



SELF STUDY REPORT

FOR

1st CYCLE OF ACCREDITATION

GOVERNMENT COLLEGE OF ENGINEERING AND RESEARCH, AVASARI (KH)

**GOVERNMENT COLLEGE OF ENGINEERING AND RESEARCH, AVASARI
KHURD, TALUQA AMBEGAON, DISTRICT PUNE 412405**

412405

www.gcoeara.ac.in

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1. EXECUTIVE SUMMARY

1.1 INTRODUCTION

Government College of Engineering & Research Avasari Khurd (GCOEARA) was established by the Government of Maharashtra in 2009. GCOEARA offers Undergraduate Programmes in six disciplines including Automobile Engineering, Civil, Computer, Electronics & Telecommunication, Instrumentation and Control, and Mechanical Engineering out of which Automobile and Mechanical Engineering Programmes are NBA accredited. The institute is affiliated to Savitribai Phule Pune University, Pune. It focuses on teaching technical knowledge, and value education through ethical behavior, leadership, and entrepreneurship qualities in students through regular teaching, industry-based projects, technical visits, research, and consultancy to transform them into competent, knowledgeable, ethical, and committed technocrats.

GCOEARA is located at Avasari Khurd near industrial hubs namely, Pimpri-Chinchwad and Chakan MIDC. It is 3.0 km away from the Pune-Nashik National Highway and well-connected to nearby towns like Pune, Mumbai, and Nashik. The Institute is located on a green campus of about 50 acres of land with the adoption of green technologies like solar heating systems, solar photovoltaic plants, wastewater treatment plants, etc.

GCOEARA has adopted Outcome Based Education, the expected outcomes being employment, higher education, and entrepreneurship. The objective is to develop industry-ready and socially committed students with research and innovation aptitude. The institute works on four-pillar Philosophy, viz. Academic Excellence, Research & Innovation, Professional Competence, and Social Commitment.

The Institute has contemporary infrastructure and experienced faculty qualified from IITs, NITs, and Government Colleges. Staff is given salary as per scale with updated DA, gratuity, PF etc. The strong mentoring system, continuous assessment, and parents-connect ensures effective monitoring of students' holistic development.

The Institute is ready to implement NEP 2020 from the academic year 2024-25 under the guidance of SPPU.

Training in aptitude, GD, communication skills, etc. has resulted in many quality placements including placement in core industries. Value-added structured courses and Major/Minor Honor Courses are offered for the technical growth of students. Students undergo activities like NSS camps, Unnat Bharat Abhiyaan, National Festivals, Commemoration Days, Sports, Cultural Events, etc. Recitation of National Anthem and Yoga are regular practices. The Institute strongly believes in education through the amalgamation of ancient traditions and modern technology.

Vision

Vision of the Institute

Educational institution for Empowerment through technological excellence towards sustainable development

Mission

Mission of the Institute

1. Value-based and demand-driven education using best practices
2. Promotion of research, innovation and entrepreneurship
3. Commitment to sustainable solutions in service of society
4. Capability to face local and global challenges

Short term goals

- Establishing a research center in the Mechanical and Automobile departments
- 50 % of faculty have PhD qualification
- 80% Placement/Higher Education /Self Employment
- Seeking grants up to Rs. 50 Lacs
- Establishment of Incubation center
- Establishment of Appropriate Rural Technology Center
- Sustainable development through Solid Waste Management, Rain Water Harvesting, and Green Energy
- 50% of projects to be interdisciplinary or sponsored
- 50 hours per year of social service by staff and students
- IRG of Rs. 15 Lac per year
- 1 CEP/Conference per year per department
- 2 weeks of Industrial training/STTP/FDP per year per faculty in a reputed organization

Long Term Goals

- 100% of faculty have PhD qualification
- 100% Placement/Higher Education /Self Employment
- Accreditation of UG programs in E & TC, Computer and Civil Engineering

- 1 patent per year per department
- 1 research paper in any reputed journal per faculty per year
- 3 start-ups by the end of 2025
- Meeting 25 % of electrical energy demand through renewable energy sources by 2025
- Center of Excellence in Appropriate Rural Technology
- 05 MoU with any reputed Foreign University
- Establishing research center in Instrumentation, E & TC, Computer, and Civil Engineering departments
- Full Autonomy by 2025
- 01 Industry-sponsored laboratory in every department

1.2 Strength, Weakness, Opportunity and Challenges(SWOC)

Institutional Strength

The criteria 1 through 7 in SSR reflect various strengths of the Institute. Following is a list of some representative (but not exhaustive) strengths of GCOEARA;

1. The Institute GCOEARA is the both established brand in the rural part of district Pune, well-known for quality education. GCOEARA has been consistently among top Institutions in University. In the Institutions most opted for admission, GCOEARA has been among top 10 for all the six programmes. In placement too, GCOEARA is among the best similar Institutions in the region.
2. GCOEARA is affiliated to Savitribai Phule Pune University (SPPU), which is one of the premier Universities on global level (541-550 rank brackets by QS World Ranking). Two of its six programmes are NBA accredited, reflecting Outcome Based Philosophy of working and Student-Centric Approach.
3. GCOEARA is located near Mancchar, with proximity to an industrial hub, Chakan MIDC, which is the largest in Asia and Hinjewadi IT Park. It is well connected by roadways to nearby towns like Pune, Mumbai and Nashik.
4. The four-pillar philosophy of working of GCOEARA ensures holistic development of students. Focus on research and innovation, PBL, internships, strong mentoring systems and parent connect, strong industry connect, rigorous training and placement, tutelage in ethics and values and social activities amalgamate into producing proficient technocrat's eager to cater to the societal needs.
5. The Institute has energetic, dynamic and technology-conversant faculty members, the average age being 40 years.
6. Professional working culture along with policies conducive to growth has culminated into good faculty retention.
7. Almost 100% admissions ensure sound position for GCOEARA.

Institutional Weakness

1. Being a Institute under Government of Maharashtra its faculty members are transferable.
2. Funds are not available for the research.
3. Though adequate for many sports activities, GCOEARA has a relatively smaller provision for auditorium.
4. The 4 years UG programme being a full-time one, Institute, Departments and mentors have to be always on their toes to achieve the desired holistic development of students.
5. Its Civil Engineering Department has meager faculty members.

Institutional Opportunity

1. To grow as a Research Institute offering PG and PhD programmes and as a center for technology transfer.
2. To cater to the huge requirement of professionals in IT/Computer/ Electronics sectors/EV.
3. To develop skilled manpower in Civil/Mechanical sectors by offering vocational courses to the needy rural youth residing in the vicinity of the Institute.
4. To achieve commendable NIRF Ranking.
5. To achieve academic autonomy, thereby acquiring freedom to design curricula involving research, software training, project/problem based learning, sandwich pattern courses and extensive industry interaction.
6. To be a part of the cluster of educational institutions offering inter-disciplinary/multi-disciplinary education, academic bank of credits and multiple entries/exits for the students.
7. To develop strong tie-ups with International Institutions and Universities so as to gain global exposure for students and faculties through hybrid degree programmes, exchange programmes, research projects, summer schools and internships.

Institutional Challenge

1. To train the students to be industry-ready in the face rapidly evolving technologies.
2. To train the fast-food and short-term-gains generation of the students for fundamental know-how, sustainable and long term benefits.
3. To complete the curricula exhaustively and educate the students holistically while the industries are offering attractive jobs when students have partially finished their undergraduate programme.
4. To motivate the students of Civil Engineering and Mechanical Engineering to pursue job/higher studies in their chosen core discipline when there is huge discrimination in the packages offered by different kinds of industry. Also, students form a heterogeneous batch merit-wise, since the ones enrolling for Civil and Mechanical Engineering programmes are of lesser merit compared to other programmes.
5. To continuously update the faculty members' know-how in the face of fast evolving technology.
6. To produce quality publications, to float good research projects and fetch sizeable funding since the Institute does not have a PG programme.

1.3 CRITERIA WISE SUMMARY

Curricular Aspects

Curricular Aspects

Academic excellence is the first pillar of the Four-Pillar-Philosophy of GCOEARA and the Institute is conducting all the academic tasks as per Plan-Do-Check-Act (PDCA) cycle. Institution imparts quality education ensuring effective curriculum delivery through a well-planned process. Outcome Based Education is accorded priority by the affiliating University and the Institution.

Curriculum planning and implementation is governed and monitored through Academic Review committee (ARC), Department Advisory Board (DAB), College development committee (CDC), Academic Monitoring and Control Committee (AMC) of the Institute. The Academic processes are planned based on the syllabus of SPPU compared with added content as per requirement in view of meeting local, global, national needs and desired outcomes/careers of students. Value added courses and content beyond syllabus (CBS) are covered at different platforms in view of multi skill development.

The Institute adheres to the academic calendar which is monitored by the AMC. All the programs are Choice Based Credit System and offer elective courses. Academic flexibility and bridging the gap between curriculum and industry is achieved by conducting workshops, seminars and signing MoUs with leading industries. Weak learners and fast learners are identified and are given different assignments. Holistic development of students is achieved directly through syllabus and indirectly through various add-on courses, CBS, Industrial visits, PBL, major projects, guest lecture series, workshops etc.

Value added courses like soft skills/communication skills etc., are also conducted in order to inculcate professionalism. Institute has made it mandatory for the students to undergo the internships/training in industry/corporate companies to enhance their employability.

GCOEARA invites feedback from all the stakeholders which is collected online and based on the analysis, the corrective measures and progressive steps are taken. Institute takes initiative to sensitize and inculcate values, rights, duties and responsibilities of citizens through activities mainly organized by the committees like National Service Scheme, Student Development/Welfare Organization, Internal Complaints, Staff/Student Grievance, SC/ST/OBC Reservation, students with disabilities, Anti-ragging, Discipline and by the Departments.

Teaching-learning and Evaluation

Teaching-Learning and Evaluation

GCOEARA is dedicated to providing quality education through effective teaching-learning processes for students' holistic development. Admission process is centralized and Institute follows all the guidelines of DTE. Efforts are taken to serve students from different backgrounds and abilities. In last 8 years GCOEARA has achieved University results among top 5 and has been among top 10 most opted colleges.

Institute has qualified and experienced faculty members as per AICTE specifications (26-PhD/NET qualified faculty, average teaching experience of 12 years and student to teacher ratio of around 25).

Faculty uses conventional teaching and ICT to enable student-centred learning. Faculty members update

themselves with innovative teaching techniques by attending Workshops, STTPs, FDPs and certification programs. Institute promotes experiential learning with regular industrial/field visits, Industry Institute Initiatives like internships, sponsored projects etc. Participative learning provides problem-solving abilities, opportunity to gain professional values, knowledge and skills.

GCOEARA has a structured method of pedagogy to address the needs of students with different backgrounds from advanced learners to average and slow learners. Advanced learners are motivated for higher studies and research. Slow learners are counselled and provided with additional course materials, remedial sessions and group studies.

The evaluation processes are dynamic and updated from time to time. Rubrics for evaluation of internal assessment are well-defined. The evaluation process is transparent and carried out efficiently. Exam-related grievances are addressed in accordance with University policies. Faculties are engaged in various up-gradation activities including Teacher Technical Training and exam reforms.

Each course is planned and delivered to achieve stated objectives and outcomes. CO-PO attainment is calculated for each course using different assessment tools. Attainment level of all COs is obtained based on the student's performance in the internal and external examinations. Course end survey is taken from students. Exit survey, alumni survey and employer surveys are taken. All departments have defined PSO and added many co-curriculum activities. The outcome of all these activities is the continuous improvement in University results and attainment of COs and POs.

Research, Innovations and Extension

Research, Innovations And Extension

The Institute has a culture and ecosystem conducive to foster research, innovation and extension activities. All the departments have its own Project Lab or Industry Sponsored Labs. The infrastructure, facilities and resources are available 24×7 for research and innovations. The institute has total 26 PhD holders who are guiding students under their tutelage at different research centres within SPPU. The institute has started the sequel of National conference in the field of Energy and Environment for Sustainable Development. This conference encompasses all the disciplines of engineering and hence provide opportunity to our own students and faculty to present their research. During last five years the faculty members have published 80 journal papers in UGC/SCOPUS/SCI journals and approximately same number of conference papers. This is an indication of the fact that conducive atmosphere is maintained in the institute for the research.

The institute has collaboration with National Institute of Wind Energy as a part of which an instrument named SSRA for wind resource assessment is installed at the institute. Department of Mechanical Engineering has a research facility of solar dryer which is also used by the students of instrumentation for its automation. Department of instrumentation has a research laboratory established in collaboration with Forbes Marshall Ltd. Pune for carrying out research in the area of flow measurements. These are some of the examples to indicate the research culture. Institute has MoU with IIT Bombay through its apex body DTE, Mumbai for faculty and students to benefit from IIT Bombay.

In addition to this the students are encouraged to undertake industry sponsored projects to address industrial technical problems. GCOEARA supports in-house projects, project based learning activities. The faculty members are also given an opportunity to do their PhD either through QIP at IITs or as an external candidate

within SPPU.

The institute provides platform 'AVISHKAR' a project competition for students to exhibit the research work. Every year about two to three projects participate in AVISHKAR at University level.

