnel Ashram, Bandstand, Bandra(W)
Mumbai, Maharashtra - 400050.



UNDER CONTINUING EDUCATION PROGRAMME

APPLICATION FORM

Course Applied for CNC MILLING

Name NIKHIL · DINESH · BOLE

Address Gajana Mahoraj Chawl 1, Manvelpada Rd
Kogil nagar, near Mahakali Mandir, Uranv (e)

Date of Birth: - 20/4/1998 Tel No. 7021325293
9763990382


Education Qualifications:

| | Name of the Institute | Board /University | Year of Passing | % of Marks |
|---------|-----------------------|-------------------|-----------------|------------|
| S.S.C | | | | |
| I.T.I | <u>I.T.I (Vasai)</u> | <u>Delhi</u> | | |
| H.S.C | | | | |
| DIPLOMA | | | | |
| DEGREE | | | | |
| OTHERS | | | | |
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Date :- _____

N. D. BOLE
Signature of the applicant

For office use only

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| Application Checked / Verified by | |
| Admitted to | |
|  Signature | Director |
| Fee Receipt No. & Date | Form No. |
| GST No. 27AARCA0471B1ZW | |

Receipt
10,384
10/11/2022

21/11/22

Agnel Education and Social Development Foundation

Fr. Agnel Ashram, Bandstand, Bandra(W)
Mumbai, Maharashtra - 400050.



UNDER CONTINUING EDUCATION PROGRAMME

APPLICATION FORM



Course Applied for ENC MILLING
 Name RANJIT SHATRUGHAN RAI
 Address Saraswati welfare Society, Near Candhi Nagar Takadi, Shivaji Nagar, Cutting No.10, Kuram Village malad(E) Mumbai - 400097
 Date of Birth: - 29/11/2003 Tel No. 7304285717 / 9867679034

Education Qualifications:


| | Name of the Institute | Board /University | Year of Passing | % of Marks |
|---------|---|-------------------|------------------|------------|
| S.S.C | | | | |
| I.T.I | | | | |
| H.S.C | <u>P.D TURAKHEASUNI OR COLLEGE of Commerce and Science.</u> | <u>Mumbai</u> | <u>2021-2022</u> | |
| DIPLOMA | | | | |
| DEGREE | | | | |
| OTHERS | | | | |
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Date :- _____



 Signature of the applicant

For office use only

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| Application Checked / Verified by | |
| Admitted to | |
|  Signature | _____ Director |
| Fee Receipt No. & Date | Form No. 131 |
| GST No. 27AARCA0471B1ZW | |

112

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06-04-22

Agnel Education and Social Development Foundation

Fr. Agnel Ashram, Bandstand, Bandra(W)
Mumbai, Maharashtra - 400050.

UNDER CONTINUING EDUCATION PROGRAMME

APPLICATION FORM



Course Applied for CNC MILLING

Name BHAVESH. SURESH. GHARAT.

Address At. Vilage, P.O. Agarwadi, Ta. Palghar, U. Talasariad
Thane, Mad - 401102

Date of Birth: - 24/3/1999. Tel No. 9021015792
77098 60556


Education Qualifications:

| | Name of the Institute | Board /University | Year of Passing | % of Marks |
|---------|-----------------------|-------------------|-----------------|------------|
| S.S.C | | | | |
| L.T.I | <u>I.T.I (Vangoo)</u> | <u>Delhi</u> | | |
| H.S.C | | | | |
| DIPLOMA | | | | |
| DEGREE | | | | |
| OTHERS | | | | |
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Date :- _____

Bhoseel
Signature of the applicant

For office use only

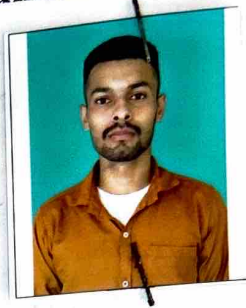
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|--|-------------------|
| Application Checked / Verified by | |
| Admitted to | |
|  Signature | _____ Director |
| Fee Receipt No. & Date | Form No. |
| GST No. 27AARCA0471B1ZW | |

Accept
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29/11/22

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29/11/22

Agnel Education and Social Development Foundation

Fr. Agnel Ashram, Bandstand, Bandra(W)
Mumbai, Maharashtra - 400050.



UNDER CONTINUING EDUCATION PROGRAMME APPLICATION FORM

124

Course Applied for CNC MILLING

Name ARYAN KHAN

Address vill - PHULWARTA P.O - MAHARIYAR P.S - MATRWA
DIST. SIWAN, BIHAR

Date of Birth: - 25/05/2004 Tel No. 9341831022

9766532141

Education Qualifications:

| | Name of the Institute | Board /University | Year of Passing | % of Marks |
|---------|-----------------------|-------------------|-----------------|------------|
| S.S.C | | | | |
| I.T.I | R.B.D HIGH SCHOOL | | | |
| H.S.C | THEPHAN | | | |
| DIPLOMA | | | | |
| DEGREE | | | | |
| OTHERS | | | | |
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Date :- _____

Aryan Khan
Signature of the applicant

For office use only

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|-----------------------------------|---------------------|
| Application Checked / Verified by | |
| Admitted to | |
| <u>[Signature]</u> Signature | _____ Director |
| Fee Receipt No. & Date | Form No. 175 |
| GST No. 27AARCA0471B1ZW | |

2 = 21

Agnel Education and Social Development Foundation

Fr. Agnel Ashram, Bandstand, Bandra(W)
Mumbai, Maharashtra - 400050.

