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
www.frcrce.ac.in

Submitted To

NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL

BANGALORE

December 2022

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 programe 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 Undegraduate 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

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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	9920228275	022-6711410 0	crce@frcrce.ac.in
IQAC / CIQA coordinator	Sunil Krishnaji Surve	022-67114000	9167635546	022-6711410 0	surve@frcrce.ac.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 minroity 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**		
	Male	Female	Others	Male	Female	Others	Male	Female	Others	Total
D.sc/D.Litt/ LLD/DM/M CH	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**		
	Male	Female	Others	Male	Female	Others	Male	Female	Others	Total
D.sc/D.Litt/ LLD/DM/M CH	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

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Part Time Teachers									
Highest Qualification	**Professor**			**Associate Professor**			**Assistant Professor**		
	Male	Female	Others	Male	Female	Others	Male	Female	Others	Total
D.sc/D.Litt/ LLD/DM/M CH	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**	**Others**	**Total**
	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

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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

1. Multidisciplinary/interdisciplinary:	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

	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

	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.
6. Distance education/online education:	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.

Institutional Initiatives for Electoral Literacy

1. Whether Electoral Literacy Club (ELC) has been set up in the College?	The Institute has formed an Electoral Literacy club (ELC)from the Academic year 2022-23 with the aim of creating awareness among students regarding the electoral process and introducing them to their duties in contributing to the various activities like awareness drives, promotion of ethical voting, etc.
2. Whether students' co-ordinator and co-ordinating faculty members are appointed by the College and whether the ELCs are functional? Whether the ELCs are representative in character?	The ELC constitutes of a student coordinator and supervised by a faculty coordinator appointed by the Institute. They are responsible in arranging various activities like organizing talks, collecting data regarding the number of students enrolled in the voter's list, etc. Since the ELC has been set up a few months ago, it is yet to achieve the expected outcomes. However, various activities have been planned in the upcoming semesters.
3. What innovative programmes and initiatives	During the Lok Sabha Assembly elections in April

undertaken by the ELCs? These may include voluntary contribution by the students in electoral processes-participation in voter registration of students and communities where they come from, assisting district election administration in conduct of poll, voter awareness campaigns, promotion of ethical voting, enhancing participation of the under privileged sections of society especially transgender, commercial sex workers, disabled persons, senior citizens, etc.	2019, a drive was conducted by Institution Innovation cell (IIC-Fr CRCE) in the institute to promote and encourage students to vote. Posters were put up at various locations in the campus and volunteers (Faculty and staff) visited classes and laboratories and spoke about democratic rights and urged students to be part of the electoral process. This also included a signature campaign across all the branches. Due emphasis was made on the need for ethical voting.
4. Any socially relevant projects/initiatives taken by College in electoral related issues especially research projects, surveys, awareness drives, creating content, publications highlighting their contribution to advancing democratic values and participation in electoral processes, etc.	The Institute is committed in its Vision –"Moulding Engineers who can build the Nation" and recognises the importance of involving the younger generation in the democratic structure of the country. Responsible students will lead to responsible citizens and it is through them that the Nation can grow and thrive. Registration of students in the voter's list was undertaken at the Institute level. Faculty and students have conducted awareness drives to involve students to offer volunteering services in the electoral processes.
5. Extent of students above 18 years who are yet to be enrolled as voters in the electoral roll and efforts by ELCs as well as efforts by the College to institutionalize mechanisms to register eligible students as voters.	The ELC is in the process of collecting data class-wise of all registered and unregistered students. Post this, all unregistered students will be urged to enrol themselves in the voter's list. The ELC has planned an event for the same and will continue this process for each incoming batch(students above 18 years)

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
68	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.**

File Description	Document
Upload Additional information	[View Document](#)
Provide Link for Additional information	[View Document](#)

1.2 Academic Flexibility

1.2.1

Number of Add on /Certificate/Value added programs offered during the last five years

Response: 0

File Description	Document
Upload supporting document	[View Document](#)
Institutional data in the prescribed format	[View Document](#)

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

Response: 0

1.2.2.1 **Number of students enrolled in subject related Certificate/ Add-on/Value added programs year wise during last five years**

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

File Description	Document
Upload supporting document	[View Document](#)
Institutional data in the prescribed format	[View Document](#)

1.3 Curriculum Enrichment

1.3.1

Institution integrates crosscutting issues relevant to Professional Ethics, Gender, Human Values, Environment and Sustainability into the Curriculum

Response:

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, 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.