Centre of Excellence sanctioned by GoM is the culmination of this culture through which GCOEARA looks forward to further prosper.

Infrastructure and Learning Resources

Infrastructure and Learning Resources

GCOEARA adheres to AICTE, DTE, SPPU, NBA and NAAC norms for requirements regarding infrastructure facilities. Additional facilities like sponsored laboratories, innovation centres, etc. have also been created at GCOEARA to meet the expected outcomes. Physical facilities, library framework for books, e-resources and IT support are maintained in view of meeting POs, Mission and Vision of the Institute. Physical infrastructure consists of 22 classrooms, 05 tutorial rooms, 45 laboratories, 02 seminar halls, 01 Workshops, Library, Girls and Boys common rooms and other facilities. Laboratories and workshops have the necessary conventional and modern equipment. Laboratory equipment, elevators, fire-fighting system, water tanks/coolers and experimental setups are serviced properly before starting the new semester. Corrective actions are initiated to maintain equipment and laboratory setup in working condition. Preventive maintenance is carried out in-house by the supporting staff. Institute has 61472 sq.m built-up and 21595 sq.m circulation area including staircase, passages etc. Necessary kit for outdoor gymnasium, outdoor games, indoor sports room and gymnasium equipment have been provided to the students. Cultural club has musical instruments. Cultural cell organizes Annual Festival and several other programs. GCOEARA students regularly earn rewards and applause in various competitions.

Institute has Centre, where regular sessions on Yoga are organized. Administrative building and Central library occupies 4852 sq. m area. It has two reading halls having capacity of 50 each. Library has 24000 Volumes, 2387 Titles and 11 print journals along with 586 e-journals like Springer. These e-journals can be downloaded using DELNET platform for which Institute has registration. There is digital library having 10 computers with internet facility.

Institute has 754 computers and sufficient number of printers with 100 Mbps internet connectivity. There are 50 plus Wi-Fi points deployed in the campus. All the departments are connected with six core optical fiber backbone cable. There is facility of centralized firewall Sophus network monitoring.

The institute has recently built-up fully air-conditioned auditorium with seating capacity of 1000. Thus, GCOEARA has a state of art infrastructure which can be used to fulfil its vision and mission.

Student Support and Progression

Student Support and Progression

GCOEARA provides necessary support, facility and environment to enable the students to achieve designed outcomes like, Placement/Entrepreneur/Higher studies. Professional development of student is one of the pillars of GCOEARA. Government and non-government scholarships are availed by students with Institute's active

support. In last five years, 60% out of 8000 plus students from different categories and sections have availed the benefits of scholarships under various schemes of the Government. Students have also availed Non-Government scholarships.

The Institute has dedicated placement, higher study and Innovation cells. Students gain guidance and opportunities for placements, entrepreneurship and higher studies. Institute has promoted learning of the German and Japanese through audit courses offered by SPPU. Guidance for competitive exam and career counselling is also offered by institution through CSAC. Alumni of the institute helps this club for preparing for the examinations. Activities like group discussion and mock tests are conducted through this club.

About 40% students have been placed in reputed companies and progression to higher studies in last five years. Well-structured programme for pre-placement training is effectively implemented in GCOEARA. Year-wise activities are planned from first year to final year to make students competent for better career opportunities. The activities like Mock tests, interviews and Group discussions. Soft skill training such as resume writing, interview preparation, communication skill, email writing, presentation skills are imparted to the students. Free aptitude tests are given to students through various free portals such as firstnookari.com. Superset software is used for training and placement operation and documentation which helps to provide authentic and reliable data to industry for placement drives.

Infrastructure has been provided for sports and cultural activities. Students actively participate in various competitions at different levels and win prizes.

The Institute has well-defined mechanism for redressal of grievances of students through various committees formed as directed by regulating authorities. Institute organizes alumni meet every year. Alumni contribute in delivering expert talk, formulation and evaluation of projects and seminars and help in organizing industrial visits, value-added courses, and placement. Alumni association of GCOEARA is recently registered and has separate office in the campus.

Governance, Leadership and Management

Governance, Leadership and Management

GCOEARA has a transparent governance and management. It leads to effective realization of its Vision and Mission, which is the extension of vision of Directorate of Technical Education of the State to provide quality education. GCOEARA works on four pillar philosophy viz. Academic Excellence, Research & Innovation, Professional Competence and Social Commitments.

GCOEARA has a well-established organizational structure for its governance and smooth functioning. Various bodies viz. College development committee (CDC), Internal Quality Assurance Cell (IQAC), seven departments, Institute/Department level committees are formed with representation from all stakeholders. Programme Advisory Committees (PACs) are formed to support and advice departments. In CDC, review of progress on four pillars is taken periodically. e-governance is introduced to streamline the administration. IQAC has been formed in 2023. It conducts regular audits of academic and administrative processes.

GCOEARA has a set of well-defined welfare policies to ensure students' and employees' overall development and welfare. Institute organizes professional development/administrative training programmes for teaching/non-teaching staff.

The recruitment process of the employees of Institute is effected by the Government through public service commission and selection board. GCOEARA follows the Self- Appraisal System for the staff. There is a policy to promote internal faculty through Career Advancement Scheme.

Enrollment is nearly 100% and financial status is sound. The Institute budget is provided by the Government considering the increased requirements. Institute has transparent financial policies including sanction of budget, purchase and audits to ensure appropriate utilization of funds for academic, administrative and development purposes. More than 90% budget has been utilized in every financial year. Income and expenditure is audited by Chartered Accountant every year.

The functioning and policies has resulted in healthy environment and contributed towards the achievement of its Mission, resulting in retention of almost 90% of staff, although staff is transferable.

The governance, leadership and team-work have brought GCOEARA into lime light and its merit at intake level is improving continuously.

Institutional Values and Best Practices

Institutional Values and Best Practices

The institute has always upheld its core values such as integrity, excellence transparency, inclusivity and lifelong learning. These core values are inculcated through various academic, administrative, financial and other practices in the institute. During induction program a lecture on universal human values help them to understand these core values and help them during rest of their programme.

There are some best practices followed in the institute. 'Learning by doing' beyond the classrooms through club activities is one of the best practices followed. The objective of the practice is to help students to develop lifelong working habits and to foster practical skills. Clubs like ROBOCON, GO-CART, Enlectic Research Centre, Innovation and Entrepreneurship Cell are functional in institute. Students of different disciplines work cohesively in these clubs. These clubs present an ecosystem which contribute to students' technical, physical, mental development and supports students to develop their academic success.

Another best practice followed by GCOEARA is Students Mentorship Program which has an objective to increase interactions with the students and make them comfortable in the academic, feel them emotionally stable and let settle them in social adjustment during their first year of academic. By pairing incoming students with experienced mentors, institutions can foster a sense of belonging, provide valuable resources, and address common challenges new students face. In the first year of engineering faculty mentor is assigned to a group of 25 students. The interaction between mentor and students takes place twice a month. The mentor discusses with the group to understand problems and views of group. The faculty mentor also interacts with the students individually and confidentially. From second year onwards, faculty of respective engineering branch is assigned as mentor to students of the same branch. For a group of twenty students one faculty mentor is assigned. During three years, same faculty mentor is retained. This helps mentor to establish good rapport with them.

First-year mentoring programs have proven to be instrumental in supporting new students' transition and success. By providing academic, social, and emotional support, these programs helped students navigate the challenges of their first year.

2. PROFILE

2.1 BASIC INFORMATION

Name and Address of the College	
Name	GOVERNMENT COLLEGE OF ENGINEERING AND RESEARCH, AVASARI (KH)
Address	Government College of Engineering and Research, Avasari Khurd, Taluqa Ambegaon, District Pune 412405
City	Pune
State	Maharashtra
Pin	412405
Website	www.gcoeara.ac.in

Contacts for Communication					
Designation	Name	Telephone with STD Code	Mobile	Fax	Email
Principal(in-charge)	Dilip R Pangavhane	02133-230582	9422521375	02133-230583	principal@gcoeara.ac.in
IQAC / CIQA coordinator	Chandrashekar M Sewatkar	02133-230506	9422521375	02133-230583	cmsewatkar.mech@gcoeara.ac.in

Status of the Institution	
Institution Status	Government

Type of Institution	
By Gender	Co-education
By Shift	Regular

Recognized Minority institution	
If it is a recognized minority institution	No

Establishment Details

State	University name	Document
Maharashtra	Savitribai Phule Pune University	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	15-05-2023	12	

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	Government College of Engineering and Research, Avasari Khurd, Taluqa Ambegaon, District Pune 412405	Rural	50.48	61472.01

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, Automobile Engineering,	48	Higher Secondary Certificate	English	60	0
UG	BE,Civil Engineering,	48	Higher Secondary Certificate	English	60	0
UG	BE,Computer Engineering,	48	Higher Secondary Certificate	English	60	0
UG	BE,Electronics And Telecommunication Engineering,	48	Higher Secondary Certificate	English	60	0
UG	BE,Instrumentation And Control Engineering,	48	Higher Secondary Certificate	English	60	0
UG	BE,Mechanical Engineering,	48	Higher Secondary Certificate	English	60	0

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	8				18				55			
Recruited	4	0	0	4	6	1	0	7	27	15	0	42
Yet to Recruit	4				11				13			
Sanctioned by the Management/Society or Other Authorized Bodies	0				0				0			
Recruited	0	0	0	0	0	0	0	0	0	0	0	0
Yet to Recruit	0				0				0			

Non-Teaching Staff				
	Male	Female	Others	Total
Sanctioned by the UGC /University State Government				118
Recruited	53	25	0	78
Yet to Recruit				40
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				43
Recruited	25	13	0	38
Yet to Recruit				5
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/MCH	0	0	0	0	0	0	0	0	0	0
Ph.D.	4	0	0	6	1	0	9	6	0	26
M.Phil.	0	0	0	0	0	0	0	0	0	0
PG	0	0	0	0	0	0	18	9	0	27
UG	0	0	0	0	0	0	0	0	0	0

Temporary Teachers										
Highest Qualification	Professor			Associate Professor			Assistant Professor			Total
	Male	Female	Others	Male	Female	Others	Male	Female	Others	
D.sc/D.Litt/LLD/DM/MCH	0	0	0	0	0	0	0	0	0	0
Ph.D.	1	0	0	0	0	0	0	0	0	1
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

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

Details of Visting/Guest Faculties					
Number of Visiting/Guest Faculty engaged with the college?	Male		Female	Others	Total
		10	10	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	0	0	0	0	0
	Female	0	0	0	0	0
	Others	0	0	0	0	0

Provide the Following Details of Students admitted to the College During the last four Academic Years

Category		Year 1	Year 2	Year 3	Year 4
SC	Male	27	33	26	0
	Female	12	15	17	0
	Others	0	0	0	0
ST	Male	8	8	13	0
	Female	5	7	3	0
	Others	0	0	0	0
OBC	Male	88	77	96	0
	Female	32	26	41	0
	Others	0	0	0	0
General	Male	89	71	81	0
	Female	42	36	41	0
	Others	0	0	0	0
Others	Male	36	31	38	0
	Female	15	9	15	0
	Others	0	0	0	0
Total		354	313	371	0

Institutional preparedness for NEP

1. Multidisciplinary/interdisciplinary:	Government College of Engineering & Research (GCOEARA) is affiliated to Savitribai Phule Pune University (SPPU). The university will be implementing curriculum as per the guidelines of
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NEP 2020 for first year of engineering starting from academic year 2024-25. In the new curriculum the credits for traditional courses have been reduced but credits for computer programming is increased. Considering the significance of communication skill it has been introduced at the entry level. This course will be taught as tutorial instead of theory. The curricula (2019 pattern) of SPPU encompass several multi/interdisciplinary aspects. The course of Mathematics continues for one more Semester in Second Year for all disciplines. FE syllabus is uniform for all disciplines and includes introductory credit courses on all the disciplines like Elements of Mechanical Engineering, Elements of Electrical Engineering, Elements of Computer engineering, etc. This ensures fundamental understanding of the students about the natural sciences and all core branches of Engineering. Few courses like Strength of Materials, Fluid Mechanics are uniform for Civil Engineering and Mechanical Engineering disciplines. Similarly, a few Courses like Data Structures, Object Oriented Programming, Digital Electronics & Logic Design, Computer Networks, Cloud Computing, Digital Signal Processing, Embedded Systems, System Programming & Operating Systems are uniform for Computer Engineering and E&TC Engineering disciplines. Further, these two have a few Honors courses in common viz. Internet of Things, Artificial Intelligence & Machine Learning, Data Science. Civil Engineering has a credit course on Computer Programming in Civil Engineering and Mechanical Engineering has credit courses on Artificial Intelligence & Machine Learning, Mechatronics and Computer Integrated Manufacturing. All the disciplines have audit courses on Environmental Sustainability, Road safety, etc. GCOEARA is a Teaching-intensive and Research-intensive Institute. Special efforts are taken by GCOEARA to inculcate multi/interdisciplinary research culture among faculty and students. GCOEARA has been the pioneer Institute among SPPU institutions to adopt Project/Problem Based Learning (PBL) and the students are encouraged to identify problems that would need multi/interdisciplinary solution. GCOEARA also insists that the students in their Final Year should carry out sponsored projects, which address the real life problems and which almost always involve