UNDER CONTINUING EDUCATION PROGRAMME

APPLICATION FORM



Course Applied for CNC - MILLING.

Name Saad Zuber Sunetra

Address Abdulkalam building ACW 501 Momin Nagar
Jogeshwari CW Mumbai 400102

Date of Birth: - 25/03/2003

Tel No. 9136526605
7506510386

Education Qualifications:

| | Name of the Institute | Board /University | Year of Passing | % of Marks |
|---------|-----------------------|-------------------|-----------------|------------|
| S.S.C | | | | |
| I.T.I | | | | |
| H.S.C | <u>lords. Daria</u> | <u>Mumbai</u> | | |
| DIPLOMA | | | | |
| DEGREE | | | | |
| OTHERS | | | | |
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Date :- 17/11/2022

Saad.
Signature of the applicant

For office use only

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|-----------------------------------|---------------------|
| Application Checked / Verified by | |
| Admitted to | |
| <u>[Signature]</u> Signature | Director |
| Fee Receipt No. & Date | Form No. 164 |
| GST No. 27AARCA0471B1ZW | |

Accept
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Agnel Education and Social Development Foundation

Fr. Agnel Ashram, Bandstand, Bandra(W)
Mumbai, Maharashtra - 400050.

UNDER CONTINUING EDUCATION PROGRAMME

APPLICATION FORM



Course Applied for CNC TURNING

Name SUJEET BALRAM MAURYA

Address A/106, Jayeward Apt, Laxmi Nagar,
Nallasopra, Vasai, Palghar - 401209

Date of Birth: - 3/5/2000 Tel No. 8149203228

Education Qualifications:


8149369571

| | Name of the Institute | Board /University | Year of Passing | % of Marks |
|---------|------------------------|-------------------|-----------------|------------|
| S.S.C | | | | |
| I.T.I | | | | |
| H.S.C | | | | |
| DIPLOMA | | | | |
| DEGREE | <u>Abhinav College</u> | | | |
| OTHERS | | | | |
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Date :- _____

Signature of the applicant

For office use only

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| Application Checked / Verified by | |
| Admitted to | |
|  Signature | _____ Director |
| Fee Receipt No. & Date | Form No. 149 |
| GST No. 27AARCA0471B1ZW | |

Kotak Bank 10/8/22

AF-8
26/5/22

IRG

Agnel Education and Social Development Foundation



Fr. Agnel Ashram, Bandstand, Bandra(W)
Mumbai, Maharashtra - 400050.



UNDER CONTINUING EDUCATION PROGRAMME

APPLICATION FORM

IRG

Course Applied for CNC Learning

Name Mohammad Sadiz Kadiwala (SADIQ)

Address 704-D wing All Siddiqui apartment Kashmir western Park.

Date of Birth: - 13-07-2002 Tel No. 706944270

Education Qualifications:


| | Name of the Institute | Board /University | Year of Passing | % of Marks |
|---------|--------------------------------------|-------------------|-----------------|------------|
| S.S.C | <u>Noor Jahan Urdu school Mumbai</u> | | <u>2019</u> | <u>45</u> |
| I.T.I | | | | |
| H.S.C | | | | |
| DIPLOMA | | | | |
| DEGREE | | | | |
| OTHERS | | | | |
| | | | | |
| | | | | |

Date :- 26-05-2022

M. Mohammed

Signature of the applicant

For office use only

| | |
|--|---------------------|
| Application Checked / Verified by | |
| Admitted to | |
|  Signature | Director |
| Fee Receipt No. & Date | Form No. 136 |
| GST No. 27AARCA0471B1ZW | |

10,384 / (on line) Kotak Bank 10/8/22
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IRG

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10/8/22

Agnel Education and Social Development Foundation

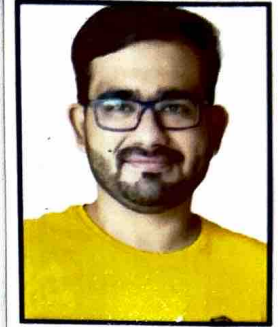


Fr. Agnel Ashram, Bandstand, Bandra(W)
Mumbai, Maharashtra - 400050.

UNDER CONTINUING EDUCATION PROGRAMME

APPLICATION FORM

IRG



Course Applied for CNC. TURNING

Name CHAUDHARY JIGAR HIRALAL

Address B/56, SHIV PRABHA CHS, NEAR MOKILI VILLAGE BUS STOP, ASAFI, ANDHERI - GNATIKOPAR LINK RD, MUMBAI - 400072.