File Description	Document
Upload Additional information	[View Document](#)
Provide Link for Additional information	[View Document](#)

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

File Description	Document
Upload supporting document	[View Document](#)
Institutional data in the prescribed format	[View Document](#)

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

File Description	Document
Upload supporting document	[View Document](#)

Criterion 2 - Teaching-learning and Evaluation

2.1 Student Enrollment and Profile

2.1.1

Enrolment percentage

Response: 89.58

2.1.1.1 **Number of students admitted year wise during last five years**

2021-22	2020-21	2019-20	2018-19	2017-18
292	305	260	232	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

File Description	Document
Upload supporting document	[View Document](#)
Institutional data in the prescribed format	[View Document](#)

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
35	22	18	12	14

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
35	22	18	12	14

File Description	Document
Upload supporting document	[View Document](#)
Institutional data in the prescribed format	[View Document](#)

2.2 Student Teacher Ratio

2.2.1

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

Response: 18.78

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.

File Description	Document
Upload Additional information	[View Document](#)
Provide Link for Additional information	[View Document](#)

2.4 Teacher Profile and Quality

2.4.1

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

Response: 100

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
68	63	65	69	69

File Description	Document
Upload supporting document	[View Document](#)

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: 24.85

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

File Description	Document
Upload supporting document	[View Document](#)
Institutional data in the prescribed format	[View Document](#)

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.

File Description	Document
Upload Additional information	[View Document](#)
Provide Link for Additional information	[View Document](#)

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.**

File Description	Document
Upload Additional information	[View Document](#)
Provide Link for Additional information	[View Document](#)

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

File Description	Document
Upload supporting document	[View Document](#)
Institutional data in the prescribed format	[View Document](#)

2.7 Student Satisfaction Survey

2.7.1

Online student satisfaction survey regarding teaching learning process

Response: 3.42

File Description	Document
Upload database of all students on roll	View Document

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

File Description	Document
Upload supporting document	[View Document](#)
Institutional data in the prescribed format	[View Document](#)

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.

File Description	Document
Upload Additional information	[View Document](#)
Provide Link for Additional information	[View Document](#)

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: 51

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
29	7	8	5	2

File Description	Document
Upload supporting document	[View Document](#)
Institutional data in the prescribed format	[View Document](#)

3.3 Research Publications and Awards

3.3.1

Number of research papers published per teacher in the Journals notified on UGC care list during the last five years

Response: 0.76

3.3.1.1 **Number of research papers in the Journals notified on UGC CARE list year wise during the last five years**

2021-22	2020-21	2019-20	2018-19	2017-18
13	11	25	3	13

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File Description	Document
Upload supporting document	[View Document](#)
Institutional data in the prescribed format	[View Document](#)

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: 1.26

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
23	21	30	17	16

File Description	Document
Upload supporting document	[View Document](#)
Institutional data in the prescribed format	[View Document](#)

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 TedxCRCE 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.

File Description	Document
Upload Additional information	[View Document](#)
Provide Link for Additional information	[View Document](#)

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.

File Description	Document
Upload Additional information	[View Document](#)
Provide Link for Additional information	[View Document](#)

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: 55

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
10	9	16	12	8

File Description	Document
Upload supporting document	[View Document](#)
Institutional data in the prescribed format	[View Document](#)

3.5 Collaboration

3.5.1

Number of functional MoUs/linkages with institutions/ industries in India and abroad for internship, on-the-job training, project work, student / faculty exchange and collaborative research during the last five years.