	<p>multi/interdisciplinary approach to the solution. The teaching faculty members are encouraged to earn and participate in IKS courses conducted by NPTEL SWAYAM courses. Students undergo industrial internships in their Third Year of UG course where, on the site, the interns automatically undergo multi/interdisciplinary training. Gymkhana committee organizes birth and death anniversary celebration of freedom fighters and social workers. Through NSS, several events like Independence Day and Republic Day celebrations, Blood donation camps, winter camps, social work initiatives are taken to instill human values like Truth, Righteous conduct, Non- violence, Peace and Love. GCOEARA plans to acquire the status of Autonomous Institute in near future and having acquired thus, the Institute shall certainly plan more multidisciplinary curricula that will enable multiple entries and exits.</p>
<p>2. Academic bank of credits (ABC):</p>	<p>GCOEARA is affiliated to Savitribai Phule Pune University (SPPU) and is governed by SPPU as regards curricula, examination and evaluation. GCOEARA will make all the necessary provisions of the Academic Bank of Credits, benefit of multiple entries and exits, as soon as instructed by SPPU. Also, it is proposed by GCOEARA to apply for academic autonomy in near future and in case it is sanctioned, the Institute shall definitely make all the arrangements to include clauses in NEP in its curriculum structure. GCOEARA is coming up with Centre of Excellence through Digitalization supported by Government of Maharashtra. The institute is therefore taking exhaustive efforts to make tie-ups with higher level Institutes so as to facilitate students' exchange programme, joint degrees and credit transfers. Till date, MoUs on various collaboration aspects with have been signed with IIT Bombay and COEP Tech University, Pune. Due to continuous advancement in technology, endeavors by faculty members to give contents beyond syllabus (CBS) to the students through extra/value added courses are in place. Faculties design and disseminate the content of these add-on courses either themselves or by inviting an expert from industry. ICT tools and innovative techniques like flipped classroom, participative learning, etc are used to discuss CBS. Assignments on the value added courses are designed by the course in-charge.</p>

<p>3. Skill development:</p>	<p>Knowledge, skills, attitude and behavior are the graduate attributes defined by AICTE and skills development in students and faculty has always been the major focus of GCOEARA right from its inception. Many initiatives like internship, industrial training, PBL etc were taken by GCOEARA much before, these were included in the curriculum by the University. Faculty members at GCOEARA are encouraged to undergo industrial training, STTP, FDP and certification courses like NPTEL. Students are also encouraged to enhance their knowledge and skills by undergoing online/offline certification courses. Registrations fees are reimbursed by the Institute for the successful faculty members and students. 100% students of GCOEARA undergo industrial internships. Hands-on experience in internships enhances students' technical skills, interpersonal skills and professionalism. GCOEARA is endeavoring to achieve paperless, sustainable and environmental friendly processes. Faculty and students are provided with various ICT tools like projectors, computational systems, audio-visual aid in the classrooms and laboratories. Students also make use of virtual laboratory. The Institute has sufficient mechanical workshop area with all the conventional and modern machinery as well as skilled trainers. Various sections like carpentry, tin smithy, machine shop, welding, fitting, CNC etc. are well-equipped. Institute is thus well-prepared to offer a variety of vocational courses. Presently, right from First Year, students are undergoing hands-on training in workshop. Workshop practice is a credit course common for all branches of First Year and later on for Mechanical and Automobile Engineering. There is a special skill development program implemented with the help of PhD students of IIT Bombay who are doing their PhD under Prime Minister Research Fellow Program. The courses on design thinking, ANSYS etc are conducted as a part of this initiative in an online mode.</p>
<p>4. Appropriate integration of Indian Knowledge system (teaching in Indian Language, culture, using online course):</p>	<p>Every day, academic sessions in GCOEARA begin with National Anthem. NSS Cell celebrates Independence Day and Republic Day on large scales. A special Commemoration Committee organizes and celebrates birth and death anniversaries of all the Freedom Fighters and Social Workers. During the Mentor-mentee meetings, faculties discuss stories</p>

	<p>from history and ancient history (mythology) so as to make the students aware of our rich heritage and culture. The annual social event titled RESSONANCE has a special section called Naadbrahma, which is dedicated to the Indian Classical Music. It showcases classical and semi-classical singing, Bharatnatyam, Kathak and regional/folk dances, Instrument Playing talents of students and staff. RESSONANCE also showcases Rangaawali and Painting talents of the students. Lantern-making, Fort-making, Ganesh Idol making competitions are also held by the Art Circle during Deepawali and Ganesh Festival. Celebration of Shivjayanti sees the traditional Dhol-Tasha performance and procession. Though the medium of communication is English and students have to appear for SPPU examinations in English language itself, faculty use vernacular language (Marathi) or Hindi at times to make a singularly difficult concept simple to understand. Regional languages are deliberately used while mentoring the students' group in Mentor-mentee meetings or while addressing academic/personal queries raised by students. This ensures a cozy and at-home atmosphere and enables a more heart-to-heart talk. In the online regular/extra/add-on/weak-learners lectures, there are limitations on use of video due to band-width limitations at students' end. Thus, many communication modes otherwise available in offline mode, like facial expressions and gestures are disabled and that makes it difficult for the students to understand the tough concepts when discussed entirely in English. Hence, Instructors engaging the lectures in online mode disseminate the information in vernacular language (Marathi or Hindi). The institute recently organized its second National Conference on Energy and Environment for sustainable development through AICTE-VAANI scheme. The official language was Marathi for this conference.</p>
5. Focus on Outcome based education (OBE):	<p>Two UG programmes of GCOEARA viz. Automobile and Mechanical Engineering are NBA accredited. GCOEARA believes in student-centric Four-Pillar philosophy, which includes Academic excellence, Professional Competency, Research and innovations and Social Commitment. GCOEARA Four-Pillar philosophy is aligned with AICTE's</p>

	<p>Outcome Based Education (OBE) attributes, viz. Knowledge, Skill, Behavior and Attitude. Students are trained from the very First Year up to Final Year keeping in mind the probable walk of career they would choose, viz. Employment, Higher Studies and Entrepreneurship. Academic excellence has always been a strong focus of GCOEARA. In academics, GCOEARA results are among the best results at the SPPU level. The Institute has an environment conducive to Research and Innovation. Students of GCOEARA undergo Project/Problem Based Learning from their very First Year. Students are encouraged to conduct sponsored projects based on real life industrial and social problems. GCOEARA holds National Conference on Energy and Environment for Sustainable Development to bring researchers, academicians and industrial personnel on a common platform. Students are carefully groomed in soft-skills like communication, aptitude, interviews, GD, etc. As a result of the rigorous training given, the placement of GCOEARA has been more than 50% for the passed out batches, including a few International placements. GCOEARA ensures that students get all the necessary information, resources and guidance for appearing for competitive examinations and for higher studies. As a result, many passed out students are at present pursuing their higher studies. The Entrepreneurship Cell organizes talks of experts for the students to understand challenges, legal formalities and resources for start-ups and provides space, funds, advice and IP consultation for the budding entrepreneurs. The focus of GCOEARA is on producing Engineering Professionals with high moral and ethical values.</p>
<p>6. Distance education/online education:</p>	<p>GCOEARA is affiliated to Savitribai Phule Pune University (SPPU) and is governed by SPPU as regards syllabus, instructions, examination and evaluation. The four years undergraduate full-time programmes in Automobile, Civil, Computer, ENTC, Instrumentation & Control and Mechanical Engineering offered by GCOEARA are to be completed in offline, physical, on-campus mode and there is no provision or feasibility of distance education. During pandemic, all the academic activities like lecture-practical-tutorial delivery, theory and viva-voce examinations, mentor meetings, projects, seminars, etc were being conducted purely</p>

in online mode using platforms like Google Meet. Google classroom was used for circulation of study material. The online lectures delivered then have been made available as video lectures on YouTube channels and blogs created by the faculty members for anyone to refer to. E-journal, e-books, journals, and many other resources from library too were made accessible from home. Further, many faculty members from GCOEARA floated outreach programmes in which, the course contents were delivered in online mode for students all over the state. As the students from many Institutions and Universities were not receiving proper tuitions in pandemic, these programmes received good response from students and even course faculty members. This has indirectly led to Open Distance Learning (ODL). Thus, GCOEARA and its faculty are well-prepared to offer ODL to become a multidisciplinary HEI. As on date too, the faculty members are delivering a portion of their curriculum in online mode. Content beyond syllabus, tutorials, extra lectures, audit courses and honors courses by industry experts are nearly always conducted in online mode. The Institute has conducted many co-curricular and extra-curricular events like First Year Induction Programme, National Conference NCEESD-2022, and Technical Competition ROBOCON, cultural events RESSONANCE and Indradhanu and Departmental Students' Association events in online mode. Faculty members of GCOEARA have been enthusiastically involved in delivering on-line expert talks on various technical topics. Later, as the pandemic receded, GCOEARA began to conduct all the curricular, co-curricular and extra-curricular activities in hybrid (offline-online simultaneously) mode.

Institutional Initiatives for Electoral Literacy

<p>1. Whether Electoral Literacy Club (ELC) has been set up in the College?</p>	<p>There is no Electoral Literacy Club (ELC) in the Institute. However, activities related to new voters' registration, voter awareness, etc. are organized under the NSS unit of the Institute.</p>
<p>2. Whether students' co-ordinator and co-ordinating faculty members are appointed by the College and whether the ELCs are functional? Whether the ELCs</p>	<p>Yes, students are appointed as new voters' registration ambassadors, and one of the faculty members is appointed as college nodal officer to</p>

<p>are representative in character?</p>	<p>conduct new voters' registration camps and voter awareness activities.</p>
<p>3. What innovative programmes and initiatives 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.</p>	<p>Through the New voters' registration campaign, NSS volunteers participate in voter registration campaigns of newly admitted students in the college. They help students fill out form no. 6 for new voters online, generate acknowledgment receipts, and help till their names appear in the electoral roll. NSS volunteers also organize voter awareness campaigns in which they promote ethical voting and enhance the participation of voters in celebration of democracy with a larger number through Street Plays in the college. A few NSS volunteers assisted the Taluka election administration in the conduct of the poll during the 2024 parliamentary election.</p>
<p>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.</p>	<p>NSS volunteers organize voter awareness campaigns in which they promote ethical voting and enhance the participation of voters in celebration of democracy with a larger number through Street Plays in the college. A few NSS volunteers assisted the district election administration in conducting of poll during the 2024 parliamentary election.</p>
<p>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.</p>	<p>The college organizes a new voter registration campaign. NSS volunteers help students fill out form no. 6 online, generate acknowledgment receipts, and help till their names appear in the electoral roll.</p>

Extended Profile

1 Students

1.1

Number of students year wise during the last five years

2023-24	2022-23	2021-22	2020-21	2019-20
1481	1668	1703	1695	1575
File Description		Document		
Institutional data in prescribed format		View Document		

2 Teachers

2.1

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

Response: 75

File Description	Document
Institutional data in prescribed format	View Document

2.2

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

2023-24	2022-23	2021-22	2020-21	2019-20
54	55	53	54	58

3 Institution

3.1

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

2023-24	2022-23	2021-22	2020-21	2019-20
406.23	2251.233	931.05	425.66	253.13
File Description		Document		
Upload Supporting Document		View Document		

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:

Academic excellence is an important aspect of the vision and mission of GCOEARA. The institute is committed to conducting all academic tasks in line with the Plan-Do-Check-Act cycle. According to the inputs given by the Academic Quality Assurance Committee curricular/co-curricular/extra-curricular activities are scheduled in the academic calendar of the Institute. The institute shares the academic calendar with students and faculty members well before the start of the academic year.

HOD assigns courses to faculty members as per their expertise and preference. Time table is prepared to fulfill the subject-wise structure provided by Savitribai Phule Pune University (SPPU). Faculty members prepare teaching plans that include content beyond the syllabus, course files, and laboratory manuals. Academic monthly review of the courses at the departmental level is an integral part of the teaching-learning process, which ensures the progress of curricula. Every year, academic review is done and detailed reviews are sought to ensure continuous improvement.

Attendance is noted daily and the progress of students is monitored regularly. Defaulter's list is displayed every month and parents are informed about the progress of their ward. Counseling of defaulters is done by the batch mentor.

The institute implements outcome-based education, innovative pedagogy, use of Bloom's taxonomy, ICT, and participative learning for the enhanced teaching-learning experience. Effective curriculum delivery is ensured by supplementing classroom teaching with expert lectures, seminars/hands-on sessions, mini/industry-supported projects, industry visits, industrial internships, case studies, e-learning, NPTEL lectures, etc. Contents beyond the syllabus are identified and taught in the classroom/laboratory to expose students to recent trends in the industry. Soft-skills training, value-added courses, and counseling for the holistic development of students is done.

Feedback from Students is taken twice in the semester and from other stakeholders once a year through ERP/physically. Inputs from various stakeholders are summarized and communicated to the Board of Studies for curriculum revision.

Continuous Assessment is done to improve overall performance in internal and external examinations. Continuous Internal Assessment for Practical, Term-work, Projects, Seminars, internal examinations, and assignments is conducted and assessed by well-defined rubrics.

