# SELF STUDY REPORT

## FOR

## 1st CYCLE OF ACCREDITATION

## CHANDIGARH ENGINEERING COLLEGE-CGC , LANDRAN , MOHALI

CHANDIGARH ENGINEERING COLLEGE-CGC, LANDRAN MOHALI KHARAR-BANUR HIGHWAY SECTOR 112 GREATER MOHALI PUNJAB-140307
140307
http://cecmohali.org

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# 1. EXECUTIVE SUMMARY

## 1.1 INTRODUCTION

Chandigarh Engineering Institute-CGC Landran, Mohali , also known as CEC-CGC Landran, Mohali is a premier technical institution located in the Mohali district of Punjab, India. Established in 2002  by Shri Guru Ramdass Educational Society under Chandigarh Group of Colleges (CGC), the institute has grown to become one of the top engineering institutes in the country, known for its academic excellence, state-of-the-art infrastructure, and industry partnerships.

The institute offers undergraduate and postgraduate programs in engineering, computer applications, and management, with a focus on providing students with a comprehensive education that blends theoretical knowledge with practical skills. The institute is affiliated with the IKG Punjab Technical University and is approved by the All-India Council for Technical Education (AICTE).

The institute's faculty members are highly qualified and experienced, with many holding doctorate degrees and having research experience in various fields of engineering and technology. They are dedicated to providing students with the highest quality of education and mentorship, ensuring that they have the necessary skills and knowledge to succeed in their chosen careers.

The institute boasts a world-class infrastructure, with modern classrooms and laboratories equipped with the latest technology and equipment. The institute has a large library with an extensive collection of books, journals, and other academic resources, as well as a well-equipped sports complex that encourages students to participate in various physical activities.

In addition to its academic programs, the institute has a vibrant student life, with a range of extracurricular activities, clubs, and societies that cater to students' interests and hobbies. The institute also has strong industry partnerships and collaborations, with tie-ups with leading companies in the IT, automotive, and manufacturing sectors, providing students with opportunities for internships, projects, and placements.

Overall, the institute is a dynamic and innovative institution that offers students a world-class education and a platform to excel in their careers. With its commitment to academic excellence, industry partnerships, and student welfare, the institute is a leading institution in the field of engineering and technology, contributing to the growth and development of the nation's economy and society.

**Vision**

To become a leading institute of the country for providing quality technical education in a research-based environment for developing competent professionals and successful entrepreneurs.

**Mission**

To make incessant endeavour to translate our vision into a reality & achieve the following objectives:

- To provide state of the art infrastructure and engage proficient faculty for enhancing the teaching learning process to deliver quality education.

- To give a conducive environment for utilizing the research abilities to attain new learning for solving industrial problems and societal issues.

- To collaborate with prominent industries for establishing advanced labs and using their expertise to give contemporary industry exposure to the students and faculty.

- To cater opportunities for global exposure through association with foreign universities.

- To extend choice-based career options for students in campus placements, entrepreneurship and higher studies through career development program.

# 1.2 Strength, Weakness, Opportunity and Challenges(SWOC)

**Institutional Strength**

- Good reputation for high quality teaching & laboratory based practical skills.

- Known for quality admissions and attract a good number of students in all courses.

- Equal emphasis on co-curricular and value-added courses on Emerging Technologies.

- Beyond the syllabus curriculum to make the students ready for the present global scenario.

- Constant encouragement of faculty for pursuing Ph.D., research and innovation, IPR, advancement of qualification etc.

- Constant mentoring, monitoring, and a strong feedback system of students.

- Good Faculty Retention due to peaceful, stress-free working environment.

- Training and grooming of students to make them industry ready and enhancing their Employability skills by imparting technical training, Career Guidance, Soft skill, GD & Aptitude classes etc.

- Various activity clubs viz. Tech club, Cultural club, Sports club etc., for Innovation & all-round development and extracurricular activities.

- Academic achievements of student in university examination and other platforms.

- Achievements in placement by students in various reputed organizations and reputed companies as well as in higher studies and entrepreneurship.

- Various Faculty and Student Chapters like IETE, IEI, ISTE, CSI, ACM, Geeksforgeeks student chapter, Google Developer Student Club, Society of Automobile Engineers etc. Also, NPTEL Local Chapter is

available to offer students moocs program.

- The institute got a separate International Affairs department to look after all international tie-ups, Collaborations, exchange programmes etc.

- Strong Alumni base that helps for the job generation and referral drive of junior students.

- Dedicated research and Innovation Department (RISE) for research and innovation and IPR activities.

- Featuring in all reputed ranking systems like NIRF, ARIIA, MOE-IIC etc with overall ranking improvement every year. Also, Institute got privileged in getting featured in all rankings being conducted by magazines of repute.

- Diversity in students from majority of states of the country.

- Existence of well-crafted various employee welfare schemes and policies.

- Proactive Internal Quality Assurance Cell (IQAC) to ensure quality in teaching learning process including Centre of Excellence, latest technological labs and trainings.

- Focus on Green initiatives with Energy Conservation and Waste management system.

- Extension and services to society conducted by NCC, NSS, Unnat Bharat Abhiyan through various activities.

**Institutional Weakness**

- There is shortage of Ph.D. degree holders and senior professors mainly in emerging areas. However, there is continuous effort made by the management to recruit senior level faculty members having Ph.D. degree from reputed institutions.

- Government and other agencies Grants are not as per expectations due to grants of funds for Self-Financed private institutions by Govt., Non- Govt. & External agencies. Infact, certain Govt. schemes are not opened for private institutions.

- Since course curriculum is as per IKGPTU, so there is no flexibility in academic curriculum.

**Institutional Opportunity**

- Collaboration with International and National Institutes of repute and other recognitions for futuristic research and development in sync with the New Education Policy.

- Introduction of New Programs in sync with the latest technological advancement and industry needs.

- Strengthening of already existing Faculty – student exchange program with reputed National & Foreign Universities.

- Focus on Research activities & collaboration with institutes and industries for more diversification and to produce Industry ready graduates.

- Involving more faculty members in research-oriented programs

- Exploring more opportunities for External funding for research, project and innovative programs

- Enrolment of Students in Internship programs in different renowned corporate houses & industries

- Extract various available opportunities for Start-ups by different Government Agencies.

- Enhancing of Skill centres for vocational / Advanced Skill / Research Centre / Incubation Centre etc.to Advance level.

- Well Renowned institutes and organisations like IIT Ropar, NITTTR Chandigarh, NIPER Mohali, CSIO, CDAC etc are situated at reasonable distance so a collaborative education hub exclusively dedicated for Research and Academic Excellence can be conceived keeping in sync with new education policy.

**Institutional Challenge**

- Students come with various vernacular and ethnic backgrounds and training these multi-languages speaking students in English language and developing their communication skills is really a challenging job.

- Gap in course curriculum with respect to Industry standards and our inability to modify it as per present market scenario due to guidelines by affiliating university. However, Exclusive TPP Department striving hard to bridge this gap.

- Keeping pace with continuous modification of technological advancement.

- To motivate faculty members for New Product Development/ R&D/ Innovation etc.