Date of Birth: 28/05/1997.

Tel No. 9004035371 / 7021004515.

Education Qualifications:

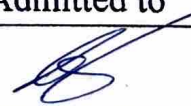
| | Name of the Institute | Board /University | Year of Passing | % of Marks |
|---------|-----------------------------|--------------------------|-----------------|------------|
| S.S.C | V.S. GURUKUL TECHNICAL. | MAHARASHTRA STATE BOARD. | 2013 | 40.60 |
| I.T.I | | | | |
| H.S.C | V.S. GURUKUL TECH JR. COLG. | MAHARASHTRA STATE BOARD. | 2015. | 55.85 |
| DIPLOMA | | | | |
| DEGREE | | | | |
| OTHERS | | | | |
| | | | | |
| | | | | |

Date :- 10/08/2022

Jigar Chaudhary,

Signature of the applicant

For office use only

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| Application Checked / Verified by | |
| Admitted to | |
|  Signature | Director |
| Fee Receipt No. & Date | Form No. 151 |
| GST No. 27AARCA0471B1ZW | |

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AF-14
4/7/2022
Agnel Education and Social Development Foundation



Fr. Agnel Ashram, Bandstand, Bandra(W)
Mumbai, Maharashtra - 400050.

UNDER CONTINUING EDUCATION PROGRAMME

APPLICATION FORM



Course Applied for CNC TURNING

Name SHAIKH. MOHD. TALIB FIROZ

Address Behind Dharavi Bus Depot, Room No: 09, BLD NO: 1/B, P.m.g.p Colony, Dharavi, Dharavi Mumbai 400017.

Date of Birth: - 25/04/2001 Tel No. 9833 90 20 73

93 21 68 23 23

Education Qualifications:

| | Name of the Institute | Board /University | Year of Passing | % of Marks |
|---------|-----------------------|-------------------|-----------------|------------|
| S.S.C | | | | |
| I.T.I | | | | |
| H.S.C | AVAMI JR collage | | 20 22 | |
| DIPLOMA | | | | |
| DEGREE | | | | |
| OTHERS | | | | |
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| | | | | |

Date :- 28/05/2022

AB
Signature of the applicant

For office use only

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|-----------------------------------|---------------------|
| Application Checked / Verified by | |
| Admitted to | |
| <u>[Signature]</u> Signature | Director |
| Fee Receipt No. & Date | Form No. 143 |
| GST No. 27AARCA0471B1ZW | |

Sheet
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18/8/22
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Agnel Education and Social Development Foundation

Fr. Agnel Ashram, Bandstand, Bandra(W)
Mumbai, Maharashtra - 400050.



UNDER CONTINUING EDUCATION PROGRAMME

APPLICATION FORM



Course Applied for CNC TURKISH
Name AMIRUDDIN KHAN
Address S/o Md Idris Khan, Daranagar, Rohtas, Bihar - 821304

Date of Birth: - 09.11.1999 Tel No. 8910773517 / 9038065148


Education Qualifications:

| | Name of the Institute | Board /University | Year of Passing | % of Marks |
|---------|---------------------------|---------------------|-----------------|------------|
| S.S.C | | | | |
| I.T.I | | | | |
| H.S.C | | | | |
| DIPLOMA | | | | |
| DEGREE | | | | |
| OTHERS | BANGABASI MORNING college | Calcutta University | 2022 | 60% |
| | | | | |
| | | | | |

Date :- 18/08/22

Amiruddin Khan
Signature of the applicant

For office use only

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|--|---------------------|
| Application Checked / Verified by | |
| Admitted to | |
|  Signature | Director |
| Fee Receipt No. & Date | Form No. 152 |
| GST No. 27AARCA0471B1ZW | |

Accept.
210,384/online fee 15

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Agnel Education and Social Development Foundation

Fr. Agnel Ashram, Bandstand, Bandra(W)
Mumbai, Maharashtra - 400050.

UNDER CONTINUING EDUCATION PROGRAMME



APPLICATION FORM

Course Applied for CNC TURNING

Name MARWA KAMAL KHAN

Address AKBARPUR, ROHTAS BIHAR - 821311

Date of Birth: - 25/04/2002 Tel No. 7667114920 / 9939099876


Education Qualifications:

| | Name of the Institute | Board /University | Year of Passing | % of Marks |
|---------|------------------------|-------------------|-----------------|------------|
| S.S.C | | | | |
| I.T.I | | | | |
| H.S.C | | | | |
| DIPLOMA | | | | |
| DEGREE | | | | |
| OTHERS | Calcutta Univ | Calcutta Univ | 2022 | 65% |
| | Bangabasi Morning coll | | | |

Date :- 18/08/2022

Marwa Kamal Khan
Signature of the applicant

For office use only

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| Application Checked / Verified by | |
| Admitted to | |
|  Signature | Director |
| Fee Receipt No. & Date | Form No. 153 |
| GST No. 27AARCA0471B1ZW | |

10,384 / 31-5-2022 2/6/2022
Agnel Education and Social Development Foundation

Fr. Agnel Ashram, Bandstand, Bandra(W)
Mumbai, Maharashtra - 400050.