Unit tests and Prelim examinations are conducted every semester. Test papers are set using Unit-wise COs and BT levels and answers are evaluated. **The assignment** is given after completion of every unit

and is assessed for the quality of answers.

Mock project review is organized twice in each semester for the Final year. The final Review assessment is done by an external examiner.

Students are assessed on all possible platforms and internal marks are given as per their performance in internal tests, assignments, mock oral, mock practical, mock project reviews, and in active participation in technical, and non-technical events.

Adherence to the academic calendar is monitored through course file verification, Faculty meetings, and Feedback on the syllabus.

The Institute is ready to implement NEP 2020 as per the guidelines of SPPU. This will revamp the entire process of evaluation and assessment of the students. The awareness about such a revamping is being created in the institute through faculty meetings.

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

1.2 Academic Flexibility

1.2.1

Number of Certificate/Value added courses offered and online courses of MOOCs, SWAYAM, NPTEL etc. (where the students of the institution have enrolled and successfully completed during the last five years)

Response: 5450

File Description	Document
List of students and the attendance sheet for the above mentioned programs	View Document
Institutional programme brochure/notice for Certificate/Value added programs with course modules and outcomes	View Document
Institutional data in the prescribed format	View Document
Evidence of course completion, like course completion certificate etc. Apart from the above:	View Document

1.2.2

Percentage of students enrolled in Certificate/ Value added courses and also completed online courses of MOOCs, SWAYAM, NPTEL etc. as against the total number of students during the last five years

Response: 66.39

1.2.2.1 Number of students enrolled in Certificate/ Value added courses and also completed online courses of MOOCs, SWAYAM, NPTEL etc. as against the total number of students during the last five years

2023-24	2022-23	2021-22	2020-21	2019-20
1070	1164	1066	1121	971

File Description	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 in transacting the Curriculum

Response:

GCOEARA is affiliated with SPPU, a leading University at the National level. SPPU syllabus has many courses addressing issues relevant to Professional Ethics, Gender, Human Values, Environment and Sustainability. The institute has added some curricular and extracurricular activities to further strengthen these.

Curricular courses addressing Professional Ethics:

Advanced Concrete Technology: Applying ethical principles and professional codes in designs. Total Quality Management and Management Information System: Applying ethical principles, professional codes and TQM philosophy.

Quantity Survey Contracts & Tenders: Applying ethical principles and professional codes. Plagiarism check for PBL, seminars, and projects.

Air Pollution & Control: Applying ethical principles and government norms to design air pollution control equipment and adapt the

Value addition courses covering professional ethics

Curricular courses addressing Human Values:

Industrial Engineering: This Course highlights the work, human and machine relationship. Information and Cyber Security: Digital vulnerability and data protection from malicious users. Road Safety Management: Enforcement of law for greater road safety and environment-friendly road transport.

PBL activity covers many societal projects.

Curricular courses addressing Environment and Sustainability:

Environmental Engineering: Environment contaminants and hazards, sustainable solutions. Architectural Planning and Design of Buildings: Optimum planning, utilization of resources, building bylaws, green buildings, rainwater harvesting, waste management system.

Geotechnical Engineering: Causes and remedial measures of landslides.

Ecology and Environment: Maximizing the use of renewable energy sources, the importance of energy conservation and management.

Environmental Studies: Science and technology for monitoring and control of pollution.

CBS covering Environment and Sustainability issues. Many projects address Sustainability issues.

Gender equality is the second nature of GCOEARA. Girls and boys participate equally in various curricular/co-curricular/extra-curricular activities such as projects, seminars, presentations, group discussions, workshops, competitions, events, etc.

An induction program is arranged on cross-cutting issues. Guest lectures are arranged on mind-body alignment, stress management, and soft skills. Yoga, Human values sessions, cultural performances, the art of living, etc are frequently organized.

National Service Scheme organizes Winter Camps in rural areas involving activities like Beti Bachao, Beti Padhao, Unnat Bharat Abhiyan, and Street plays to make villagers aware of various social issues. Every year the Institute organizes blood donations to raise awareness of the importance of blood donation. The average blood collection for 8 years has been 160 units. To increase awareness related to women’s rights, safety, security, and health issues, the Institute celebrates Women’s Day for women employees and students. To protect the environment and to generate awareness, the Institute regularly organizes activities like tree plantation, Swachhata Bharat Abhiyan, Swachhata Rally, etc. The institute has also organized two National Conferences on Energy and Environment for Sustainable Development; 1st in 2022 and 2nd in 2024.

File Description	Document
Upload Additional information	View Document

1.3.2

Percentage of students undertaking project work/field work/ internships (Data for the latest

completed academic year)

Response: 51.92

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

Response: 769

File Description	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

Response: C. Feedback collected and analysed

File Description	Document
Feedback analysis report submitted to appropriate bodies	View Document
At least 4 filled-in feedback form from different stake holders like Students, Teachers, Employers, Alumni etc.	View Document
Action taken report on the feedback analysis	View Document
Link of institution's website where comprehensive feedback, its analytics and action taken report are hosted	View Document

Criterion 2 - Teaching-learning and Evaluation

2.1 Student Enrollment and Profile

2.1.1

Enrolment percentage

Response: 95

2.1.1.1 Number of seats filled year wise during last five years (Only first year admissions to be considered)

2023-24	2022-23	2021-22	2020-21	2019-20
350	353	310	351	346

2.1.1.2 Number of sanctioned seats year wise during last five years

2023-24	2022-23	2021-22	2020-21	2019-20
360	360	360	360	360

File Description

Document

Institutional data in the prescribed format

[View Document](#)

Document related to sanction of intake from affiliating University/ Government/statutory body for first year's students only.

[View Document](#)

Provide Links for any other relevant document to support the claim (if any)

[View Document](#)

2.1.2

Percentage of seats filled against reserved categories (SC, ST, OBC etc.) as per applicable reservation policy for the first year admission during the last five years

Response: 92.97

2.1.2.1 Number of actual students admitted from the reserved categories year wise during last five years (Exclusive of supernumerary seats)

2023-24	2022-23	2021-22	2020-21	2019-20
244	275	232	248	297

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

2023-24	2022-23	2021-22	2020-21	2019-20
273	276	276	276	293

File Description	Document
Institutional data in the prescribed format	View Document
Copy of communication issued by state govt. or Central Government indicating the reserved categories(SC,ST,OBC,Divyangjan,etc.) to be considered as per the state rule (Translated copy in English to be provided as applicable)	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

2.2 Student Teacher Ratio

2.2.1

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

Response: 27.43

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 and teachers use ICT- enabled tools including online resources for effective teaching and learning process

Response:

Teachers of GCOEARA In addition to conventional teaching resources, GCOEARA teachers have

received training and have access to contemporary ICT tools. Faculty members have attended professional development seminars and training to strengthen skill sets linked to ICT. An LCD projection system is equipped in classrooms to enhance the quality of instruction.

To enhance student learning, student-centric teaching-learning strategies are employed, which include traditional blackboard instruction as well as non-traditional instruction such as experiential, problem-solving, collaborative, and participatory learning for average, slow, and advanced learners.

1. Experiential Learning:

In order to learn about the newest technologies, students participate in project-based learning and summer internships. This teaches them how to mine data from multiple sources and use a variety of techniques. Students enhance their presentation and communication abilities by presenting their project work as presentations. Faculty-created educational resources are made available on the Institute website, YouTube channels, and Google Classroom to improve self-learning.

2. Participative Learning:

The goal of flipped classrooms is to improve learning and student involvement. Participation in extracurricular activities like NPTEL, Coursera, etc. is highly encouraged for students. For advanced learners, these courses are required to enhance higher-order thinking. Engaging in activities such as SAE-BAJA, Go-Cart, and TIFAN gives students the chance to practice working both alone and in groups.

3. Problem-Solving Methodologies:

Multiple activities are carried out to familiarise students with real-world industry issues. The institute conducts activities to boost their problem-solving abilities like puzzles, quizzes, etc. through the Knimbus platform, exambuzz.com, etc. The seminar helps to understand fundamental concepts, recent trends/technologies, and the expression of practical skills and knowledge gained.

Some of the ICT tools used in GCOEARA are given below;

Classrooms (equipped with network connectivity, LCD projector, standard teaching aids, audio-video components, etc.)

Knimbus Platform

Google Classroom, Google Meet, google form

YouTube channels and blog, video lectures on the website,

Simulation software

Online material like E-books, E-Journals, etc.

Extensive use of Google Classroom, Google Meet, knimbus platform, etc. was observed during the pandemic and it has been continued in the post-pandemic period in hybrid mode. The institute encourages students to use the available tools for the conduction of various workshops, hands-on

training, and technical events with an emphasis on the use of the software.

A summary of various students-centric methods is given below;

Experiential Learning	Participative Learning	Problem-Solving methods
Industrial visits	Group discussions	Case studies
Field visits	Presentations	Projects
Seminar	Technical events	Puzzles
Project Based Learning	Student committees	Quizzes
Projects	NPTEL/ FOSS/ Coursera etc.	Online test
Softwares/Data Analysis	Flipped classroom	
Youtube videos and blogs	Hands-on experience	
Industry internship	Resource pooling	
Virtual labs		
Computer-assisted learning		

File Description	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: 66.83

2.4.1.1 Number of sanctioned posts year wise during the last five years

2023-24	2022-23	2021-22	2020-21	2019-20
82	82	82	82	82

File Description	Document
Sanction letters indicating number of posts sanctioned by the competent authority (including Management sanctioned posts)	View Document

2.4.2

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

Response: 38.32

2.4.2.1 Number of full time teachers with NET/SET/SLET/Ph. D./ D.Sc. / D.Litt./L.L.D year wise during the last five years

2023-24	2022-23	2021-22	2020-21	2019-20
26	24	22	18	15

File Description	Document
List of faculties having Ph. D. / D.Sc. / D.Litt./ L.L.D along with particulars of degree awarding university, subject and the year of award per academic year.	View Document
Institution data in the prescribed format	View Document
Provide Links for any other relevant document to support the claim (if any)	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:

GCOEARA follows the outcomes-based philosophy for the assessment of students. The evaluation process is bifold i.e., internal and external. The internal evaluation process is designed to prepare and guide students for the SPPU examination. The external assessment process is as per SPPU guidelines and schedule. The SPPU examination scheme consists of in-semester, end-of-semester, oral/practical exams, and term work. The detailed evaluation process and tools for internal and external assessment are provided in 2.6.1.

The mechanism followed for internal and external assessment is listed below;

1.Internal Assessment

- Every faculty member conducts internal examination as per the requirements of the course.
- These internal examinations are carried out during the regular time table.
- These internal examinations are assessed and its result is communicated to students
- Students with weak performance are identified and special lectures are arranged for them at the end of the semester.
- The evaluation process and assessment rubrics of term work, seminar, project, Project Based

Learning (PBL) are shared with students at the beginning of each semester to keep transparency

- Continuous internal assessment and their frequency of conduction are as follows:

Sr. No.	Teaching Scheme	Internal Assessment Tools*	Recurrence per Semester
1	Theory	Unit Test/ Prelim Exam	1
		MCQ Test/ Prerequisite Test	1
		Assignment	2 to 4
		Tutorial	As per Time Table
2	Practical	Practical Assessment	Continuously throughout the semester
3	Project and Seminar	Project Review	2 to 3
		Seminar Review	2 to 3

* Internal assessment and its conduction frequency are selected as per the need of the course.

1. External Assessment

University conducts external assessments through in-semester and end-semester examinations. University also conducts external practical/ oral/ project/ seminar examinations by appointing external examiners.

The examination timetable is displayed on the notice board and is available on the university website.

Further, in the new curriculum introduced by SPPU as a part of NEP 2020 implementation, there is clear provision for internal assessment of the students as against the in semester examination (which is external in nature) conducted by SPPU in 2029 pattern of curriculum. In the new curriculum there will be better internal assessment of students as it has a credit in the curriculum.

Grievances Redressal:

If any internal grievances occur, they will be addressed and resolved by mentors, course faculty, and the head of the department.

To address all examination and evaluation-related grievances, Institute has appointed Controller of Examination. Once the university exam schedule is released students are notified to fill out the exam forms. Any queries or issues identified are resolved by the departmental exam coordinator along with CEO in communication with the university exam cell.

During SPPU External Examination if any malpractice occurs, the issue is registered and forwarded to the university for further action. After the declaration of results, aggrieved students can make an online application for photocopies, rechecking, or revaluation of answer sheets. The application is forwarded to SPPU for corrective action.

The sample documents which explains the redressal of grievances and reporting of malpractices is

attached with this.

File Description	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

Response:

GCOEARA adheres to the NBA's Program Outcomes (POs). These are twelve in number and are similar to and in line with the Graduate Attributes. Programme Specific Outcomes (PSOs) are also defined for all programs.

Every Department has Program Advisory Committee (PAC). Course Teachers redefine the Course Objectives and Course Outcomes (COs) for every Course, although they are defined by SPPU. The CO statements and CO-PO/PSO mapping matrix are defined using Bloom's Taxonomy and communicated to all stakeholders.