- Present lack of interest among students for few engineering disciplines.

- Getting ready for interdisciplinary courses as per new education policy.

- Alarming trends by few of the institutions to offer students non attending degrees specially in PG Courses.

- To attract more research funding from DST/ DIT/ UGC/ AICTE/ DRDO/ ISRO etc.

# 1.3 CRITERIA WISE SUMMARY

**Curricular Aspects**

- Chandigarh Engineering College-CGC (CEC-CGC) Landran, Mohali ensures effective curriculum delivery through planning of curriculum and Teaching Learning Process with its effective course delivery.

- Institute is affiliated to I.K. Gujral Punjab Technical University (IKGPTU), Jalandhar and follows the curriculum prescribed by the university.

- Institute prepares its academic calendar in line with calendar prepared by the CGC Landran campus taking into consideration the calendar provided by the university.

- IQAC and Programme Assessment Committee (PAC) examine the teaching learning process and its effective course delivery. In addition to regular classroom lecture delivery, guest lectures, industrial visits, expert talks, workshops, certification programs, projects etc. form a major part of curriculum.

- Identification of weak students and bright students is done on a regular basis while planning and delivering the curriculum.

- Institute strongly believes in inculcation of human and social values, gender equality, professional ethics, promotion of environmental conservation and sustainable development among the students through teaching, research, sports and co-curricular activities etc.

- Awareness of above categories is provided through various courses that are part of curriculum and various activities held under NSS, NCC, Unnat Bharat Abhiyan (UBA) etc.

- More than 2000 students complete certifications every year offered under MOOCs like Swayam, NPTEL and other platforms like AWS, Google, Coursera, Internshala etc.

- Students undergo Internships, Projects in different semesters in the course of their degree.

- Feedback from various Stakeholders is taken in each academic session and the required actions are taken after the analysis of the feedback given.

**Teaching-learning and Evaluation**

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· Admission process for different programs is carried out as per the admission guidelines issued by the affiliating University. The institute attracts good enrollment percentage.

· The admission against reserved category is done as per the reservation notification by the State Government of Punjab/ affiliating university.

·        At the entry level induction /bridge courses are conducted for the newly joined students.

·        The student-teacher ratio is maintained as per the norms of AICTE/IKG Punjab Technical University. The institute has excellent student faculty ratio.

·        The Institute has Ph.D. / NET qualified faculty from various reputed institutes like IITs,NITs, PEC,Panjab University etc.

·        Full time faculty against sanctioned posts are approved from the management and recruitment is done accordingly in each academic year

·        The institute always ensures to provide latest ICT (Information and Communication Technology) infrastructure to students, faculty and technical staff to meet the demands of current educational trends.

·        An excellent mentor-mentee system takes care of academic and personal issues of students.

·        Various experiential learning/ Student centric methods are used for teaching such as Industrial training, Internships, software training, workshops, Industrial tours , Expert lectures, NPTEL,MOOCS courses, AWS academy, ICT Academy, Institute Conferences ,Interaction with Alumni, Interactive classes, Soft-skill classes and Video lectures etc.

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

·        Students are sensitized in this regard through an orientation program, student handbook, academic calendar, open house, class representative (CR) meetings.

·        Programme Outcomes (POs) and Course Outcomes (COs) for all Programmes offered by the institution are well stated and students are made aware of these well in advance.

·        The institute systematically assesses the attainment of outcomes and reviews the teaching- Learning process.

·        The institute maintains Excellent Pass percentage of students.

**Research, Innovations and Extension**

- The Institute has been functioning to the highest international standards with state-of-the-art infrastructure and it holds a prominent position for **innovation ecosystem** in the region.

- The research and innovation is backed by a strong and **motivational Research and development policy, IPR policy and Startup policy**. Institute provides incentives to the faculty members for their research contribution as per research and development policy.

- Financial assistance is also provided to faculty members to attend conferences, workshops, symposiums etc.

- The faculty has published 800+ research papers in peer reviewed, UGC CARE/SCOPUS/SCI Journals, Books, conference proceedings and **400+ book chapters and conference papers** in the last 5 years.

- The institute has set up an **EDC (Entrepreneurship Development Cell)** wherein financial grant is received under the DST-NIMAT project to conduct Entrepreneurship Awareness Camps (EAC) and an **incubation center named as Atal Community Innovation Centre**, sponsored by Atal Innovation Mission, NITI Aayog, Govt. of India to nurture Innovation and Entrepreneurial culture in Semi-urban and Rural India.

- IPR Cell works for filing patents, trademarks, and design patents followed by publishing, granting and commercializing student's ideas.

- The institute has been placed in the excellent band category for the **ARIIA ranking 2021,** 3.5 star rating (highest rank) for **IIC** in 2021-2022 & 139 all India rank in engineering category for **NIRF Ranking 2022** ,Rank 4 in Pan India among the Top 10 Patent filing Institutes.

- The college has signed 50 MoUs with various universities/renowned institutes /industries collaborations for research/ academic activities.

- The Institute promotes extension activities in the neighborhood community through NCC, NSS and UBA and has received several awards and recognition from the Government/ recognized bodies for such activities.

## Infrastructure and Learning Resources

- The institute has adequate Academic infrastructure and physical facilities as per the statutory guidelines. The institute has adequate number of well-furnished, well ventilated, well illuminated, and spacious Classrooms, Tutorial Rooms, Drawing Halls, laboratories, and Workshops. Most of the academic facilities are ICT equipped.

- The non-academic facilities such as Multipurpose Ground, Indoor sports facilities, a state of Art Centrally Air-Conditioned Auditorium helps to augments the heathy learning and developing environment in the campus. Other facilities such as Separate hostels for boys and girls, crèche facility, Dispensary, Transportation, Bank branches, ATMs, Common rooms, Tuck shop etc also are the integral part of the institute.

- The institution has main Library (Wi-Fi and LAN enabled) in addition to Department Libraries. The library works on LIBSYS SOFTWARE. The users can access to e-resources like EBSCO, DELNET, NDL, NPTEL video lectures, Turnitin Software, Digital Library, OER REPOSITORIES and other e-resources.

- The institute has sufficient and well organised IT facilities. The institute has High speed Internet lease lines with 1.2 Gbps bandwidth, dedicated Login credentials for all to access internet facility in the campus, using next generation Firewall facility, adequate number of Wi-Fi Access Points, network switches, Servers hosting, system software, application software, computers, Printers, Projectors, CCTV

Cameras, CISCO spark kit plus video conferencing unit Dish TV connection for Swayam Courses, provide excellent computational environment. 1200+ computers are available making student computer ratio less than 4:1.

- Adequate financial allocations are made for the augmentation of infrastructure and maintenance of physical and academic facilities.

## Student Support and Progression

- CEC-CGC, Landran Mohali focusses on the all-round development of students.

- A good number of students avail scholarships & free ships from Government as well as non-government agencies as well as the institution.

- Substantial number of Capacity building and skills enhancement initiatives is taken by the institution in the areas of soft skills, Language and communication skills, Life skills (Yoga, physical fitness, health and hygiene), ICT/computing skills.