UNDER CONTINUING EDUCATION PROGRAMME

APPLICATION FORM



Course Applied for COM-C Turning

Name Bhushan Bhiva Malaji

Address Bal Mitra Mandal Mahakastur Nagar Appapada
Malad East Mumbai - 400097

Date of Birth: - 19-02-2001

Tel No. 9082064425 / 7733486622

Education Qualifications:


| | Name of the Institute | Board /University | Year of Passing | % of. Marks |
|---------|------------------------------|-------------------|-----------------|-------------|
| S.S.C | SWAMI VIVEKANAND High school | MUMBAI | | |
| I.T.I | I.T.I MUMBAI 11 | | | |
| H.S.C | | | | |
| DIPLOMA | | | | |
| DEGREE | | | | |
| OTHERS | | | | |
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Date :- 31-05-21

Bhushan.

Signature of the applicant

For office use only

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| Application Checked / Verified by | |
| Admitted to | |
|  Signature | Director |
| Fee Receipt No. & Date | Form No. 138 |
| GST No. 27AARCA0471B1ZW | |

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Agnel Education and Social Development Foundation

Fr. Agnel Ashram, Bandstand, Bandra(W)
Mumbai, Maharashtra - 400050.



UNDER CONTINUING EDUCATION PROGRAMME
APPLICATION FORM

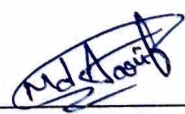


Course Applied for CNC TURNING
Name MOHD AARIF MUSTAKIM IDRISI
Address Galli no 14 Ganpat Patil Nagar New link Road
Near masjid, I.C. Colony Borivali (west) Mumbai 400103
Date of Birth: - 22/06/1998 Tel No. 8286616913


Education Qualifications:

| | Name of the Institute | Board /University | Year of Passing | % of Marks |
|---------|-------------------------|-------------------|-----------------|------------|
| S.S.C | R. C. Patel High School | Maharashtra | 2014 | 35 |
| I.T.I | | | | |
| H.S.C | B.N.E.S Jr College. | Maharashtra | 2016 | 41.69 |
| DIPLOMA | | | | |
| DEGREE | | | | |
| OTHERS | | | | |
| | | | | |
| | | | | |

Date :- 06/07/2022


Signature of the applicant

For office use only

| | |
|--|---------------------|
| Application Checked / Verified by | |
| Admitted to | |
|  Signature | Director |
| Fee Receipt No. & Date | Form No. 147 |
| GST No. 27AARCA0471B1ZW | |

AP 25/05/2022

Agnel Education and Social Development Foundation

Fr. Agnel Ashram, Bandstand, Bandra(W)
Mumbai, Maharashtra - 400050.



UNDER CONTINUING EDUCATION PROGRAMME

APPLICATION FORM

Course Applied for CNC MILLING

Name SHAIKH OSAMA MOHAMMAD .TAHIR


Address 702, Om Shiv Chaya, geeta nagar PH-II.
MIRA ROAD (E) . THANE - 401107

Date of Birth: - 22/11/2000 Tel No. 8169232108
8169541467

Education Qualifications:


| | Name of the Institute | Board /University | Year of Passing | % of Marks |
|---------|-----------------------|-------------------|-----------------|------------|
| S.S.C | | | | |
| I.T.I | | | | |
| H.S.C | SRI L. P. RAVAL Cg | Mum | | |
| DIPLOMA | | | | |
| DEGREE | | | | |
| OTHERS | | | | |
| | | | | |
| | | | | |

Date :- _____



Signature of the applicant

For office use only

| | |
|--|---------------------|
| Application Checked / Verified by | |
| Admitted to | |
|  Signature | _____ Director |
| Fee Receipt No. & Date | Form No. 134 |
| GST No. 27AARCA0471B1ZW | |

Accept
T 10384
full page
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AF 06
23/05/2022

IRU

Agnel Education and Social Development Foundation

Fr. Agnel Ashram, Bandstand, Bandra(W)
Mumbai, Maharashtra - 400050.