The PO/Mission and Vision of the Institute and Department are well explained to the students during their induction program at the beginning of first year. The course outcomes are explained by each teacher at the beginning of the course instruction.

Following are some methods/avenues for disseminating information:

- Institute website
- Laboratories
- Classrooms
- HoD Cabins
- Faculty presentations

CO, PO, and PSO Attainment

The attainment process of POs/PSOs is divided into Direct and Indirect Attainments. Direct attainment includes the attainment of each CO contributing towards the attainment of PO and Indirect attainment includes views of stakeholders on the PO/PSO attainment. 80% weightage is given to Direct and 20% weightage is given to Indirect attainment.

CO attainment is further divided into two parts viz. Course attainment (direct) and course end survey (indirect).

Course attainment is further divided into Internal attainment and External attainment. The internal attainment is done at Department as per Institute's academic calendar and the External attainment is done at University.

The Indirect Attainment tools include Passing out Student Surveys, Alumni Surveys, and Employer Surveys.

The weightage and assessment tools are broadly shown below:

Direct CO Attainment (80% Weightage)		Indirect CO Attainment (20% Weightage)
Internal Assessment tools (20% Weightage)	External Assessment tools (80% Weightage)	Indirect Assessment tools
Unit Test Examination	In-semester Examination	Course End Survey
Prelim Examination	End-semester Examination	
Lab/ Practical Assessment (Term-work)	External Lab/ Practical Examination	
Mock Orals	External Project Presentation	
Seminar, Project Presentation		
Assignments		

With the help of the above-mentioned tools, CO attainment is calculated by Course In-charge.

Level 1: If a student scores 40% to 49.99% marks out of the relevant maximum marks allocated for a particular CO.

Level 2: If a student scores 50% to 59.99% marks out of the relevant maximum marks allocated for a particular CO.

Level 3: If a student scores 60% and above marks out of the relevant maximum marks allocated for a particular CO.

CO Attainment is calculated as follows

Calculated CO attainment is compared with target CO attainments set by PAC. If the calculated CO attainment is more than the target CO attainment, the targets are raised by the decided policy, and if not, corrective actions are planned to achieve the target.

Final PO/PSO Attainment is calculated as the sum of Direct PO/PSO Attainment (80% weightage) and Indirect PO/PSO Attainment (20% weightage).

File Description	Document
Upload Additional information	View Document

2.6.2

Attainment of POs and COs are evaluated.

Explain with evidence in a maximum of 500 words

Response:

This college is affiliated to Savitribai Phule Pune University and the course structure, syllabus; academic calendar is decided and controlled by SPPU. Course Outcomes are well defined and they are informed to faculty and students. Each course from first year to final year is well aligned with the Program Outcomes. At the college every year academic calendar is published on website, classes are conducted as per timetable; continuous comprehensive assessment is carried out for all theory and practical courses. Academic sincerity is ensured by IQAC. Regular practical and theory attendance records are maintained by regular and visiting faculty. At the end of each semester the attendance is submitted to course coordinator. Regular Assignments, quizzes, group presentations, seminars are conducted and the marks considered for CCE internal functions examinations. University conducts in-semester (Mid Semester) examinations. The answer books are evaluated at institute and marks are informed to students within a month and SPPU. First 2 units are considered for CO1 and CO2. After in-semester CO1 to& CO2 marks are considered for calculation of CO attainment. Similarly after the End Semester Examination results are declared, CO3 to CO6 are calculated from the marks obtained by the students in ESE exam. Every year CO attainment is calculated and compared with % average marks for the class and number of students who have obtained marks above the subject average marks. All CO, PO calculations are done for every course of every year and considered for

PO attainment. Hands on skill development are monitored through practical examination, journal writing and oral examination. The marks obtained are considered for CO attainment.

Environmental awareness, social responsibility, sensitization about sustainable development is also ensured during CO attainment.

Students are generally weak in Communication skills especially those who are from rural areas; special care and attention is given to weaker students and attempts are made for improvement of communication skills. Subject specific competency development is achieved through program core courses, skill development is achieved through laboratory courses, Internship, mini projects and graduation project, supplemented by online MOOC, NPTEL, SWAYAM, IIT Bombay etc. courses.

Based on the CO attainment through direct and indirect method the PO attainment is also calculated for a particular batch. For example: for the students passing out in the AY 2021-22 their CO attainment from AY 218-19 till 2021-22 are considered. This helps to understand as to how the program outcomes are attained when one batch passes out.

Sample CO-PO attainments are provided as a proof with this as attachment.

File Description	Document
Upload Additional information	View Document

2.6.3

Pass percentage of Students during last five years (excluding backlog students)**Response:** 96.43**2.6.3.1 Number of final year students who passed the university examination year wise during the last five years**

2023-24	2022-23	2021-22	2020-21	2019-20
392	473	382	415	416

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

2023-24	2022-23	2021-22	2020-21	2019-20
413	501	396	429	416

File Description	Document
Institutional data in the prescribed format	View Document
Certified report from Controller Examination of the affiliating university indicating pass percentage of students of the final year (final semester) eligible for the degree programwise / year-wise.	View Document
Annual report of controller of Examinations(COE) highlighting the pass percentage of final year students	View Document

2.7 Student Satisfaction Survey**2.7.1****Online student satisfaction survey regarding teaching learning process****Response:**

File Description	Document
Upload database of all students on roll as per data template	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: 0

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

2023-24	2022-23	2021-22	2020-21	2019-20
00	00	00	00	00

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, Indian Knowledge System (IKS), including awareness about IPR, establishment of IPR cell, Incubation centre and other initiatives for the creation and transfer of knowledge/technology and the outcomes of the same are evident

Response:

The Government College of Engineering and Research at Avasari Khurd has made significant academic contributions, with its faculty securing 8 patents, of which 7 have been granted, and one copyright. The faculty members have published 70 research papers in renowned journals such as SCI, WoS, Scopus, and UGC-CARE listed publications. In addition, 72 books and papers have been presented at national and international conferences.

The institution actively addresses the gap between academia and industry through 16 MOUs with industrial partners, facilitating sponsored projects, internships, field visits, and on-the-job training programs.

The institute has implemented NEP 2020 from the academic year 2024-25. The courses on Indian Knowledge are the part of new curriculum introduced by the University. This course is take care by first

year faculty members who are trained for the same.

As part of its social responsibility efforts, the NSS unit of GCOEARA organizes various initiatives such as blood donation camps, digital literacy programs, and the Swachh Bharat Abhiyan etc in the surrounding communities.

Entrepreneurship Development and Start Up Centre (EDSUC) is a non-profit student's organization dedicated for promoting and building the spirit of entrepreneurship among students coming throughout Maharashtra. It is established in 2018 under the aegis of Innovation, Incubation and Entrepreneurship Development cell of "Government College of Engineering and Research, Avasari (khurd)". The geographical location of the Institute i.e. rural place lacks the local employment opportunities because of underdeveloped industrial sector. This compiles force the employable graduates to migrate to the urban area for hunting the job opportunities and increasing the burden/pressure on the facilities. The ultimate solution to reduce the burden is to provide the opportunities by developing their skill and transforming them self employable and job creators.

Prominent entrepreneurship activities conducted under the "EDSUC" are listed below:

1. Interaction meet of EDSUC students member with Prominent Alumni Mr. Tejas Narwade, Mr. Rahul Nehere and Mr. Manoj Bhojane regarding Entrepreneurship, Innovation and Start Up on Monday 15th July 2019.
2. One day workshop on "Digital Literacy Programme", for girls' students sponsored by "Maharashtra State Commission for Women", Mumbai, on Friday 10th January 2020.
3. One day online webinar on "Opportunities and Challenges in Cyber Crime: Women Empowerment through Precautions and Strategies", sponsored by "National Commission for Women" New Delhi

File Description	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: 2

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

2023-24	2022-23	2021-22	2020-21	2019-20
0	0	0	0	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: 0.93

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

2023-24	2022-23	2021-22	2020-21	2019-20
21	12	11	10	16

File Description	Document
Link to re-directing to journal source-cite website in case of digital journals	View Document
Links to the papers published in journals listed in UGC CARE list or	View Document
Institutional data in the prescribed format	View Document
Provide Links for any other relevant document to support the claim (if any)	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: 0.96

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

2023-24	2022-23	2021-22	2020-21	2019-20
8	25	16	9	14

File Description	Document
List of chapter/book along with the links redirecting to the source website	View Document
Institutional data in the prescribed format	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

3.4 Extension Activities**3.4.1**

Outcomes of Extension activities in the neighborhood community in terms of impact and sensitizing the students to social issues for their holistic development during the last five years.

Response:

National Service Scheme (NSS):

The Savitribai Phule Pune University, Pune has sanctioned NSS unit of 100 students to this institute since A. Y. 2016-17 (till AY 2022-23 it was a unit of 50 students). Students from all departments are selected based on their special achievements and hobbies. Students serve for 120 Hrs per year for two years and in one special residential camp organized in a village. NSS student representative is selected among the 100 students. Various activities like blood donation camps, cleanliness drives, forest conservation drives, food waste management awareness drives, nutritious diet awareness campaigns, visit and child care activities at orphanage, new voter registration and voter awareness campaigns, digitization and cashless transaction sessions, cyber security awareness sessions, sessions on information of government schemes to the community, help to the Manchar traffic police during festivals, etc. are organized under National Service Scheme unit of this institute.

The activities has helped the students to develop the organizational skills like planning, execution and evaluation. This has further helped the students to imbibe spirit of team work and cooperation among the fellow colleagues. Through street plays the students understand the ways to present the concept in their minds. Since the work of extension activities is mostly carried out in the rural areas, students come across the culture, ethics and values of the indian society at grass root level. The helps to sensitize the students for rural problem and issues. The camps of NSS help them to understand the values of democracy, peace, justice, tolerance etc.

The most important effect of carrying out the extension activities is that the number of students seeking admission to GCOEARA especially from the region around it has increased significantly. These activities are helpful to bring the rural youth in the main stream.

Because the institute reach outto the people around, other way round they also reach to the Institute to seek the solutions to their problem especially, some of the projects carried out in the institute are based on the rural technologies required for agricultural projects. The students of the institute every year participate in the state level competition called **TIFFAN** in which the development of technology for agricultural technology is to be developed and presented.

File Description	Document
Provide Link for Additional information	View Document

3.4.2

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

Response:

Humanbeing is a social animal. Generally a person who is learned and financially stable likes to see a society around him or her to be peaceful, stable and supportive. What differentes man from animal is his willingness to help others so thatthe entire society is uplifted. The prograss of mankind has happened over the centuries mostly due to large scale cooperation and belief in common interests. If one helps others in the surrounding communities, all will progress at a satisfactory speed. Considering this; the faculty at GCOEARA works for community around it with cleaning drives, skill development activities for women in the neighbourhood, conducting speciof topic lectures for students, carry out blood donation camps, vaccination importance are some such initiatives.

Dr Manisha Khaladkar a relatively recent faculty member at the institute has been working for Vigyan Bharati and Sharada Shakti (women’s wing of VIBHA) since 2009.

Through Sharada Shakti she had conducted National Conference’WeMeet’ in 2010, Nationsl Conference Women Health scenerio 2024, worked for Editing Indian Women Scientist Book which was released at the hands of Mrs Draupadi Murmu during IISF 2020, Chaired Sessions at STREE2020 (during November 2022), worked as orgamnizing committee member at 6 National convension of ViIBHA in 2024.

Dr Khaladkar is a receipt of Sant Eeshwar Seva Samman which is one of the highest awards in the areas of Social Service, this award was conferred upon her for her social work in the area of Women and Youth.

During the period 2009 to 2017 she had successfully mentored, motivated, guided 176 students from the College of Engineering Pune (CoEP) who worked towards Facbrication of India’s first Pasdively stabilized Pico satellite, SWAYAM which was launched into space on 22 June 2016. This became India’s first end to end successful student Satellite. For this effeort along with other socially relevant student related works like career guidance, research supervisions, community activities like Vigyan Katta, she was awarded Sant Eeshwar Seva Samman on 17 November 2019. It comprised of a Citation, a trophy and cash award of 1 Lakh. She fontinues her work for Sharada Shakti and Vigyan Bharati with encouragement from this college authorities as well.

At GCOEARA she has started working on Awareness programs for students in Sustainable Development by use of waste plastic for fuel generation and making other valuable added products from thermoplastic waste.

File Description	Document
Upload Additional information	View Document

3.4.3

Number of extension and outreach programs conducted by the institution through organized forums including NSS/NCC with involvement of community during the last five years.

Response: 78

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

2023-24	2022-23	2021-22	2020-21	2019-20
22	16	16	10	14

File Description	Document
Photographs and any other supporting document of relevance should have proper captions and dates.	View Document
Institutional data in the prescribed format	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

3.5 Collaboration

3.5.1 <i>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.</i> Response: 16	
File Description	Document
Summary of the functional MoUs/linkage/collaboration indicating start date, end date, nature of collaboration etc.	View Document
List of year wise activities and exchange should be provided	View Document
Institutional data in the prescribed format	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

Criterion 4 - Infrastructure and Learning Resources

4.1 Physical Facilities

4.1.1

The Institution has adequate infrastructure and other facilities for,

- **teaching – learning, viz., classrooms, laboratories, computing equipment etc**
- **ICT – enabled facilities such as smart class, LMS etc.**

Facilities for Cultural and sports activities, yoga centre, games (indoor and outdoor), Gymnasium, auditorium etc (Describe the adequacy of facilities in maximum of 500 words.)