- Guidance for various Career counseling and Competitive examinations are given to the students to enhance their skills and capabilities.

- Transparent and time bound Grievance Redressal mechanism is in place through various committees like Grievance Redressal committee, Anti-Ragging Committee and Internal Complaint Committee help the students to address the issues, if any.

- The institute has a track record of outstanding placement and student progressing for higher education in reputed organizations/institutions respectively.

- A good number of students have qualified in state/ national/ international level examinations for the last five years.

- A good number of students performed outstandingly in various sports/cultural activities at university / state/ national / international level and bagged various awards and accolades.

- Many Students have participated in various sports and cultural programs organized by the institute/other institutions.

- The alumni association of the institute is a registered body which significantly contributes towards the growth of the institution in the form of Peer mentoring, Career Guidance, and placements etc.

## Governance, Leadership and Management

- The governance of the institute demonstrates strong leadership in tune with the comprehensive Vision and Mission statements.

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- The Institute strongly believes in transparency, participative leadership, delegation of authority at multiple levels and decentralization of its operations and delegated authority at various levels from Director-Principal to the Deans/Hods to Faculty and students to ensure effective governance.

- All stakeholders are adequately represented in the participatory governance.

- The institute has a well-structured hierarchical organization structure involving all key stakeholders and complies with all regulatory set ups.

- The institution has established different policies for all important aspects of governance.

- The institute has devised its strategic development plan which acts as a beacon for its continuous growth.

- Various institutional bodies/ cells/ committees are working effectively. Regular meetings are called for the discussions, minutes of meetings are recorded, and action taken reports are sorted.

- The institute has implemented e-governance in the areas of administration, finance, accounts, examination, student admission and support.

- The Teachers are provided with financial support to attend conferences/ workshops and towards membership fee of professional bodies.

- A quite good number of faculty development programmes (FDP's), professional development/ administrative training programs have been organized by various departments of the institute for the upgradation of technical/managerial skills of the teaching, non-teaching staff/administrative staff.

- The institute has adopted various Quality Assurance initiatives that pave the way for ensuring academic excellence. The IQAC is responsible for the effective implementation of the academic quality processes, by conducting periodic meetings and by collaborating with other institutes. The institute is NBA accredited for B.Tech. CSE, B.Tech. ECE programs, secured 139th rank in Engineering category in NIRF 2022 and is ISO Certified.

**Institutional Values and Best Practices**

- The institute provides equal opportunities to all individuals irrespective of gender, race, caste, colour, creed, language, religion. The institute conducts many events for the promotion of gender equity such as Women's rights, Health & Hygiene, Anti Dowry, Female Foeticide, Beti Padhao, Beti Bachao, Women Entrepreneur Workshops etc. The institute also celebrates commemorative days such as Engineers Day, Teachers Day, Youth Day, National Science Day, etc. Festivals like Lohri, Baisakhi and Eid etc. and other days like Happiness Day, Cancer Day, Heart Day etc.

- The institute provides an inclusive environment for everyone with tolerance and harmony towards cultural, regional, linguistic, communal socioeconomic and other diversities. It takes pride in having a cosmopolitan environment where students from 15+ different states study, depicting diversity and brotherhood. The institute has always taken various direct and indirect steps to promote and sensitize

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

- The Best practice adopted in the institute is aligned and oriented towards its Motto "Building Careers, Transforming lives" through strong career guidance with the Training and Placement Program (TPP).

- IPR support to its faculty and students is another best practice adopted by the institute. As a result, The Institute has filed 1000+patents, of which 500+ are published &10 are granted and many others are on the verge of getting granted.

- The Research, Innovation, Sponsored projects & Entrepreneurship department provides an excellent eco system to the students and faculty for their professional development. This is the distinctive area for the institute that is given priority and thrust.

# 2. PROFILE

## 2.1 BASIC INFORMATION

| Name and Address of the College | |
| --- | --- |
| Name | CHANDIGARH ENGINEERING COLLEGE-CGC , LANDRAN , MOHALI |
| Address | Chandigarh Engineering College-CGC, Landran Mohali Kharar-Banur Highway Sector 112 Greater Mohali Punjab-140307 |
| City | Mohali |
| State | Punjab |
| Pin | 140307 |
| Website | http://cecmohali.org |

| Contacts for Communication | | | | | |
| --- | --- | --- | --- | --- | --- |
| Designation | Name | Telephone with STD Code | Mobile | Fax | Email |
| Principal | Rajdeep Singh | 0172-3984280 | 9781925256 | 0172-3984206 | director@cecmohali.org |
| IQAC / CIQA coordinator | Sumit Goel | 0172-3984217 | 8968488774 | 0172-3984206 | iqac@cgc.edu.in |

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

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

| Recognized Minority institution | |
| --- | --- |
| If it is a recognized minroity institution | No |

**Establishment Details**

| State | University name | Document |
|---|---|---|
| Punjab | The I.K. Gujaral Punjab Technical 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](#) | 03-07-2022 | 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? | Yes |
| If yes, name of the agency | National Board of Accreditation |
| Date of recognition | 10-06-2022 |

| Location and Area of Campus | | | | |
|---|---|---|---|---|
| **Campus Type** | **Address** | **Location\*** | **Campus Area in Acres** | **Built up Area in sq.mts.** |
| Main campus area | Chandigarh Engineering College-CGC, Landran Mohali Kharar-Banur Highway Sector 112 Greater Mohali Punjab-140307 | Rural | 11.28 | 37665 |

## 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 | BTech,Computer Science And Engineering | 48 | Intermediate OR Diploma | English | 420 | 418 |
| UG | BTech,Information Technology | 48 | Intermediate OR Diploma | English | 180 | 179 |
| UG | BTech,Electronics And Communication Engineering | 48 | Intermediate OR Diploma | English | 300 | 213 |
| UG | BTech,Mechanical Engineering | 48 | Intermediate OR Diploma | English | 180 | 44 |
| UG | BTech,Artificial Intelligence And Machine Learning | 48 | Intermediate OR Diploma | English | 60 | 59 |
| UG | BTech,Artificial Intelligence And Data Science | 48 | Intermediate OR Diploma | English | 60 | 60 |

| PG | Mtech,Computer Science And Engineering | 24 | UG | English | 18 | 11 |
|----|----|----|----|----|----|----|
| PG | Mtech,Information Technology | 24 | UG | English | 18 | 0 |
| PG | Mtech,Electronics And Communication Engineering | 24 | UG | English | 18 | 2 |
| PG | Mtech,Mechanical Engineering | 24 | UG | English | 18 | 3 |
| PG | MBA,Masters Of Business Administration | 24 | UG | English | 60 | 59 |
| PG | MCA,Master Of Computer Application | 24 | UG | English | 60 | 59 |