UNDER CONTINUING EDUCATION PROGRAMME

APPLICATION FORM



Course Applied for CNC MILLING

Name DHANRAJ . PATIL

Address 608/Jai b'rajy bali CHS sent Rohidars Rd,
Dharavi, Mumbai - 17

Date of Birth: - 15/9/2001

Tel No. 9130312798
9136585937

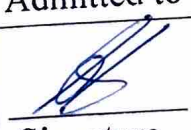
Education Qualifications:

| | Name of the Institute | Board /University | Year of Passing | % of Marks |
|---------|-----------------------|-------------------|-----------------|------------|
| S.S.C | | | | |
| I.T.I | | | | |
| H.S.C | <u>Siddhant</u> | <u>Mumbai</u> | | |
| DIPLOMA | | | | |
| DEGREE | | | | |
| OTHERS | | | | |
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Date :- _____

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Signature of the applicant

For office use only

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|--|---------------------|
| Application Checked / Verified by | |
| Admitted to | |
|  Signature | Director |
| Fee Receipt No. & Date | Form No. 133 |
| GST No. 27AARCA0471B1ZW | |

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18/18/22

Agnel Education and Social Development Foundation

Fr. Agnel Ashram, Bandstand, Bandra(W)
Mumbai, Maharashtra - 400050.

UNDER CONTINUING EDUCATION PROGRAMME

APPLICATION FORM



Course Applied for CNC TURNING.

Name BLESS BABU

Address ~~104~~ A04 SHREE AJAY CHS, OPPOSITE BLUE BELL BUILDING, JANKALYAN NAGAR, MALAD(W), MUMBAI 400095

Date of Birth: - 06/01/2003 Tel No. 8657644787
9702413179

Education Qualifications:

| | Name of the Institute | Board /University | Year of Passing | % of Marks |
|---------|---|-------------------------|-----------------|------------|
| S.S.C | HOLY ANGEL HIGH SCHOOL | MAHARASHTRA STATE BOARD | 2018 | |
| I.T.I | | | | |
| H.S.C | THAKUR COLLEGE OF SCIENCE AND COMMERCE JUNIOR COLLEGE | MAHARASHTRA STATE BOARD | 2020 | |
| DIPLOMA | | | | |
| DEGREE | | | | |
| OTHERS | | | | |
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Date :- _____

Bless Babu
Signature of the applicant

For office use only

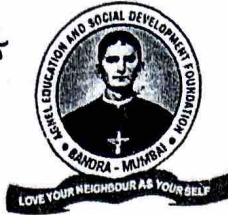
| | |
|-----------------------------------|---------------------|
| Application Checked / Verified by | |
| Admitted to | |
| <u>[Signature]</u> Signature | _____ Director |
| Fee Receipt No. & Date | Form No. 150 |
| GST No. 27AARCA0471B1ZW | |

on his name AF-3
11/12
Fr. Agnel Education and Social Development Foundation

Fr. Agnel Ashram, Bandstand, Bandra(W)
Mumbai, Maharashtra - 400050.

UNDER CONTINUING EDUCATION PROGRAMME

APPLICATION FORM



Course Applied for CNC Lathe

Name Mohammad Asif


Address village-birdpur n.14, Khushrajpur, Post-Naugarh, Siddharth Nagar, Uttar Pradesh. 272203

Date of Birth: - 05/07/2001 Tel No. 82 99 66 35 90


Education Qualifications:

| | Name of the Institute | Board /University | Year of Passing | % of Marks |
|---------|-----------------------|-------------------|-----------------|------------|
| S.S.C | Reliance Academy | CBSE | 2017 | 9.4 CGPA |
| I.T.I | | | | |
| H.S.C | JKIC Sakarpur sanai | UPMSE | 2019 | 60% |
| DIPLOMA | | | | |
| DEGREE | | | | |
| OTHERS | | | | |
| | | | | |
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Date :- _____


Signature of the applicant

For office use only

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| Application Checked / Verified by | |
| Admitted to | |
|  Signature | Director |
| Fee Receipt No. & Date | Form No. 169 |
| GST No. 27AARCA0471B1ZW | |

Address 1603 Marhaba Tolomin Nagar Madana
Asad Madni Road Jogeshwari (W) PIN 400102
Date of Birth: - 2-8-2001 Tel No. 8898662009


Education Qualifications:

| | Name of the Institute | Board /University | Year of Passing | % of Marks |
|---------|-----------------------|-------------------|-----------------|------------|
| S.S.C | Madni High School | S.S.C | march 2017 | 61.40 |
| I.T.I | | | | |
| H.S.C | | | | |
| DIPLOMA | | | | |
| DEGREE | | | | |
| OTHERS | | | | |
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Date :- 16/11/2022

Signature of the applicant

For office use only

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| Application Checked / Verified by | |
| Admitted to | |
|  Signature | |
| Fee Receipt No. & Date | Director |
| GST No. 27AARCA0471B1ZW | Form No. 170 |

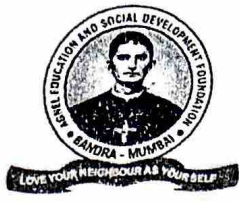
Account
Payment
710,384
full
for

on line

AF 42
1/12/2020

Agnel Education and Social Development Foundation

Fr. Agnel Ashram, Bandstand, Bandra(W)
Mumbai, Maharashtra - 400050.