Response:

The GCOEARA campus is spread over 50 acre area with huge academic buildings along with a separate administrative and workshop buildings, a separate residential zone with quarters for faculty and staff and hostels.

Institute has the essential infrastructure to fulfill the norms laid by the AICTE, NBA, NAAC, NIRF, DTE, SPPU and several additional facilities for effective Teaching-Learning (TL) process, and research and development activities.

Physical infrastructure consists of well-maintained 22 classrooms (1560.93 sq.m), 05 tutorial rooms (336sq.m), 03 drawing hall, 05 departmental libraries, 82 laboratories (16009.46sq.m), 4 stores and workshop(), 04 seminar halls (min.200 capacity) ,Auditorium(1083 capacity) Medical room, Girls/Boys Common rooms, faculty cabins, cubicle and girls and boys hostel etc. The overall ambiance is cheerful and conducive to learning and experimenting. Each department has a departmental library, Concept/Project/sponsored labs and separate cabins for the faculty members. The available physical infrastructure is optimally utilized to conduct co- curricular/extra-curricular activities. Laboratories are equipped with essential equipment and add-on set- ups, which are regularly calibrated. Institute also has departmental centers of excellence and facilities to enhance the learning experience. Workshop(more than 1740sq.m) consists of adequate facilities such as milling, fitting, carpentry, welding, CNC, Centre Lathe, Bench Grinder Machine, Plastic injection molding machine etc. for imparting practical skills.

Institute has a well-established Sports section and Art circle for organizing various sports and cultural activities. Students are motivated to take part in cultural and sports activities to develop leadership qualities, decision making abilities, team spirit, socio-psychological awareness, molding the students into an intellectually integrated persons.

Institute has a well equipped 3 indoor sports room (200.67sq.m) and indoor gymnasium. Indoor Sports activities include carom, chess, table tennis, badminton, etc. Students are provided with funds for participating in intra and inter University tournaments. Annual sport competitions are organized in the Institute.

GCOEARA has open ground (320000 m²) for outdoor sports. Necessary kit/equipment for outdoor games like Cricket, Football, Volleyball, Basketball, Badminton, etc. is provided by the Institute.

Cultural club has musical instruments and an independent practice area. Cultural cell organizes Annual Cultural Festival and several cultural programmes. As a result, our students have earned applause in various competitions like Firodiya Karandak, Bhimashankar Karandak, Jallos organized by SPPU Pune and many Inter collegiate events.

Students who represent the Institute in various sports and cultural events are provided with necessary gears/materials and are felicitated at Annual Social Function.

Institute has a Yoga Center (200 sq.m), where regular workshops, seminars, training programmes are organized on Yoga Asanas, Surya-Namaskar, Pranayama and Meditation. International Yoga Day is celebrated with zeal and enthusiasm in the Yoga Center by students and staff under the guidance of Yoga experts.

File Description	Document
Provide Link for Additional information	View Document

4.1.2

Percentage of expenditure for infrastructure development and augmentation excluding salary during the last five years

Response: 72.66

4.1.2.1 Expenditure for infrastructure development and augmentation, excluding salary year wise during last five years (INR in lakhs)

2023-24	2022-23	2021-22	2020-21	2019-20
91.81	1775.72	714.73	382.21	136.16

File Description	Document
Institutional data in the prescribed format	View Document
Audited income and expenditure statement of the institution to be signed by CA for and counter signed by the competent authority (relevant expenditure claimed for infrastructure augmentation should be clearly highlighted)	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

4.2 Library as a Learning Resource

4.2.1

Library is automated with digital facilities using Integrated Library Management System (ILMS), adequate subscriptions to e-resources and journals are made. The library is optimally used by the faculty and students

Response:

Library at GCOEARA is a premier learning resource that facilitates transference of information to fulfill the needs of learners. Library has a basic collection of necessary resources and is continuously updated in view of changing scenarios. Library plays a leadership role in today's distributed information environment, creation, organization, dissemination in building affiliations with students and faculty members.

GCOEARA library spreads over 489.48 sq.m area and two spacious and well ventilated reading rooms each of 50 seating capacity. The total area of reading rooms is 246.05 sq.m. The digital library facility is also available with 156.68 sq.m. area and 10 computers with full time internet facility to access the E-journals and E-books. The virtual repository facilities like National Digital Library of India (NDLI) is available here as a learning resource which is not just a repository with search/browse facilities but provides a host of services for the learner community. The total numbers of volumes available in the central library are 24000 which include technical books required for all the branches in the institute. Library also provides the non-technical books for over all development of the students in the institutes. The total numbers of non-technical books available in the library are 700. The library automation is in progress and will be implemented in near future. Besides, Central library facility, each department has its own library and central library provides counsel regarding the library processes.

All types of reports, viz. Daily, monthly, students, staff issue/return, Department-wise collection of books, year-wise purchasing data, Accession number-wise, fines etc are generated by the computer system. Staff and students can register online to get library membership. DELNET and J-GATE platforms are available to get the research database which helps teachers and students in writing their research articles. The Knowledge Center facility provided by ARAI is also available with the central library which provides the vast and unique collection in automotive and research related subjects. Reading material on MPSC, UPSC, GATE, and GRE helps students in competitive examinations preparation. The selected magazines and wide circulated newspapers in Marathi, Hindi and English language are available for UPSC/MPSC aspirants.

We have E-resources like 586 E-journals, E-books, Shodhganga, J-Gate Engineering and Technology, have been made available to students for academic excellence. Every year, more than 500 books and 5 journal subscriptions are added to the Library. Average amount spent in last five years on purchase of books and subscriptions is Rs. 200000/-. Library is exhaustively used by students and staff, usage for A.Y. 2023- 24 being 100 foot-falls per day, the average for last five years being 70 readers per day. Many activities/events are conducted by library to motivate readers to visit and utilize Library frequently.

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

Describe IT facilities including Wi-Fi with date and nature of updation, available internet bandwidth within a maximum of 500 words

Response:

Response:

It is the policy of GCOEARA to keep its faculty and students updated on recent development in ICT. The campus is Wi-Fi enabled with 100 Mbps bandwidth, has 700 desktops and secured with dedicated Firewall for network security. Updating and maintenance of all systems is carried out regularly. Open source and license software like MS-office, language, Multisim etc are available for students.

With the changing teaching-learning/administration needs and evolving technology, IT services are constantly upgraded as discussed below;

Desktop Systems

Institute has 700 plus Desktops, 05 laptops (540 Desktops for students). Brands like Dell are used. Configurations are; Desktops Intel® core™ i5-2500 CPU @3.30 GHz, Intel Graphics, Wi-Fi and Bluetooth connectivity, USB Keyboard and Mouse. ICT facilities are provided in classrooms with system, projector and internet connectivity. The Institute has 08 LCD projectors. In Computer Labs 2:1 ratio of systems is maintained. There are 35 Canon/HP/Epson single printers, 17 Multi-function printers, 01 scanner.

Security

Institute has a network of 700 plus computers with 100 Mbps Internet connectivity and Wi-Fi facility to

fulfill the academic and research needs. Centralized Firewall is used for network monitoring, management and security. We regularly upgrade or move to the latest version.

Internet Bandwidth

Institute has 100 Mbps internet bandwidth and is fully Wi-Fi enabled. Regular maintenance of Wi-Fi is done.

Licensed Software

Windows 7, 8 and 10, Microsoft Office, Anti-Virus, Digital Language Lab Software.

Library Automation

We have E-resources like 586 E-journals, E-books, Shodhganga, J-Gate Engineering and Technology, have been made available to students for academic excellence. Every year, more than 500 books and 5 journal subscriptions are added to the Library. Average amount spent in last five years on purchase of books and subscriptions is Rs. 200000/-.

Intercom System

Intercom facility is provided for each faculty and staff cabin. Institute has EPABX which is a telephone network used by GCOEARA for various types of communication, either between the employees or with outside stakeholders.

Updating IT infrastructure:

GCOEARA upgrades IT infrastructure by:-

Regularly upgrading the software and desktop system for fast execution of processes.

As mentioned above, the Institute regularly upgrades and maintains ICT facilities to enhance and strengthen the infrastructure.

File Description	Document
Upload Additional information	View Document

4.3.2

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

Response: 3.23

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

Response: 458

File Description	Document
Purchased Bills/Copies highlighting the number of computers purchased	View Document
Extracts stock register/ highlighting the computers issued to respective departments for student's usage.	View Document

4.4 Maintenance of Campus Infrastructure**4.4.1**

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

Response: 27.34

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)

2023-24	2022-23	2021-22	2020-21	2019-20
314.42	475.51	216.32	43.45	116.97

File Description	Document
Institutional data in the prescribed format	View Document
Audited income and expenditure statement of the institution to be signed by CA for and counter signed by the competent authority (relevant expenditure claimed for maintenance of infrastructure should be clearly highlighted)	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 institution, government and non-government bodies, industries, individuals, philanthropists during the last five years

Response: 95.31

5.1.1.1 Number of students benefited by scholarships and freeships provided by the institution, Government and non-government bodies, industries, individuals, philanthropists during the last five years

2023-24	2022-23	2021-22	2020-21	2019-20
1417	1619	1424	1578	1703

File Description

Document

Year-wise list of beneficiary students in each scheme duly signed by the competent authority.

[View Document](#)

Upload Sanction letter of scholarship and free ships (along with English translated version if it is in regional language).

[View Document](#)

Upload policy document of the HEI for award of scholarship and freeships.

[View Document](#)

Institutional data in the prescribed format

[View Document](#)

5.1.2

Following capacity development and skills enhancement activities are organised for improving students' capability

- 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
Report with photographs on Programmes /activities conducted to enhance soft skills, Language and communication skills, and Life skills (Yoga, physical fitness, health and hygiene, self-employment and entrepreneurial skills)	View Document
Report with photographs on ICT/computing skills enhancement programs	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: 0.17

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

2023-24	2022-23	2021-22	2020-21	2019-20
2	2	5	3	2

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

5.1.4

The institution adopts the following for 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: C. 2 of the above

File Description	Document
Proof w.r.t Organisation wide awareness and undertakings on policies with zero tolerance	View Document
Proof related to Mechanisms for submission of online/offline students' grievances	View Document
Proof for Implementation of guidelines of statutory/regulatory bodies	View Document
Details of statutory/regulatory Committees (to be notified in institutional website also)	View Document
Annual report of the committee motioning the activities and number of grievances redressed to prove timely redressal of the grievances	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: 35.22

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

2023-24	2022-23	2021-22	2020-21	2019-20
201	147	177	131	120

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

2023-24	2022-23	2021-22	2020-21	2019-20
413	503	400	436	451

File Description	Document
Number and List of students placed along with placement details such as name of the company, compensation, etc and links to Placement order(the above list should be available on institutional website)	View Document
List of students progressing for Higher Education, with details of program and institution that they are/have enrolled along with links to proof of continuation in higher education.(the above list should be available on institutional website)	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

Response: 1.96

5.2.2.1 Number of students qualifying in state/ national/ international level examinations year wise during last five years (eg: IIT/JAM/NET/SLET/GATE/GMAT/GPAT/CLAT/CAT/ GRE/TOEFL/ IELTS/Civil Services/State government examinations etc.)

2023-24	2022-23	2021-22	2020-21	2019-20
9	12	2	4	1

File Description	Document
List of students qualified year wise under each category and links to Qualifying Certificates of the students taking the examination	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: 2

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

2023-24	2022-23	2021-22	2020-21	2019-20
2	0	0	0	0

File Description	Document
Upload supporting document	View Document
list and links to e-copies of award letters and certificates	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: 4.8

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

2023-24	2022-23	2021-22	2020-21	2019-20
12	7	0	0	5

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 Alumni Association of Government College of Engineering and Research, Avasari Khurd, is officially registered on March 14, 2019, has become a vital force in the institution's growth and progress. Since its establishment, the association has united graduates from various fields and cohorts, all dedicated to giving back to the institution that shaped their academic and professional lives. Through a combination of financial contributions, professional expertise, and community-building initiatives, the association significantly supports the institution's mission and development.

A primary way the Alumni Association contributes is through financial support to the technical clubs in the institute like ROBOCON. Many alumni, having achieved success in their careers, are committed to ensuring the sustainability and advancement of their alma mater. They do so by contributing to sponsorship funds, expert lectures, and research initiatives thereby providing students and faculty with the resources necessary to maintain the excellence.

In addition to financial donations, the Alumni Association also provides other forms of support that are equally valuable. One of its most impactful initiatives is the mentorship program where experienced alumni offer guidance and advice to current students. Through this program, students gain insights into various industries, receive career advice, and build valuable professional networks that can help them secure internships and job placements after graduation. This hands-on support helps bridge the gap between academic learning and real-world experience, preparing students for successful careers.

The association also plays an active role in organizing networking events, workshops, and guest lectures. These events allow alumni to share their expertise and experiences with students, providing them with exposure to industry trends and opportunities. Such interactions not only enrich the students' academic journey but also foster collaboration between the institution and its alumni. Alumni reunions and conferences strengthen ties within the alumni community, creating a supportive network that continues to benefit the institution long after graduation.