**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 | | | | 0 | | | | 0 | | | | 0 |
| Recruited | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Yet to Recruit | | | | 0 | | | | 0 | | | | 0 |
| Sanctioned by the Management/Society or Other Authorized Bodies | | | | 30 | | | | 36 | | | | 266 |
| Recruited | 22 | 8 | 0 | 30 | 22 | 14 | 0 | 36 | 97 | 169 | 0 | 266 |
| Yet to Recruit | | | | 0 | | | | 0 | | | | 0 |

| Non-Teaching Staff | | | | |
|---|---|---|---|---|
| | Male | Female | Others | Total |
| Sanctioned by the UGC /University State Government | | | | 0 |
| Recruited | 0 | 0 | 0 | 0 |
| Yet to Recruit | | | | 0 |
| Sanctioned by the Management/Society or Other Authorized Bodies | | | | 115 |
| Recruited | 95 | 20 | 0 | 115 |
| Yet to Recruit | | | | 0 |

| Technical Staff | | | | |
|---|---|---|---|---|
| | **Male** | **Female** | **Others** | **Total** |
| Sanctioned by the UGC /University State Government | | | | 0 |
| Recruited | 0 | 0 | 0 | 0 |
| Yet to Recruit | | | | 0 |
| Sanctioned by the Management/Society or Other Authorized Bodies | | | | 60 |
| Recruited | 33 | 27 | 0 | 60 |
| Yet to Recruit | | | | 0 |

**Qualification Details of the Teaching Staff**

| Permanent Teachers | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Highest Qualification** | **Professor** | | | **Associate Professor** | | | **Assistant Professor** | | | |
| | Male | Female | Others | Male | Female | Others | Male | Female | Others | Total |
| D.sc/D.Litt/ LLD/DM/M CH | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ph.D. | 22 | 8 | 0 | 22 | 14 | 0 | 5 | 21 | 0 | 92 |
| M.Phil. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| PG | 0 | 0 | 0 | 0 | 0 | 0 | 92 | 146 | 0 | 238 |
| UG | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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

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

| Details of Visting/Guest Faculties | | | | |
|---|---|---|---|---|
| Number of Visiting/Guest Faculty engaged with the college? | Male | Female | Others | Total |
| | 2 | 0 | 0 | 2 |

**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 | 697 | 2406 | 0 | 6 | 3109 |
| | Female | 223 | 545 | 0 | 0 | 768 |
| | Others | 0 | 0 | 0 | 0 | 0 |
| PG | Male | 30 | 127 | 0 | 0 | 157 |
| | Female | 34 | 83 | 0 | 0 | 117 |
| | 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 | 49 | 35 | 17 | 13 |
| | Female | 9 | 9 | 2 | 11 |
| | Others | 0 | 0 | 0 | 0 |
| ST | Male | 2 | 3 | 0 | 1 |
| | Female | 1 | 1 | 0 | 0 |
| | Others | 0 | 0 | 0 | 0 |
| OBC | Male | 98 | 71 | 17 | 11 |
| | Female | 6 | 14 | 4 | 4 |
| | Others | 0 | 0 | 0 | 0 |
| General | Male | 853 | 881 | 756 | 772 |
| | Female | 244 | 240 | 235 | 221 |
| | Others | 0 | 0 | 0 | 0 |
| Others | Male | 0 | 0 | 0 | 0 |
| | Female | 0 | 0 | 0 | 0 |
| | Others | 0 | 0 | 0 | 0 |
| Total | | 1262 | 1254 | 1031 | 1033 |

**Institutional preparedness for NEP**

| 1. Multidisciplinary/interdisciplinary: | CEC-CGC, Landran, Mohali has a vision and mission that supports multidisciplinary education. Various subjects of humanities and science with STEM form part of scheme such as Environmental Sciences, Indian Constitution, Foundation Course in Humanities, etc. Students are offered interdisciplinary subjects from open electives, Major and Minor degree program, add-on courses/certifications, events like Hackathon/Toycathon, facility of incubation center etc. Various steps including attending seminars/webinars related to NEP, while closely following the norms of the IKGPTU are followed. Institute organizes various conferences/seminars/outreach programs to encourage multidisciplinary research. |
|---|---|
| 2. Academic bank of credits (ABC): | IKGPTU has already started the process of implementation of ABC. Collaboration with institutes from abroad is in place though Department of International Affairs which offers International Internships and Pathways Program. Faculties are supported to design their own assignments, curricula for topics beyond syllabus, attend various FDPs/ Conferences/ Seminars/ workshops and encouraged to use innovative teaching methods. |
| 3. Skill development: | To ensure integration of vocational skills with technical education the institute has RISE department for imparting research-oriented skills, Campus to Boardroom program for strengthening soft-skills and encouraged faculty to upgrade their technical skills. The institute has an IIC cell and a MOU with NSDC for imparting industry ready skills. Various subjects including Universal Human Values, Essence of Indian Traditional Knowledge, Environmental Sciences, Waste to Energy are part of curriculum. Our core values of knowledge, character, excellence, integrity, transparency, quality, teamwork, execution with passion, trust, continuous and student-centric learning are all closely integrated into our academic programs. |
| 4. Appropriate integration of Indian Knowledge system (teaching in Indian Language, culture, using online course): | As per the curriculum laid by the affiliating University, the institute offers subjects like, Essence of Indian Traditional Knowledge, Universal Human Values, etc. All Courses are taught in English, but to rationalize communal and regional harmony, the faculty communicates with the students in English |

| | |
|---|---|
| | and vernacular. The festivals and events such as Baisakhi, Lohri, Hindi Day, photography competition etc. are organised by institute and various Clubs like Artistia, and Rang Manch etc. for the preservation and promotion of Indian Arts, Culture and traditions, Indian ancient traditional knowledge. |
| 5. Focus on Outcome based education (OBE): | OBE ensures that the learner must understand, what is expected to be accomplished by the end of the program. Internal Quality Assurance Cell (IQAC) of the institute implements the OBE through the formulation of well-defined Course Outcomes (COs), Programme Outcomes (POs) and Programme Specific Outcomes (PSOs) for all its UG and PG Programs. All, student Assignments, Mid Semester Tests (MSTs) etc. are mapped with the COs. The assessment of answer sheets is done CO wise which leads to the attainment of COs, POs and PSOs of the Program. |
| 6. Distance education/online education: | As per the curriculum laid by the affiliating University, the institute does not offer any programs through ODL mode. The institute has developed many video and animated lectures, use ICT tools, encourages the students and faculty to complete, add on courses through various MOOCs platforms such as SWAYAM-NPTEL, NASSCOM etc. We are having local chapter of Swayam at our institute. We are also having, many e resources like EBSCO, DELNET etc. The institution successfully imparted all its course content delivery in online mode during the COVID era. |