UNDER CONTINUING EDUCATION PROGRAMME

APPLICATION FORM

126



Course Applied for CNC TURNING ~~8.7 MCA~~
Name JAMADAR MOHSEEN MEHBOOB
Address Vinoba Bhau Nagar, A-Block Pahala floor
Chawl NO.5 Room NO.9 .L.I.G. Building, Kurla (West)
Date of Birth: - 29/06/1998 Tel No. 7718092986

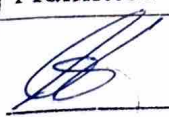
Education Qualifications:

| | Name of the Institute | Board /University | Year of Passing | % of Marks |
|---------|---------------------------------------|---------------------|-----------------|------------|
| S.S.C | S.T. Mary's High School | Pure division board | 2014 | 65%. |
| I.T.I | | | | |
| H.S.C | Shri G.P.M. College of Sci & Commerce | pure division board | 2017 | 60%. |
| DIPLOMA | | | | |
| DEGREE | K.C.T. College of Engineering | V.T.U. | 2021 | 86.28%. |
| OTHERS | | | | |
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Date :- _____

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Signature of the applicant

For office use only

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| Application Checked / Verified by | |
| Admitted to | |
|  Signature | Director |
| Fee Receipt No. & Date | Form No. 166 |
| GST No. 27AARCA0471B1ZW | |

Accept
710, 3801
a full part. Through order

126

AF-24
19/2022

UPI
225017190216
Bank of Baroda

Agnel Education and Social Development Foundation

Fr. Agnel Ashram, Bandstand, Bandra (W)
Mumbai, Maharashtra - 400050.



UNDER CONTINUING EDUCATION PROGRAMME

APPLICATION FORM



Course Applied for CNC MILLING

Name MO DANISH

Address Sai Nagar, R. no 12, Rabale,
Navi Mumbai -

Date of Birth: - 10/5/2004 Tel No. 8149895010

9151702570

Education Qualifications:


| | Name of the Institute | Board /University | Year of Passing | % of Marks |
|---------|-----------------------|-------------------|-----------------|------------|
| S.S.C | MSG. | U.P | | |
| I.T.I | | | | |
| H.S.C | | | | |
| DIPLOMA | | | | |
| DEGREE | | | | |
| OTHERS | | | | |
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DANISH

Date :- _____

Signature of the applicant

For office use only

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|--|---------------------|
| Application Checked / Verified by | |
| Admitted to | |
|  Signature | Director |
| Fee Receipt No. & Date | Form No. 155 |
| GST No. 27AARCA0471B1ZW | |

2
10,384/-
6-9-2022

AF-22
6/9/22

Agnel Education and Social Development Foundation

Fr. Agnel Ashram, Bandstand, Bandra(W)
Mumbai, Maharashtra - 400050.



UNDER CONTINUING EDUCATION PROGRAMME

APPLICATION FORM




Course Applied for CNC Milling
Name Ayshad. Alam.
Address Lahan Dhaka + Post- Dhaka.
Bihar (845418)
Date of Birth: - 26/05/2004 Tel No. 8084746171
7762024578
Education Qualifications:

| | Name of the Institute | Board /University | Year of Passing | % of Marks |
|---------|-----------------------|-------------------|-----------------|------------|
| S.S.C | S. S. H Dhaka | | 2020 | |
| I.T.I | | | | |
| H.S.C | S. S. H Dhaka | | | |
| DIPLOMA | | | | |
| DEGREE | | | | |
| OTHERS | | | | |
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Date :- _____

Ayshad-Alam.
Signature of the applicant

For office use only

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| Application Checked / Verified by | |
| Admitted to | |
|  Signature | Director |
| Fee Receipt No. & Date | Form No. 156 |
| GST No. 27AARCA0471B1ZW | |

Accept
210,384
in full int

through online
UPI - 225053854819

126

AF-23
7/19/23

Agnel Education and Social Development Foundation

Fr. Agnel Ashram, Bandstand, Bandra(W)
Mumbai, Maharashtra - 400050.



UNDER CONTINUING EDUCATION PROGRAMME

APPLICATION FORM



Course Applied for CNC MILLING

Name CHAND RITESH JEETBAHADUR

Address Jeet Bahadur Chand Room no-R-01 Kashi Vishwanath
Chand, Valvi Road, Road opp. Shiv Mulla's Santosh Chavan Vastu Niketanam
E-401209 Pulghar

Date of Birth: - 04/04/2005 Tel No. 9158524128
8421723928

Education Qualifications:

| | Name of the Institute | Board /University | Year of Passing | % of Marks |
|---------|-------------------------|-------------------|-----------------|------------|
| S.S.C | Vidya Vasidhi Vidyalaya | Maharashtra | 2020 | 59.9 |
| I.T.I | | | | |
| H.S.C | Vidya Vasidhi Vidyalaya | Maharashtra | 2022 | 54 |
| DIPLOMA | | | | |
| DEGREE | | | | |
| OTHERS | | | | |
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Date :- _____

Signature of the applicant

For office use only

| | |
|-----------------------------------|---------------------|
| Application Checked / Verified by | |
| Admitted to | |
| | |
| Signature | Director |
| Fee Receipt No. & Date | Form No. 157 |
| GST No. 27AARCA0471B1ZW | |

Receipt
710,384/
as full part
online

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8/9/2022

Agnel Education and Social Development Foundation

Fr. Agnel Ashram, Bandstand, Bandra(W)
Mumbai, Maharashtra - 400050.