Furthermore, the Alumni Association contributes to the institution's global reputation. Alumni who excel in their fields often become ambassadors for the institution, promoting its values and achievements. Their success stories reflect the quality of education the institution provides, thereby enhancing its appeal to prospective students, partners, and donors.

Since its registration in 2019, the Alumni Association has proven to be a key partner in the institution's development, continually working to support both students and faculty. Its contributions whether financial, professional, or community based are a testament to the lasting bond between alumni and their alma mater. By fostering a culture of giving back and staying engaged, the association ensures that the institution continues to grow, thrive, and maintain its reputation as a leader in education.

Through their ongoing support, the alumni ensure that future generations of students can benefit from the same opportunities they once enjoyed, creating a lasting legacy of commitment, generosity, and shared success.

File Description	Document
Upload Additional information	View Document

Criterion 6 - Governance, Leadership and Management

6.1 Institutional Vision and Leadership

6.1.1

The institutional governance and leadership are in accordance with the vision and mission of the Institution and it is visible in various institutional practices such as NEP implementation, sustained institutional growth, decentralization, participation in the institutional governance and in their short term and long term Institutional Perspective Plan.

Response:

GCOEARA is governed by its Vision and Mission. The Vision and Mission have been developed with the active participation of all internal members and stakeholders. It is set taking into consideration the sustainable development required for the present day technological innovations and forecasting the future requirements in various global challenges in the field of engineering so as to become an element in the growth of the nation.

Vision of the Institute

Educational Institution for Empowerment through technological excellence towards sustainable development

Mission of the Institute

- Value based and demand driven education using best practices
- Promotion of research, innovation and entrepreneurship
- Commitment to sustainable solutions in service of society
- Capability to face local and global challenges

The Higher and Technical Education Department of Government of Maharashtra is supreme and responsible for articulating the organization and major policy decisions. The Directorate of Technical Education (DTE), Maharashtra State executes the policies set out for technical education of the State through its regional office at Pune and the Principal and Heads of the department at Institute level.

The College Development Committee (CDC) is operating in accordance with Section 97 of the Maharashtra Public University Act 2016. CDC has representation of all HoDs, faculty members, supporting staff and student's representative. It regularly reviews and monitors the overall development of the institute. It meets three times a year.

The review is conducted on Academics, Financial Planning, Utilization and Administration. (Sample MoM, Agenda of CDC with role and responsibilities in attachment).

Internal Quality Assurance Cell (IQAC) has been formed as per NAAC guidelines. It has representation from all staff. It gives guidelines about the overall audit of the Institute, particularly on academic front. IQAC decided to obtain NAAC accreditation for achieving quality and excellence in the overall functions.

There are 25 different portfolios which have been formed to provide decentralized administration of the institution. Faculty members are portfolio in-charges and faculties and supporting staff are representing their departments. Total 16 PhD staff (out of 26) are handling responsibilities of Institute level portfolio. Around 70% of remaining faculty members are in-charge at Institute/Department level portfolio. All portfolios have defined roles and responsibilities and overall progress is monitored by the principal through meetings with the relevant committees.

On the same lines in all departments, portfolios have been formed and are functioning. Students Clubs have been formed in order to strengthen Institute Mission under students' leadership. Expenses required for different co-curricular/extra-curricular activities are included in Institute budget. Portfolio in-charges are authorized to spend as per sanctioned budget.

The institute has taken up a lead to prepare itself for implementation of NEP-2020 through in-house expert lectures and by permitting internal faculties to attend FDPs on NEP. The institute recently organized 2nd National Conference on Energy and Environment for Sustainable Development. This is the testimony to the vision of the leadership of the Institute.

Thus, the approach of governance and leadership is to involve all the stakeholders to achieve Vision of the Institute.

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 institutional perspective plan is effectively deployed and functioning of the institutional bodies is effective and efficient as visible from policies, administrative setup, appointment, service rules, and procedures, etc

Response:

Presently, teachers use traditional chalk, blackboard teaching method and supported LCD projectors. Institute is planning to have paradigm shift in the teaching modern tools by utilizing smart class rooms. Recording studio is to be developed for the creation of e-content.

The Institute development plan clearly mentions that it is planning to depute teachers for their knowledge up-gradation in industry and research organizations such as ARAI, NCL, CIRT, Vigyan Aashram Pabal, TCS, Amazon, Infosys, L& T InfoTech, TATA Motors, Mahindra and Mahindra, Forbes Marshal, Bharat Forge and many MNCs for substantial duration.

Thus, the effectiveness of functioning of GCOEARA and a zeal to achieve long term goals by 2032 is

reflected in the IDP.

File Description	Document
Institutional perspective Plan and deployment documents on the website	View Document

6.2.2

Institution implements e-governance in its operations

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

Response: B. 3 of the above

File Description	Document
Screen shots of user interfaces of each module reflecting the name of the HEI	View Document

6.3 Faculty Empowerment Strategies

6.3.1

The institution has performance appraisal system, effective welfare measures for teaching and non-teaching staff and avenues for career development/progression

Response:

Welfare Measures

GCOEARA is an Institute owned by Government of Maharashtra and has a set of well-defined welfare measures to ensure employee's well-being as applicable to all the employees of the State. Some of the measures adopted are given below;

- Ø All the faculty and non-teaching staff of the Institute are covered under GPF or CPF schemes of the Government of Maharashtra.
- Ø The employees are eligible for a gratuity scheme as revised by the Government from time- to-time.
- Ø The employees are provided Group Insurance cover.

Ø Retirement benefits are provided to staff members as per the Government norms.

Ø Leave encashment at the time of retirement restricted to 300 earn leaves is available to all its employees.

Ø The dearness allowance is updated as per GR. Current DA is 50% under seventh pay commission. The salary has always been regular and never been delayed.

Ø The medical insurance is also provided to the employees and their dependent parents and children as per the willingness of the employees. The medical reimbursement is also available to all the employees of the Institute.

Ø Travel grant for travelling within the State and for travelling to home town is also provided as per the norms available.

Over and above the leaves that come under Government Policy (Casual/Vacation/Earned/Medical/Maternity/On-duty) are also available to all the employees of the Institute.

The faculty members are also deputed for perusing their PhD under Quality Improvement Program of AICTE. Career Advancement Scheme is implemented for the teachers as per the Government norms to ensure timely growth in the career of the teachers. The promotions are also implemented for the non-teaching staff of the Institute.

Appraisal System

GCOEARA follows a systematic Performance Appraisal System for teaching and non-teaching staff. Higher and Technical Education Department of Government of Maharashtra has well designed a Self-Appraisal Form (SAF) which has to be filled online and the performance of the faculty is evaluated in an online mode only. The performance evaluation of the staff members is also shared with them every year. SAF is shared with staff well in advance.

Institution evaluates teaching staff on four categories viz. teaching-learning-evaluation, co-curricular and extension activities, research, professional development and special achievement. Due importance is given to all the activities.

GCOEARA evaluates non-teaching staff on professional competence, responsibility, attendance, punctuality, discipline, interaction with colleagues, etc.

A structured SAF is used for this purpose, wherein they give the details of their performance and participation in all the activities.

Concerned HOD gives their remarks on the performance of the faculty member. Principal gives his remarks and suggestions to each staff member after personal interaction.

Above welfare measures and appraisal system has helped the Institution to positively motivate all the employees. It has also helped staff and students to perform progressively on all four-pillar fronts.

File Description	Document
Provide Link for 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: 0

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

2023-24	2022-23	2021-22	2020-21	2019-20
0	0	0	0	0

File Description	Document
Policy document on providing financial support to teachers	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), Management Development Programmes (MDPs) professional development /administrative training programs during the last five years

Response: 65.27

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

2023-24	2022-23	2021-22	2020-21	2019-20
71	58	53	91	101

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

2023-24	2022-23	2021-22	2020-21	2019-20
62	66	55	54	62

File Description	Document
Institutional data in the prescribed format	View Document
Annual reports highlighting the programmes undertaken by the teachers	View Document
Provide Links for any other relevant document to support the claim (if any)	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:

Resource Strategies:

GCOEARA is an institute governed by Higher and Technical Education Department of Government of Maharashtra which has a strategy and financial policy to ensure effective and appropriate utilization of finances for academic, administrative and development purposes, which culminates in realizing the Institute's Mission and Vision.

The salary of the faculty and non-teaching staff members is made by Government of Maharashtra through the treasury of the state from the budgetary provision of the Higher and Technical Education Department. Apart from this Directorate of Technical Education also makes provision for the various grants such as grants for professional services, office expenses, library expenses, equipment purchase, contractual services etc. DTE releases these grants as per the availability of the funds. Recently, Government of Maharashtra has sanctioned Centre of Excellence in Digitalization through Simulations for worth Rs 4.5 core.

The admissions of the are consistently around 100%, ensuring adequate availability of funds in the principal's ledger account (PLA). Government resolution dated 1st January 2018 lays down the policy for using the funds available in this account. There are to 14 heads under which Principal is empowered to spend the amount subjected to some limits. Even Joint Director of Technical Education and Director of Technical Education are also empowered to give away an approval for expenditure against the submission of budget every year. Beyond the limits of DTE, the proposal under some special circumstances can be sent to Higher and Technical Education Department, which approves such special

expenses. Recently, such an approval for approximately Rs 64 lakh was received by the institute for the purchase of furniture and equipment for Mechanical and Automobile departments, which is executed. Such an approval for Rs 2.25 lakh is also obtained by the institute for purchase of equipment, furniture, smart boards, LCDs etc.

There is a standardized budget for all recurring/non-recurring expenditure. Accounts section, departments and portfolio in-charges are involved in preparation, allocation and mobilization of budget before the financial year. To ensure transparency and regular monitoring, income, expenditure and balance of funds is audited every year through Chartered Accountant appointed by the Government.

1. Annual requirement for the Department is prepared by Head of Department (HoD) after taking inputs from faculty for fulfillment of academic requirements and development activities.
2. HoD, after discussion with the Principal, finalizes the budget and submits it to the Principal.
3. Principal sends the budget of the Institute to DTE
4. On receiving the approved budget, Department initiates the purchase process with the help of purchase officer and store keeper of the institute.

The institute also applies to various agencies like AICTE, DTE for seeking funds for various activities such as Conference and FDPs etc. The institute has received such grants on many occasions and are spent for the appropriate purposes.

Thus, 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)

File Description	Document
Upload 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) was constituted in 2023. It has a effective participation from all the stakeholders. IQAC has decided to meet twice in a year to review the Academic and Administration systems and their progress. It was decided to apply for NAAC/NBA accreditation on being eligible as per

the inputs provided by IQAC. The institute follows the quality policy which consists of its core values such as integrity, excellence, transparency, inclusivity and lifelong learning

We shall strive to maintain conducive learning environment and student's overall development with high moral and ethical values.

The institute recommended to the Government of Maharashtra that the permission may be given to go ahead with the NAAC accreditation to which approval and financial sanction was given by the government. Since then many of the administrative and academic processes are being streamlined under the recommendation of IQAC. Academic audits of the programs are done and the reviews are taken by the IQAC.

Various initiatives taken under IQAC are as follows;

1. Creating awareness about NAAC accreditation among the faculty of the institute
2. Creating awareness among the stakeholders about the outcome based education
3. Creating awareness among the stakeholders about National Education Policy-2020
4. Introduction of provisional admission of the SE, TE and BE students well ahead of the start of the semester
5. Academic Audit of the institute
6. NAAC/NBA process initiation

As reflected in the various tables and mentioned in uploaded additional information, IQAC has contributed for overall improvement and quality assurance on the four pillars of GCOEARA.

File Description	Document
Upload Additional information	View Document

6.5.2

Quality assurance initiatives of the institution include:

- 1. Regular meeting of Internal Quality Assurance Cell (IQAC); quality improvement initiatives identified and implemented**
- 2. Academic and Administrative Audit (AAA) and follow-up action taken**

3. Collaborative quality initiatives with other institution(s)

4. Participation in NIRF and other recognized rankings

5. Any other quality audit/accreditation recognized by state, national or international agencies such as NAAC, NBA etc.

Response: B. Any 3 of the above

Criterion 7 - Institutional Values and Best Practices

7.1 Institutional Values and Social Responsibilities

7.1.1

Institution has initiated the Gender Audit and measures for the promotion of gender equity during the last five years.

Describe the gender equity & sensitization in curricular and co-curricular activities, facilities for women on campus etc., within 500 words

Response:

The institution is sensitive to gender equity and parity. The institution has promulgated a policy for Gender Equality and supports girls throughout their pathway from education to employment. For effective implementation of this policy the institute has formed gender equity cell. Some of the important aspects through which this is reflected are given below.

Thirty percent of the total admissions are reserved for the girls. To promote the gender equity, the eligible girl students are provided with special opportunities of scholarships as a financial assistance for their education. Pragati Scholarship, Umang scholarship and Leena Poonawala foundation scholarship are some of such schemes available for girls.