Response: 22

File Description	Document
Upload supporting document	[View Document](#)
Institutional data in the prescribed format	[View Document](#)

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.**

File Description	Document
Upload Additional information	[View Document](#)

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

File Description	Document
Upload supporting document	[View Document](#)
Institutional data in the prescribed format	[View Document](#)

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 schedule to take place in December 2022.

File Description	Document
Upload Additional information	[View Document](#)
Provide Link for Additional information	[View Document](#)

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.

File Description	Document
Upload Additional information	[View Document](#)

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

File Description	Document
Upload supporting document	[View Document](#)

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: 0

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
0	0	0	0	0

File Description	Document
Upload supporting document	[View Document](#)
Institutional data in the prescribed format	[View Document](#)

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

File Description	Document
Upload supporting document	[View Document](#)
Institutional data in the prescribed format	[View Document](#)

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

File Description	Document
Upload supporting document	[View Document](#)
Institutional data in the prescribed format	[View Document](#)

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: 67.5

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	1136	409

File Description	Document
Upload supporting document	[View Document](#)
Institutional data in the prescribed format	[View Document](#)

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

File Description	Document
Upload supporting document	[View Document](#)

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: 54.57

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
161	190	132	147	188

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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

File Description	Document
Upload supporting document	[View Document]()
Institutional data in the prescribed format	[View Document]()

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: 81.4

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
29	23	23	25	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

File Description	Document
Upload supporting document	[View Document]()
Institutional data in the prescribed format	[View Document]()

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

File Description	Document
Upload supporting document	[View Document](#)
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: 3

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
2	2	5	4	2

File Description	Document
Upload supporting document	[View Document](#)
Institutional data in the prescribed format	[View Document](#)

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.

File Description	Document
Upload Additional information	[View Document](#)
Provide Link for Additional information	[View Document](#)

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.

File Description	Document
Upload Additional information	[View Document](#)
Provide Link for Additional information	[View Document](#)

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.

File Description	Document
Upload Additional information	[View Document](#)
Provide Link for Additional information	[View Document](#)

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: C. Any 2 of the above

File Description	Document
Upload supporting document	[View Document](#)

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.

File Description	Document
Upload Additional information	[View Document](#)

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: 9.88

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	7	10	15

File Description	Document
Upload supporting document	[View Document](#)
Institutional data in the prescribed format	[View Document](#)

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: 21.45

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
46	46	46	46	46

File Description	Document
Upload supporting document	[View Document](#)
Institutional data in the prescribed format	[View Document](#)

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.

File Description	Document
Upload Additional information	[View Document](#)
Provide Link for Additional information	[View Document](#)

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 improvise 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 IQACfor further action.

File Description	Document
Upload Additional information	[View Document](#)
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: B. Any 3 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](#)
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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 diversity 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)

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    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

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.

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.

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:

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 Footslog. The trek was 8.2 km long and took around 6 hours to complete the trail.

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.

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.

6.ANNEXURE

1.Metrics Level Deviations

Metric ID	Sub Questions and Answers before and after DVV Verification
2.1.1	**Enrolment percentage**

2.1.1.1. **Number of students admitted year wise during last five years**
Answer before DVV Verification:

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

Answer After DVV Verification :

2021-22	2020-21	2019-20	2018-19	2017-18
292	305	260	232	260

2.1.1.2. **Number of sanctioned seats year wise during last five years**
Answer before DVV Verification:

2021-22	2020-21	2019-20	2018-19	2017-18

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)**

2.1.2.1. *Number of actual students admitted from the reserved categories year - wise during the last five years*
Answer before DVV Verification:

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

Answer After DVV Verification :

2021-22	2020-21	2019-20	2018-19	2017-18
35	22	18	12	14

2.1.2.2. **Number of seats earmarked for reserved category as per GOI/ State Govt rule year wise during the last five years**
Answer before DVV Verification:

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

Answer After DVV Verification :

2021-22	2020-21	2019-20	2018-19	2017-18

35	22	18	12	14

2.4.1	**Percentage of full-time teachers against sanctioned posts during the last five years** 2.4.1.1. **Number of Sanctioned posts / required positions for teaching staff/ full time teachers year wise during the last five years:** Answer before DVV Verification:

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

Answer After DVV Verification :

2021-22	2020-21	2019-20	2018-19	2017-18
68	63	65	69	69

Remark : Input edited as per the supporting documents provided by HEI in metric 2.1.