UNDER CONTINUING EDUCATION PROGRAMME

APPLICATION FORM



Course Applied for CNC MILLING

Name KADIWAL . E JAJBHAI . ABDULBHAI

Address Al Ammar Bld. Western Park Kashiguan Mizer Road - 401107

Date of Birth: - 8:7, 1992 Tel No. 8928539335


Education Qualifications: 7977861718

| | Name of the Institute | Board /University | Year of Passing | % of Marks |
|---------|-----------------------|-------------------|-----------------|------------|
| S.S.C | Navjivan High School | Mumbai | | |
| I.T.I | | | | |
| H.S.C | | | | |
| DIPLOMA | | | | |
| DEGREE | | | | |
| OTHERS | | | | |
| | | | | |
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Date :- _____

Ejay Kadivale
Signature of the applicant

For office use only

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| Application Checked / Verified by | |
| Admitted to | |
|  Signature | Director |
| Fee Receipt No. & Date | Form No. 158 |
| GST No. 27AARCA0471B1ZW | |

Accept
110,384
CS full part
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on/22 914094647340456160 (10,000)
UPI 22 5783193286 - 3,84

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AF-26
14/9/22

Agnel Education and Social Development Foundation

Fr. Agnel Ashram, Bandstand, Bandra(W)
Mumbai, Maharashtra - 400050.



UNDER CONTINUING EDUCATION PROGRAMME

APPLICATION FORM



Course Applied for CNC MILLING

Name CHIRAG. KAILASH. GHONGE

Address 37/23, Akurli Jawat Mali Hsg Soc Mhada
Ad no 3, Lokhandwala, Kandivali (E) Mumbai - 101

Date of Birth: - 5/10/1998 Tel No. 8976529802


Education Qualifications: 8879787273

| | Name of the Institute | Board /University | Year of Passing | % of Marks |
|---------|-----------------------|-------------------|-----------------|------------|
| S.S.C | | | | |
| I.T.I | | | | |
| H.S.C | Narvare College | Mumbai | | |
| DIPLOMA | | | | |
| DEGREE | | | | |
| OTHERS | | | | |
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Date :- _____

Chirag Ghonge
Signature of the applicant

For office use only

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| Application Checked / Verified by | |
| Admitted to | |
|  Signature | Director |
| Fee Receipt No. & Date | Form No. 159 |
| GST No. 27AARCA0471B1ZW | |

Accepted
7/10/2024
as upi transfer

1/29

AF/30
26/9/22

Agnel Education and Social Development Foundation

Fr. Agnel Ashram, Bandstand, Bandra(W)
Mumbai, Maharashtra - 400050.



UNDER CONTINUING EDUCATION PROGRAMME

APPLICATION FORM



Course Applied for CNC MILLING.
Name HASSAM ASLAM BALSANIYA
Address Rom No 18 bunou Ramnager goregow (w)

Date of Birth: - 14/2/2000 Tel No. 7718018325

Education Qualifications:


| | Name of the Institute | Board /University | Year of Passing | % of Marks |
|---------|-----------------------|-------------------|-----------------|------------|
| S.S.C | | | | |
| I.T.I | | | | |
| H.S.C | K.H.W | | 2017 | |
| DIPLOMA | | | | |
| DEGREE | | | | |
| OTHERS | | | | |
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Date :- _____

HASSAM

Signature of the applicant

For office use only

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|--|---------------------|
| Application Checked / Verified by | |
| Admitted to | |
|  Signature | Director |
| Fee Receipt No. & Date | Form No. 163 |
| GST No. 27AARCA0471B1ZW | |

Keep
210,384
as full
date

online (2) 37
17/11/22

Agnel Education and Social Development Foundation

Fr. Agnel Ashram, Bandstand, Bandra(W)
Mumbai, Maharashtra - 400050.



UNDER CONTINUING EDUCATION PROGRAMME

APPLICATION FORM



Course Applied for CNC MILLING C.

Name AMIRUDDIN KHAN BARANAGAR, ROHTAS, BIHAR-8213

Address S/O MD IDRIS KHAN

Date of Birth: - 09/11/1999

Tel No. 8910773517
9038065148

Education Qualifications:

| | Name of the Institute | Board /University | Year of Passing | % of Marks |
|---------|--------------------------|---------------------|-----------------|------------|
| S.S.C | | | | |
| I.T.I | | | | |
| H.S.C | | | | |
| DIPLOMA | | | | |
| DEGREE | | | | |
| OTHERS | BANABASI MORNING College | Calcutta university | 2022 | 60% |
| | | | | |
| | | | | |

Date :- _____

Amiruddin Khan
Signature of the applicant

For office use only

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|-----------------------------------|---------------------|
| Application Checked / Verified by | |
| Admitted to | |
| <u>[Signature]</u> Signature | Director |
| Fee Receipt No. & Date | Form No. 171 |
| GST No. 27AARCA0471B1ZW | |

Accept
₹ 10,384/-
as full part
fee

online (2) 36-
17/11/22

Agnel Education and Social Development Foundation

Fr. Agnel Ashram , Bandstand, Bandra(W)
Mumbai , Maharashtra - 400050.