**Institutional Initiatives for Electoral Literacy**

| | |
|---|---|
| 1. Whether Electoral Literacy Club (ELC) has been set up in the College? | Yes the CEC-CGC Landran, Mohali has established the Electoral Literacy Club (ELC) with following objectives: i. To educate the target population about voter registration, electoral process and related matters ii. To motivate voter registration for its members as they attain the age of 18. The aim of this club is to educate the targeted citizens about voter registration, electoral process and related matters through hands on experience so that they understand the value of their vote and exercise their right to franchise in a confident, comfortable and ethical |

| | manner. |
|---|---|
| 2. Whether students' co-ordinator and co-ordinating faculty members are appointed by the College and whether the ELCs are functional? Whether the ELCs are representative in character? | Yes the Institute has established the Electoral Literacy Club (ELC) where students' co-ordinator and co-ordinating as well as faculty members are appointed. The details are as under: Mr Satish Kumar Nodal Officer Ms. Apoorva Arora, Assistant Professor, CSE Mentor Ms. Ashima Kalra, Assistant Professor, ECE Member Ms. Ravdeep Kaur(AP), IT Member Mr. Ravinder Singh (AP), ME Member Dr. Nupur Sharma, Assistant Professor. MBA Member Mr. Sohanpreet Singh(AP), MCA Member Samarth Chawla, 6th Sem, CSE Member Priyanshi Sharma, 6th Sem,CSE Member Nicky kumari , 4th sem, ECE Member Nishant Annad ,4th sem, ECE Member Naman, 4th Sem, IT Member Nidhi Chaudhary,4th Sem, IT Member lovepreet singh 4th sem, ME Member Aman kumar mahto 4th sem, ME Member Ayushi Dixit, 2nd Sem, MBA Member Vishal Kumar, 2nd Sem, MBA Member Shubham Bhardwaj, 2nd Sem, MCA Member |
| 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. | The ELC at CEC-CGC Landran, Mohali has undertaken following activities: a) Voter awareness campaigns under Systematic Voters Education and Electoral Participation (SVEEP) for new voters' registration, electoral process and related matters have been conducted through the ELC student members. Workshops have been conducted for the faculties and students to make them aware about the electoral process. b) Electoral Literacy Club of the institute organized an awareness drive under SVEEP for electoral process and related matters. The drive was held in association with Mohali Administration in Landran village on 17.02.2023. c) Our students have visited booths during the Punjab State Assembly elections. |
| 4. Any socially relevant projects/initiatives taken by College in electoral related issues especially research projects, surveys, awareness drives, creating content, publications highlighting their contribution to advancing democratic values and participation in electoral processes, etc. | The Electoral literacy club of CEC-CGC Landran , Mohali has taken various initiatives that are socially relevant including awareness drives creating content, publications highlighting their contribution to advancing democratic values and participation in electoral processes. a) The students and staff members were made aware about election process, voter registrations and related matters. b) The target population was sensitized for their electoral rights and got familiarized with the electoral process of registration and EVM Voting. c) ELC sensitized |

| | electorates by distributing brochure contacting step by step EVM voting process. d) Various street plays were organized in the nearby areas for the awareness of citizens for electoral process. |
|---|---|
| 5. Extent of students above 18 years who are yet to be enrolled as voters in the electoral roll and efforts by ELCs as well as efforts by the College to institutionalize mechanisms to register eligible students as voters. | The students above 18 years who are to be enrolled as voters were motivated for voter registration and sensitized about Indian democratic process and procedure. The Electoral literacy club (ELC) had conducted various awareness drives to give the experience-based learning of the democratic setup. They were sensitized for their electoral rights and got them formalized with the electoral process of registration and EVM voting. |

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# Extended Profile

## 1 Students

**1.1**

**Number of students year wise during the last five years**

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 4117 | 4358 | 4797 | 4981 | 5195 |

| File Description | Document |
|------------------|----------|
| Upload Supporting Document | [View 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: 605**

| File Description | Document |
|------------------|----------|
| Upload Supporting Document | [View Document](#) |
| Institutional data in prescribed format | [View Document](#) |

**2.2**

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

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 338 | 356 | 378 | 386 | 389 |

## 3 Institution

**3.1**

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

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 1475.53 | 1172.42 | 1797.32 | 1975.46 | 1970.93 |

# 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:**

The institute ensures effective curriculum delivery through:

1. Planning of curriculum

2. Teaching Learning Process and Effective Course delivery

**1. Planning for Curriculum**

Institute is affiliated to **I.K. Gujral Punjab Technical University (PTU), Jalandhar** and it follows the curriculum prescribed by the university. It strives to produce competent professionals who can meet the requirements of diverse industries in the field of Computer science engineering, Electronics and communications Engineering, Mechanical Engineering, Information Technology, Artificial Intelligence & Machine Learning Engineering, Artificial Intelligence & Data Science Engineering, Master courses like MTech, MBA, MCA and also encourages budding entrepreneurs to start their own enterprises.

Institute prepares its academic calendar in line with calendar prepared by the CGC Landran campus taking into consideration the calendar provided by the university. In addition, the department academic calendar is created in accordance with the institute academic calendar.

The Institute academic calendar includes the following schedule:

- Schedule of commencement of classes
- Holidays
- Schedule for MSTs(Mid Semester Tests)
- Preparatory holidays
- End semester Theory examination
- End semester practical examination
- Institutional training schedule etc.

- Following a democratic procedure, subjects are assigned to faculty members after careful examination of their qualifications, topic specialties, experience, preferences, and performance. Prior to the start of the semester, the department's time table coordinator creates department time tables.
- Course coordinators and faculty teaching the same subject prepare **course files** of their respective subjects that comprise an active lecture plan, assignments, timetables, students lists, Question Bank, previous year university question papers , reference material etc.
- IQAC Cell checks academic readiness well ahead of the commencement of the semester.Also,it

examines the teaching learning process and its effective course delivery.

- **Identification of weak students** and **bright students** is done on a regular basis.

## 2. Teaching-Learning Process and Effective curriculum delivery

- **Effective curriculum delivery** starts by disseminating the course objectives (COs) to students through course coordinators and faculty teaching the same course.
- **Various Innovative teaching methodologies like** Interactive video lectures ,Group Discussions, Content Beyond syllabus, Seminars, Workshops, Expert lectures, Industrial Visits, International exposure, Animated videos, Smart classrooms etc. and **Pedagogical initiatives** like NPTEL lectures ,Swayam courses, MOOCs ,Online Certifications, Tie-up with Industries through **Institute Industry Interaction Cell (IIIC)** etc. are used for better understanding of students.
- **Adequate numbers of laboratories** are available in the department and all are well equipped for **conduct of experiments**. Lab experiments are conducted in accordance with university curriculum and beyond curriculum.
- **Internal Assessment**: Performance of student in theory subject is recorded through Mid Semester Tests (MSTs), Assignments and attendance. For the laboratory, assessment is done on the basis of **attendance, file work, viva and continuous assessment.**

While planning and delivering the curriculum**, feedback from all stakeholders—**students, alumni, employers, and faculty—is taken into account.

| File Description | 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:** 602

| 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](#) |
| Provide Links for any other relevant document to support the claim (if any) | [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:** 64.31

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

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 4048    | 3455    | 2861    | 2461    | 2254    |

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

## 1.3 Curriculum Enrichment

**1.3.1** *Institution integrates crosscutting issues relevant to Professional Ethics, Gender, Human Values, Environment and Sustainability in transacting the Curriculum*

**Response:**

Institute strongly believes in inculcation of human and social values, gender equality, professional ethics, promotion of environmental conservation and sustainable development among the students through teaching, research, sports, co-curricular activities and cultural events etc.