To increase the employability of girl students; institute rigorously conducts the special training for girl students under 'TeckSaksham scheme'. TeckSaksham is a program run by Microsoft and SAP for enabling women graduates to gain practical industry skills for employability in the domain of artificial intelligence, cloud computing, web design and digital marketing.

Further, there is a provision of reservation for the recruitment of women faculty and staff members as per state Government law. Due to this, strength of teaching and non-teaching women employee is reasonably good in the institute.

Girls child day is celebrated in the institute on 24 January to spread awareness about the rights of girls and to highlight the inequalities that they face in their lives. Institute actively participate to celebrate this day. Institute takes key efforts to bring the gender equity through various co-curricular and extracurricular activities viz. celebration of women's day, celebration of Savitribai Phule Jayanti, different awareness sessions for women such as health, safety etc. Institute also takes initiative to empower the women by making them financially independent. Sessions are organized on financial awareness and investment.

Institute has established Internal Complaint Committee. This committee ensures no occurrence of sexual harassment in the workplace, any reference to sexism, gender stereotyping or gender-based discrimination. This committee organizes various events for girl students and women employee to create awareness about physical and mental health. Committee also takes efforts to create the awareness of prevention of sexual harassment act through some events like one act play which is open to all employee. Institute also take efforts to bring equity by representing woman members in various policy making and implementation committees. Equal opportunities are made available for participation in various events

viz. sports, cultural, NSS, extension activities, technical events, social activities, etc. The **common room** facilities in all the academic buildings and hostels are provided with requisite facilities and also attached restrooms. Institute provides hostel facility to total 300 girl students. Hostel is well equipped with gym facility, mess facility. For safety of girls' security guards are appointed and attendance is monitored every day at 8 pm.

File Description	Document
Upload Additional information	View Document

7.1.2

The Institution has facilities and initiatives for

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

Response: A. 4 or All of the above

File Description	Document
Policy document on the green campus/plastic free campus.	View Document
Geo-tagged photographs/videos of the facilities.	View Document
Circulars and report of activities for the implementation of the initiatives document	View Document
Bills for the purchase of equipment's for the facilities created under this metric	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
Report on Environmental Promotional activities conducted beyond the campus with geo tagged photographs with caption and date	View Document

7.1.4

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

Response:

As per the state government admission process, some of the seat are reserved for candidates belonging to the Maharashtra-Karnataka Border (disputed area) and students of J & K. Because of this students of diverse region study together in the campus.

The institution shows immense pleasure and responsibility in the aspect of tolerance and harmony in the fields of culture, linguistic, communal socio-economic and other diversities.

During undergraduate programme, students undertake the courses like Code of Conduct, humanity and social sciences which are core courses. There are some audit courses like social awareness and governance, professional ethics and etiquettes. Under these courses a broad perspective of nationalistic thinking is developed which provide the students with the ability to be socially conscientious, more resilient and open to building an inclusive society.

Institute also takes initiative to find out hidden artistic talent amongst the students by organizing Annual Day Celebration known as 'Resonance'. Themes with various regional, linguistic, social activities are always part of Resonance. Students or groups of students with the best theme and performance get appreciation from the Institute. Traditional Day is also celebrated in which students are in various costumes of different traditions in India to give the message of 'Unity in Diversity'.

Institute also celebrates the sports day to inculcate the spirit of team building and sportive nature.

Institute publishes annual Magazine entitled as 'Zenith' where in students write different articles in languages like Marathi, Hindi, English.

During undergraduate programme, students get opportunity to study one of the foreign languages throughout their curriculum of four years. This course is taken as an audit course.

Trimonthly newsletter is also published and circulated to all students and faculty, staff to disseminate the information of different events in the department.

There are also different technical club such as ROBOCON, BAJA in which students of different classes,

different branches work together in specific domain and compete for national level competitions. Student clubs help in learning to work with a team as it is an essential skill for any career; it provides networking opportunities through student-meetings across various programs of the university, making connections, and building relationships for life.

Sensitization of students and employees to the constitutional obligations: values, rights, duties and responsibilities of citizens.

GCOEARA conducts various programs to create awareness and sensitize the students, faculty and staff about their constitutional obligations/rights as citizens of India. Blood donation camp and Voter awareness camps Are arranged for understanding THE responsibilities of citizen. Students also participated in the national campaign “Meri Mati Mera Desh” and carried the institute Amrut kalash to Delhi.

In the first year only immediately after admission, students are trained on Universal Human Values subject as apart of induction training programme.

File Description	Document
Upload 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-I

1. Title of the Practice

“Learning by doing” beyond the classrooms through different club activities

1. Objectives of the Practice

- To help students to develop lifelong good working habits
- To foster practical skills such as time management, leadership, and responsibility,
- To “test the waters” and explore new areas of interest for students

1. The Context

Clubs like ROBOCON, GO-CART, Enlectic Research Centre, Innovation and entrepreneurship Cell; co-curricular activities clubs like cultural club, sports club and social empowerment clubs like NSS club,

green club etc. are functional in the institute for overall development of students.

However, the challenge is limited time and resources available for these activities. Further, students are not equally motivated for participating in these activities. These challenges highlight the need for students to provide support to facilitate students' participation. Other difficulty is raising the funds when club members need to compete at state/national/international level.

The Practice

In the different student's club students of different disciplines work cohesively. These different clubs present an ecosystem which contribute to students' technical, physical, mental development and supports students to develop their academic success. Students gain self-management skills and are prepared to live in a democratic society by participating in social club activities. In addition to enabling product presentation by allowing students to work in collaboration, club activities significantly contribute to students' development of communication and research skills. Moreover, in club studies, students can develop such feelings as belonging to a group, self-reliance, feeling secure, and being appreciated.

1. Evidence of Success

In ROBOCON club of this institute, students from different engineering faculty E&TC, Computer, Mechanical, Instrumentation work together to design some robot for some specific application. This club got All India Rank 2 in DD ROBOCON-2022 which was held at New Delhi. Club represented India at international level and got International Rank 5.

In 2021, Robotic club bagged AIR 2 in all over 112 teams in India and represented Team India and received International Rank 5 in Asia-Pacific countries like Japan, China, Hongkong, Egypt, Indonesia, etc

In year 22-23, Robotics club also got AIR 7 in Fusion Sustainability Leadership Award with score of 99/100 in Round 1(Documentation Round) and 99/100 in Round 2 (Video Round)). Also participated in many college events like Mindspark COEP, and received remarkable rankings.

Students of Enlectic Research club participated in Winners of I2I, runner up of State Level Startup and Business Plan competition conducted by Bhau institute, COEP tech university and were winners of I2I. They also bagged the prize as 2nd runner-up of Eureka.

Astrophile club project has been selected for University level Avishkar competition. Two students of this club won Silver and Bronze honour at International Astronomical Congress

1. Problems Encountered and Resources Required

Being the government institute, fund raising is the major issue. For purchase of equipment, institute need to seek the permission from the State which is time consuming. Also, national and international travel there is no financial provision.

Best Practice II

1. Title of the Practice:

Students Mentorship Program

1. Objectives of the Practice

The objective of this program is to increase interactions with the students and make them comfortable in the academic, feel them emotional stable and settle them in social adjustment during their first year of academic. By pairing incoming students with experienced mentors, institutions can foster a sense of belonging, provide valuable resources, and address common challenges new students face.

1. The Context

The transition from high school to engineering institute can be a challenging experience for many students. The first year of engineering is a critical period where students face numerous adjustments and new experiences.

First year students may face unique academic challenges, such as unfamiliar course requirements, a lack of study skills, or difficulty accessing resources like tutoring or academic advising. Mentor programs can help students overcome these obstacles by providing accountability and guidance.

In this mentorship program, mentor teacher is not only connected with students, but if required he/she also will get connected with the parent of students.

Making the students to discuss freely with mentor is challenge. As many students are from rural background, reaching to their parents and making them to understand the gravity of the problem is a crucial task.

1. The Practice

In the first year of engineering faculty mentor is assigned to a group of 25 students. The interaction between mentor and students takes place twice a month. The mentor discusses with the group to understand problems and views of group. The faculty mentor also interacts with the students individually and confidentially. The outcome of the meeting is communicated to class teacher, HoD for remedial action.

From second year onwards, faculty of respective engineering branch is assigned as mentor to students of the same branch. For a group of twenty students one faculty mentor is assigned. During three years, same faculty mentor is retained. This helps mentor to establish a good rapport with them.

First-year mentoring programs have proven to be instrumental in supporting new students' transition and success. By providing academic, social, and emotional support, these programs helped students navigate the challenges of their first year.

Students had difficulty in understanding the teaching of some faculty members. The faculty and concerned students were counselled by the HOD and improvement was observed in the teaching learning process. One of the students was not interested in continuing engineering education. He and his parents were counselled. After understanding the importance of education and repercussions of leaving the

education in between, he further continued his study. Peer group of mentees also shared their own struggles and successes, providing both empathy and inspiration.

.Problems Encountered and Resources Required

Because of lot of teaching load and administrative responsibilities, it is very challenging for the mentor teacher to get the time for conducting the meetings. Also it is found that students are shy and hesitate to speak about the problem specially in the group. Again finding out the separate time for one to one discussion is really crucial task.

File Description	Document
Best practices as hosted on the Institutional website	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:

Located in Rual area

Rural areas in India have long been ignored in terms of technological advancements for many years. In many cases, access to basic infrastructure, such as roads and electricity, is limited, making it difficult for students in rural areas to access quality education.

Rural development is important not only for the majority of the population residing in rural areas, but also for the overall economic expansion of the nation. With this objective, government of Maharashtra has established engineering institute in Awasari, Taluka Manchar.

Being the government engineering college , the tuition fee is very reasonable. Because of this many students from nearby rural area prefer this institute for admission. This gives the opportunity to institute to tap the local talent . There is lot of opportunity to respond to the needs of the local community. In rural areas, the challenges faced by students and the local population are unique, and engineering institutes get privilege to address these challenges. For example, our engineering students can design programs that cater to the specific needs of the local economy, providing students with the skills necessary to drive technological advancements and economic growth in the local communities.

Employability of the engineering students is the major challenge. At present around 3.7 million students can take admission in technical education in the country. But when it comes to placements, around 8-10

lacs of students are getting placement. So, there is huge scope for the students to go in the villages, create some start-ups, create some innovation in the villages, So the life of the villages can be improved as well as GDP growth can be improved by the contribution of rural technology, rural entrepreneurship, rural industrialization.

As our institute is located in rural area and majority of admitted intake is also from nearby rural area, institute can provide them with the necessary skills to create their businesses and drive economic growth in their communities. This, in turn, can help to reduce poverty and improve the standard of living for people in rural areas.

Located nearby automobile industry zone

Institute is not only located in rural areas but it is also near by automobile industrial belt at chakan which is just 40 km away from this institute. This provides the opportunity for industry interaction, internship, projects and placement specially for the students of Mechanical and automobile industry.

5. CONCLUSION

Additional Information :

Government College of Engineering and Research Avasari-Khurd has a potential to grow as an institute of importance in the near future. This institute is the only Government Engineering organization in Pune region as COEP has been accorded the status of unitary university by the government. Therefore, it is expected that GCOEARA shall fetch talented students and faculty in the time to come. To add to this, the Ministry of Surface Transport has declared construction of elevated six lane highway from Pune to Rajgurunagar which will reduce the travel time substantially. It is also proposed that high speed train track from Pune to Nashik. This will pass from Avasari Khurd. This will further provide an opportunity to the growth of this Institute as students from Pune will be able travel quickly to this place. The institute will be able bring in experts and industrial personnel of high quality to develop communication with students. It is important here to note that although GCOEARA is close to Pune, the current travel time is more than 2.0 hours which restricts people from industry and other higher education institutes to visit this place frequently.

With the development in the region around Avasari-Khurd GCOEARA also looks forward to develop itself to a better level.

Concluding Remarks :

Government College of Engineering and Research Avasari-Khurd is located in the rural part of Pune district, but it is in the close proximity of an industrial zone namely, Chakan MIDC. GCOEARA essentially caters to the rural youth by bringing them in the main stream of development through the strong teaching learning process at the institute. The important focus of the institute is to develop the capabilities of the youth by providing them an essential exposure to the technical education and industry around. To do this GCOEARA has created a strong academic culture and requisite infrastructure in terms of academic and administrative building, hostels for boys and girls, sport facilities, auditorium etc.

The institute is well connected with its affiliating University to take care of the curricular aspects. Faculty members are the part of board of studies of the affiliating University and are also trained to understand the implementation of NEP 2020.

The institute has created an ecosystem for research innovation and other extension activities through which it is able to provide state of art exposure to the students. This helps students to connect with the outside world as they get opportunity to present their work in terms of publications. The institute could publish around 80 journal papers and around same number of conference papers during last five years. The students are highly benefited through this.

The leadership of the institute is well connected with its vision and mission and has always strived to inculcate it among its faculty and students. This is done by following the core values of the institute such as integrity, excellence transparency, inclusivity and lifelong learning and through some of the best practices like learning beyond syllabus.

To conclude, despite the limitations and constraints, the college has taken all possible steps to provide quality education to the aspiring rural youth with clear focus on empowerment and enrichment of the student and

teachers for their upward mobility, economic welfare and quality of life, the college strives hard to contribute to a social transformation.