UNDER CONTINUING EDUCATION PROGRAMME

APPLICATION FORM



Course Applied for CNC MILLING

Name MARWA KAMAL KHAN

Address S/O KAMALUDDIN KHAN, AKBARPUR, ROHTAS
BIHAR 821311.

Date of Birth: - 25/04/2002 Tel No. 7667114920

9142787920

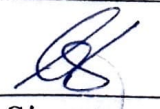
Education Qualifications:

| | Name of the Institute | Board /University | Year of Passing | % of Marks |
|---------|---------------------------|------------------------|-----------------|------------|
| S.S.C | | | | |
| I.T.I | | | | |
| H.S.C | | | | |
| DIPLOMA | | | | |
| DEGREE | | | | |
| OTHERS | BANWABASE MORNING COLLEGE | UNIVERSITY OF CALCUTTA | 2022 | 7-7 CARR |
| | | | | |
| | | | | |

Date :- 17/11/2022

Marwa Kamal Khan
Signature of the applicant

For office use only

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|--|---------------------|
| Application Checked / Verified by | |
| Admitted to | |
|  Signature | Director |
| Fee Receipt No. & Date | Form No. 172 |
| GST No. 27AARCA0471B1ZW | |

Accept
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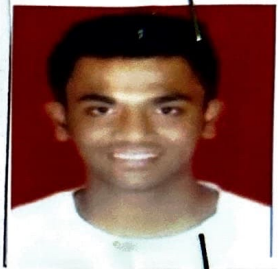
AF - 214

10/12/22

Agnel Education and Social Development Foundation



Fr. Agnel Ashram, Bandstand, Bandra(W)
Mumbai, Maharashtra - 400050.



UNDER CONTINUING EDUCATION PROGRAMME

APPLICATION FORM

1/2

Course Applied for VMC (CNC) Milling

Name KSHITIJ . HEMANT. JADHAV

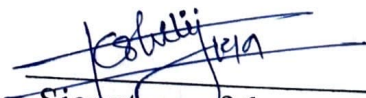
Address 7/47, NEW B.D.D CHAWL, DAHIWALKAR BOWA MARG, NAIGAON, DADAR (EAST), MUMBAI - 400012

Date of Birth: - 04th, September, 2000 Tel No. 7738934907


Education Qualifications:

| | Name of the Institute | Board /University | Year of Passing | % of Marks |
|---------|--------------------------------|-------------------|-----------------|------------|
| S.S.C | DR.ANTONIO DA.SILVA | MAHARASHTRA | 2016 | 67%. |
| I.T.I | | | | |
| H.S.C | KIRTI COLLEGE | MAHARASHTRA | 2021 | 55%. |
| DIPLOMA | | | | |
| DEGREE | | | | |
| OTHERS | DIPLOMA IN MECH. DRAUGHTMAN | | | |
| | | | | |

Date :- 15th December, 2022


Signature of the applicant

For office use only

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|--|---------------------|
| Application Checked / Verified by | |
| Admitted to | |
|  Signature | Director |
| Fee Receipt No. & Date | Form No. 173 |
| GST No. 27AARCA0471B1ZW | |

Accept
F 10,382/
CO full part

(Online) 2

AF 41
29/11/22

Agnel Education and Social Development Foundation



Fr. Agnel Ashram , Bandstand, Bandra(W)
Mumbai , Maharashtra - 400050.

UNDER CONTINUING EDUCATION PROGRAMME

APPLICATION FORM



Course Applied for CNC MILLING

Name SUJEET BALRAM MAURYA

Address A/406 GAJANAND APARTMENT, LAXMI NAGAR, NALLASOPARA EAST, VASAI, PALGHAR

Date of Birth: - 03/05/2000

Tel No. 8149203228

Education Qualifications:


| | Name of the Institute | Board /University | Year of Passing | % of Marks |
|---------|-----------------------|-------------------|-----------------|------------|
| S.S.C | | | | |
| I.T.I | | | | |
| H.S.C | | | | |
| DIPLOMA | | | | |
| DEGREE | | | | |
| OTHERS | | | | |
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Date :- _____

Sujeet

Signature of the applicant

For office use only

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|--|---------------------|
| Application Checked / Verified by | |
| Admitted to | |
|  Signature | Director |
| Fee Receipt No. & Date | Form No. 176 |
| GST No. 27AARCA0471B1ZW | |