- Awareness of Professional Ethics, Gender, Human Values, Environment and Sustainability is created through various courses that are part of curriculum as mentioned below:

**Professional Ethics:**

- Business Ethics and CSR
- Human Values, Deaddiction and Traffic Rules
- Workshop on Indian Ethos
- Mentoring and Professional Development etc.

**Human Values:**

- Foundation Course in Humanities (Development of Societies/Philosophy)
- Universal Human Values 2 etc.

**Environment and Sustainability :**

- Environmental Sciences
- Waste to Energy
- Non-Conventional Energy Resources
- Foundations of Management
- Business Communication for Managerial Effectiveness

In addition to the mandatory subjects, popular drives are regularly held by different departmental clubs, NSS, NCC, Unnat Bharat Abhiyan (UBA) Activities, etc. These drives serve as the basis for this synthesis under the categories of environmental preservation, human values, gender equality, and professional ethics.

- Clean India- Swachh Bharat Campaign
- Water day celebration for conservation of water
- Tree Plantation Drives
- World Environment Day
- National Girl child day
- Women's Day
- Rally on Stubble burning at villages
- Hands-on Workshop on creating and nurturing women led micro food processing enterprises focusing Desi Indian food products and being financially independent
- Workshop on Smart Agriculture, Basic of Computers, Electrical Components & Basic of Electronics at Village etc. and many more.
- Ozone Day
- Women Entrepreneurship Day
- Workshop for Exploring Women entrepreneurial potential
- Workshop on Rural women empowerment in health and nutrition (Startup Punjab)
- Farmer Awareness Program on Climate Smart Farming
- Awareness workshop on interventions for sustainable agribusiness
- In order to acknowledge initiatives taken up by the institute, students of Mechanical Engineering participated and won prize for the best project"Solar Powered Automatic River Cleaning System "under Chandigarh's Time Innovation Challenge at SATPI, Mohali. Under this project, a compact machine based on IOT and solar power was designed with a low cost to clean solid waste from rivers.

- Rain water harvesting facilities havealso been available in the institute for the last many years.

- In addition to the aforementioned, the lush-green surroundings of the campus soothe the mind of the students and they get to bask in clean air and a natural environment.

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

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

**Response:** 76.61

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

Response: 3154

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

## 1.4 Feedback System

**1.4.1** *Institution obtains feedback on the academic performance and ambience of the institution from various stakeholders, such as Students, Teachers, Employers, Alumni etc. and action taken report on the feedback is made available on institutional website*

**Response:** A. Feedback collected, analysed, action taken& communicated to the relevant bodies and feedback hosted on the institutional website

| 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](#) |
| Provide Links for any other relevant document to support the claim (if any) | [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:** 71.88

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

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 1033 | 1031 | 1254 | 1262 | 1376 |

2.1.1.2 **Number of sanctioned seats year wise during last five years**

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 1512 | 1512 | 1698 | 1698 | 1866 |

| File Description | Document |
|------------------|----------|
| Institutional data in the prescribed format | [View Document](#) |
| Final admission list as published by the HEI and endorsed by the competent authority | [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:** 3.62

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

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 15 | 12 | 24 | 23 | 16 |

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

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 454 | 454 | 510 | 510 | 560 |

| File Description | Document |
|------------------|----------|
| Institutional data in the prescribed format | [View Document](#) |
| Final admission list indicating the category as published by the HEI and endorsed by the competent authority. | [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:** 12.18

## 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:**

Various student centric methods are used to make the teaching and learning process more effective. The institute always strives to provide Latest Information and Communication Technology (ICT) infrastructure to students, faculty and technical staff to meet the demands of current educational trends. The institute applies following student-centric methods which are central to the system of Outcome-Based Education (OBE).

**Various ICT enabled Tools used**:

- Smart classrooms
- Multimedia teaching aids like LCD projectors, classrooms with internet-enabled computer/laptop systems.
- Seminar halls and Auditorium equipped with multimedia facilities
- PowerPoint Presentations (PPTs) and other materials like relevant videos and animations, etc.
- NPTEL / Swayam courses
- Video lectures
- Simulation software
- Animated Videos and many more…

**Student centric methods** such as experiential learning, participative learning and problem solving methodologies used are:

- Lab experiments to practically test the concepts learned theoretically in the Classroom.
- Individual /group projects developed by students based on new technological advancements and industrial applications.
- Industrial training/ Internships /Software training is provided to students to enhance personal and professional skills.
- Workshops and Expert lectures are used to familiarize students with the latest technical advancements and to make them conscious of industry requirements and standards.
- Research papers/patents/case studies enhance research knowledge of students.
- Learning through NPTEL,MOOCS courses, AWS and ICT Academy
- National and International project competitions like SIH, Ideathon etc. and various start-ups under Research & Development labs.
- Institute Conferences
- Interaction with Alumni
- Interactive classes
- Soft-skill classes
- Real time examples
- Students involvement in various department and Institute events.
- Video Lectures etc.

| 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:** 100

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

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 338 | 356 | 378 | 386 | 389 |

| File Description | Document |
|------------------|----------|
| Sanction letters indicating number of posts sanctioned by the competent authority (including Management sanctioned posts) | [View Document](#) |
| Provide Links for any other relevant document to support the claim (if any) | [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:** 19.6

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**

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 88 | 94 | 79 | 56 | 45 |

| 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:**

The Academic committee ensures fairness and transparency in the conduct and evaluation of internal

examinations of students. Students are sensitized in this regard through an orientation program, student handbook, academic calendar, open house, class representative (CR) meetings etc. Students and parents are duly updated regarding attendance and exam grades through messages, emails and telephone calls.

**Internal Assessment**: Students performance in theory subjects is assessed through mid-semester tests (MSTs), assignments and attendance. Assessment for the laboratory is based on attendance, **file-work, viva and continuous assessment.**

- The Institute's **IQAC Cell** creates standard formats for question papers and assignments.
- **MST question papers** and **assignment**s are prepared by course coordinators and faculty teaching the subject, taking into account previous years' university question papers, university paper pattern, reference books, COs coverage and Bloom's Taxonomy. After approval by IQAC Member and HOD, they are submitted to the Sessional committee.
- Answer sheets are marked in evaluation Centers strictly in accordance with the evaluation scheme laid down by the course coordinators (Department wise). Marked sheets are then shown to students to sign with "Seen or satisfactory". Sample answer sheets are checked by HoD, Course Coordinator and IQAC member.

**External Assessment**: Students' performance is assessed by university theory exams, laboratory exams, project assessments, Industrial trainings/internships and dissertations etc.

- Question papers are finalized only at the university level and for evaluation, answer sheets are distributed to different institutions and Institutes that have been approved by the University for review. The University uses a graded system for assessment.

**Grievance Redressal System** is in place at the Institute and Department level to address student's grievances regarding external and internal examinations respectively.

**1. For Internal Examinations:**

- If a student is dissatisfied with internal MST question paper, assignment, its evaluation or internal assessment, he/she can approach department's grievance redressal committee, which will resolve the matter internally by satisfying student's query. The action taken thereupon will be communicated to the student after careful consideration. If the student is not convinced; case is resolved at the Institute level. The student query is resolved within 2 working days at department level and within 5 working days at institute level.