3.2.2	*Number of workshops/seminars/conferences including on Research Methodology, Intellectual Property Rights (IPR) and entrepreneurship conducted during the last five years* 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** Answer before DVV Verification:

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

Answer After DVV Verification :

2021-22	2020-21	2019-20	2018-19	2017-18
29	7	8	5	2

3.3.1	*Number of research papers published per teacher in the Journals notified on UGC care list during the last five years* 3.3.1.1. **Number of research papers in the Journals notified on UGC CARE list year wise during the last five years** Answer before DVV Verification:

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

Answer After DVV Verification :

2021-22	2020-21	2019-20	2018-19	2017-18

13	11	25	3	13

Remark : As per supporting documents input modified

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**

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

Answer before DVV Verification:

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

Answer After DVV Verification :

2021-22	2020-21	2019-20	2018-19	2017-18
23	21	30	17	16

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**

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

Answer before DVV Verification:

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

Answer After DVV Verification :

2021-22	2020-21	2019-20	2018-19	2017-18
10	9	16	12	8

3.5.1	**Number of functional MoUs/linkages with institutions/ industries in India and abroad for internship, on-the-job training, project work, student / faculty exchange and collaborative research during the last five years.** Answer before DVV Verification : 26 Answer After DVV Verification :22
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)**

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)

Answer before DVV Verification:

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

Answer After DVV Verification :

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

Remark : Input edited because of Income & Expenditure statement not provided by HEI

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

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

Answer before DVV Verification:

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

Answer After DVV Verification :

2021-22	2020-21	2019-20	2018-19	2017-18
551	1106	830	1136	409

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

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

Answer before DVV Verification:

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

Answer After DVV Verification :

2021-22	2020-21	2019-20	2018-19	2017-18
161	190	132	147	188

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

Answer before DVV Verification:

2021-22	2020-21	2019-20	2018-19	2017-18

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)** 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*

Answer before DVV Verification:

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

Answer After DVV Verification :

2021-22	2020-21	2019-20	2018-19	2017-18
29	23	23	25	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**

Answer before DVV Verification:

2021-22	2020-21	2019-20	2018-19	2017-18

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

Answer before DVV Verification:

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

Answer After DVV Verification :

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

6.2.2	**Implementation of e-governance in areas of operation** 1. **Administration** 2. **Finance and Accounts** 3. **Student Admission and Support**

	4. **Examination** Answer before DVV Verification : A. All of the above Answer After DVV Verification: C. Any 2 of the above Remark : As per supporting documents Input modified
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** 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** Answer before DVV Verification: 	2021-22	2020-21	2019-20	2018-19	2017-18
---	---	---	---	---
0	1	8	18	21 | Answer After DVV Verification : | 2021-22	2020-21	2019-20	2018-19	2017-18
---	---	---	---	---
0	1	7	10	15	
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** 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** Answer before DVV Verification: 	2021-22	2020-21	2019-20	2018-19	2017-18
---	---	---	---	---	 6.3.3.2. **Number of non-teaching staff year wise during the last five years** Answer before DVV Verification: 	2021-22	2020-21	2019-20	2018-19	2017-18
---	---	---	---	---
0	0	0	4	1 | Answer After DVV Verification : | 2021-22	2020-21	2019-20	2018-19	2017-18
---	---	---	---	---
46	46	46	46	46	
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**

Answer before DVV Verification : A. All of the above
Answer After DVV Verification: B. Any 3 of the above

2.Extended Profile Deviations

ID	Extended Questions
1.2	**Number of teaching staff / full time teachers year wise during the last five years**

Answer before DVV Verification:

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

Answer After DVV Verification:

2021-22	2020-21	2019-20	2018-19	2017-18
68	63	65	69	69