**2. For External Examinations:**

For any complaint /query related to external examinations, students can approach Registrar through the Class counselor, Head of Department or the Director Principal of the institute. The registrar investigates and forwards the case to the university for further action. The student is notified of the communication received from the university.

Following a student's registration on portal , the university issues User ID and Password. Through their exam portal, students can fill out their Regular, Re-appear and Re-evaluation Forms. They can also view soft copies of their result Gazette, DMCs, Degree Certificate, Migration Certificate and Provisional Certificate. Students can file an RTI also.For requirement of hard copy of documents; they can register on

http://support.ptu.ac.in.with their details.

| 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:**

Institute is committed to be at the forefront for providing the best education to students and to act as a catalyst in shaping a bright and sustainable future for our nation and the world.

POs, PSOs, and COs of various courses of all the departments are well stated .**Course outcomes**(COs) are the statements of what a student should know, understand and/or be able to demonstrate after completion of a course .The course coordinators in consultation with subject teachers finalize the course outcome by taking reference from IKGPTU syllabus .Course coordinator takes care that COs must state the major skills, knowledge, attitude or ability that students will acquire and it should drive program outcomes. Bloom's taxonomy is also taken in to the consideration during formation of COs.

Program outcomes (POs) are the **knowledge, skills, and abilities that students should possess when they graduate from a program**. These are the graduate attributes for quality assurance like Problem analysis, Environment and Sustainability, Ethics , Individual and Team Work, Communication ,Lifelong learning etc.

Program Specific Outcomes (PSOs) are statements that describe what the graduates of a specific program should be able to do after completing the course.POs, PSOs, and COs are disseminated to the stakeholders through the following channels:

- Digital media
- Website
- Lab manuals
- Course files
- Prominent Places in departments

**For POs/PSOs attainment**, two assessment tools are used Direct Assessment and Indirect Assessment .These assessments are conducted on a regular basis, enabling the faculty to assist the students who may not be attaining the required level of POs/PSOs. This is ensured that all students attain the minimum level of each Program outcomes and programme specific outcomes (PO and PSO).80 % of Direct PO/PSO Attainment and 20% of Indirect PO/PSO Attainment computes total POs/PSOs attainment

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

**2.6.2** *Attainment of POs and COs are evaluated.*  **Explain with evidence in a maximum of 500 words**

**Response:**

For POs/PSOs attainment, two assessment tools are used Direct Assessment and Indirect Assessment.

1.**Direct Assessment: -**

Student's performance is recorded through Mid Semester Test (MST), Assignment/ Tutorial, attendance, laboratory assessment, project progress review and evaluation, industrial training and semester end examination etc. as per evaluation guidelines by university for each theory/lab course to calculate the attainment level. The course outcomes are evaluated and the same is used for the attainment of the corresponding program outcomes.

1.**Indirect Assessment**: -

An indirect assessment is beneficial as it can be used to gauge various implicit aspects of student learning, such as values, perceptions, and attitudes, from a variety of perspectives. Indirect assessment is done through surveys **Alumni Survey ,Employer Survey ,Program/Student Exit Survey ,Parent Survey.**

**POs/PSOs ATTAINMENT PROCESS:**

- Create a Program level CO- PO/PSO matrix of all courses.
- Independently assess CO attainment of each course through internal and external examination separately.
- Average of direct assessment of all courses (internal and external examination) is taken to compute final attainment of POs/PSOs.
- 80 % of Direct PO/PSO Attainmentand20% of Indirect PO/PSO Attainment computes total POs/PSOs attainment.
- Question wise CO attainment is also evaluated.

**Sample:  Subject Linear Integrated Circuit (BTEC-503-18)-ECE**

   **Course outcomes** of  subject is defined below:

| | |
|---|---|
| C303.1 | Understand differential and cascade amplifiers |
| C303.2 | Know the basics, working and characteristic of Op-Amps |
| C303.3 | Investigate various applications of Op-Amps |
| C304.4 | Understand some specialized Op-Amps |
| C304.5 | Interpretation of data sheet and their applications thereof. |

**CO- PO/PSO Mapping Matrix:**

Each CO can be identified to address a subset of POs.Mapping(Correlation)of COs is done with POs. Correlation level 1, 2 and 3 are defined as follows:1. Slight (low) 2. Moderate (Medium) 3. Substantial(High).

| CO | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 | PSO1 | PSO2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C303.1 | 3 | 3 | 3 | 2 | 2 | | | 1 | | | | 2 | 2 | 2 |
| C303.2 | 2 | 2 | | 1 | 2 | | | 2 | | | | 2 | 2 | 2 |
| C303.3 | 2 | 3 | 3 | 1 | 2 | | | 1 | | | | 2 | 2 | 2 |
| C303.4 | 3 | 3 | 3 | | 2 | | | | | | 1 | 2 | 2 | 2 |
| C303.5 | 2 | 2 | | 1 | 2 | | | 1 | | | 1 | 2 | 2 | 2 |
| C303* | 2.40 | 2.6 | 3.0 | 1.25 | 2.0 | | | 1.25 | | | 1.0 | 2.0 | 2.0 | 2.0 |

**Attainment of Course Outcomes:**

- For Theory External courses – Threshold  defined is 60%
- For Theory Internal, Lab Internal & External – Threshold defined is 75%

**Attainment levels:**

- Attainment Level 3--  >75-100% students scoring ? Threshold  marks
- Attainment Level 2--- >45-75% students scoring ? Threshold   marks
- Attainment Level 1--  >15-45% students scoring ? Threshold   marks
- Attainment Level 0--  = 0-15% students scoring ? Threshold   marks

**Let the Attainment level** for Internal= 3 and Attainment level for External= 2

60% of External attainment [N1] = 1.2

40% of internal attainment [N2]   = 1.2

Total CO Attainment: (N1 + N2) = 2.4

**POs and PSOs ATTAINMENT**

| Course/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 | PSO1 | PSO2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Course Mapping | 2 | 3 | 3 | 1 | 2 | | | 1 | | | 1 | 2 | 2 | 2 |
| C(303) -A_POi | 1.60 | 2.40 | 2.40 | 0.80 | 1.60 | | | 0.80 | | | 0.80 | 1.60 | 1.60 | 1.60 |
| Final attainment of POs/PSOs | 1.99 | 1.90 | 1.90 | 1.89 | 1.86 | 1.92 | 1.94 | 1.92 | 2.03 | 1.94 | 1.87 | 2.01 | 1.94 | 1.96 |

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

**2.6.3 Pass percentage of Students during last five years  (excluding backlog students)**

**Response:** 97.01

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

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---|---|---|---|---|
| 1166 | 1246 | 1380 | 1387 | 1383 |

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

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 1207    | 1280    | 1411    | 1424    | 1442    |

| 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](#) |
| Provide Links for any other relevant document to support the claim (if any) | [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:** 200.58

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)**

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 40.11   | 61.03   | 50.90   | 12.67   | 35.87   |

| 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 Institute** has been functioning to the highest international standards with state-of-the-art infrastructure and so, it holds a prominent position **for innovation ecosystem** in the region. The institution has reserved a dedicated area of approx.12000 square feet for the **research and development activities**. The research and innovation that has been taking place at the institute is backed by a strong and motivational Research and development policy, IPR policy and Startup policy.

**Research &Innovation**

In order to create a conducive environment for innovation, the institute has taken up various initiatives. All the departments have **Institute Industry Interaction Cell (IIIC)**that have signed **MOUs/Tie-ups** with the industries and established laboratories supported by industries namely IBM, Redhat, Raju Bros, Fresco, Fly X, CDAC Mohali etc. as industry partners. Regular **workshops, expert lectures, industrial visits and seminars** are organized by IIIC cell through industry experts that provide an excellent platform for the transfer of knowledge.

The institute has set up an **EDC (Entrepreneurship Development Cell)** wherein financial grant is

received under the **DST-NIMAT project** to conduct Entrepreneurship Awareness Camps (EAC) for developing entrepreneurial qualities.

Over the years based upon the best practices of research and innovation being followed by our institute, we have been placed in the Excellent band category for the **ARIIA** ranking 2021, 3.5 star rating for **IIC** in 2021-2022 &139 all India rank in engineering category for **NIRF Ranking** 2022.

**IPR Cell**:

To motivate the faculty and students towards innovation, a committee of IPR coordinators is appointed to manage the IPR Cell. Dedicated Staff and a team of IP professionals has been deputed to assist students and faculty for filing patents, trademarks, and design patents followed by publishing, granting and commercializing their ideas.

The institute has been placed at the 4th position by the Controller General of Patents, Design Trademarks and Geographical Indicators, Government of India 2021 survey among the Top 10 Patent filing Institutes and 3rd among the top 5 in the field of Information Technology ahead of the IITs and other premium Institutions in the country.

**Startup Cell/ Incubation Center (Atal Community Innovation Centre, RISE Association):**

The institute has an incubation center named as Atal Community Innovation Centre, RISE Association, which is sponsored by **Atal Innovation Mission, NITI Aayog, Govt. of India For** a **period of five years,** where in the institution aims to nurture Innovation and Entrepreneurial culture in Semi-urban and Rural India. The incubator has Co-working space with High speed internet, computer facility and advanced labs in **Drone Technology, Cyber Security and 3D printing**.

Apart from this our institute has also been chosen as the **Host institution** for **MSME Innovative Schemes (Incubation Component)** through which the seed funding is leveraged to eligible startups.

**Financial Incentives for Research & Development:**

In order to nurture innovation and entrepreneurial spirit, financial support for prototype development is provided by the Institute **and AIM NITI Aayog**. The infrastructure for prototype development is in place at **ACIC RISE Association.** The students or startups who want to develop and test their projects outside these domains are scouted to the partner academic institutes, research laboratories or the industrial partners with whom we have formal MOUs in place.

| 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:** 238

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

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 50      | 44      | 48      | 50      | 46      |

| 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:** 1.04

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

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 161     | 98      | 174     | 85      | 112     |

| File Description | Document |
|------------------|----------|
| Link to the uploaded papers, the first page/full paper(with author and affiliation details)on the institutional 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](#) |

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

**Response:** 1.75

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

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 423     | 166     | 366     | 21      | 82      |

| 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:**

Institute has been at the forefront in sensitizing its students pertaining to social issues through its extension activities. Institute undertakes social outreach activities which are meant for helping society and training students to shoulder all responsibilities with ease and impact. From the past many  years ,the major issues that have been reported by the local community are **women empowerment**, **health care facilities**, **alcohol addiction, drug addiction**, **environment pollution after harvesting** etc. Institute, under the aegis of various clubs and societies has conducted various activities and created the impact as described below:

**Awareness Programs on Drug De-addiction:** Every year students of the Institute conducts awareness sessions on drug de-addiction wherein the ill effects of drug abuse are illustrated by staging street play, rallies, expert talks on ill effect of drug abuse etc.

**Blood Donation Camp**: In order to foster the spirit of mutual wellbeing and brotherhood, Institute organizes blood donation camp in collaboration with the rotary club and NGOs etc. wherein faculty, staff, students and nearby community fellows donate blood to save the lives of our members The aim of the blood donation camp is to give back to the society.

**Medical Camps:** Considering the health care needs of the local community, Institute organizes free dental checkup camps, cancer awareness camps, AIDS awareness camp, COVID 19 awareness sessions.

**Women Empowerment**: In order to provide financial independence to the females and dual income for

the household, Institute organizes entrepreneurship awareness programs for women, capacity building programs for women, wherein they are trained to prepare eatables like papads, wadias, etc. There are special sessions on beauty and grooming services and the various government schemes that they can leverage to start their own ventures. Also to further empower the women, Women Entrepreneurship day is organized.

**Environment Protection:**The urban population, which has settled in the upcoming housing societies, feels that the stubble burning after harvesting a major health issue. Considering their point of view, the rural villages engaged in farming are educated about the ill effects of stubble burning, climate smart farming, cropping patterns, organic farming. Our teams have planted trees in the neighboring urban housing societies, under the tree plantation drives.

All these activities and initiatives help students build up involvement and fostering attitude to contribute towards societal issues and community problems. These develop a sense of social responsibility and interest in environment-related issues. The effect of the activities carried by our students is visible in the form of more number of trees in the adjoining sectors, few farmers have adopted organic farming as a result of our outreach events. Also the numbers of blood donors over the years have increased and the number of persons who are addicted to drugs have substantially reduced.

| 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:**

The institute's vision envisages offering sustainable livelihoods, enhance the well-being of the neighborhood community through knowledge, innovation and transformative actions.

There have been a number of Awards and recognitions received for extension activities from government / government recognized bodies :

- The **Startup Punjab**, the nodal agency of Government of Punjab with a vision to develop the State of Punjab as a leading global hub for Startups and Innovation has given financial awards and funds to conduct entrepreneurship activities, worth 5 Lakhs forty nine thousand rupees.
- **IETE Chandigarh Center** recognized the efforts of the institute and the Chairman of IETE issued an appreciation for organizing a workshop on Drone technology & Physics of Drone Technology for the students associated with them.

- **Appreciation Letter for Executive Director CDAC Mohali** for delivering expert session during the 5 day training program on UAV's held from Nov 8-12, 2021 at CDAC Mohali. Where Dr. Harbinder Singh, Associate Dean Research shared the information about drones with the participants.
- Appreciation and recognition Letters from **Punjab Small Scale Industries and Export Corpn.Ltd** for conducting workshops and awareness programs for the benefit of society.
- Chandigarh Engineering College received an award for being "**Ranked 9th among the Top 100 Engineering Colleges in the Northern Region** Dataquest T-School Survey March 2022" at the India Habitat Centre, Lodhi Road, New Delhi.
- Dr. Rajdeep Singh ,Director Principal ,Chandigarh Engineering College CGC Landran received an award for "**Outstanding Leader in Higher Education**" in Elets Education Innovation Summit organized by Digital Learning in Dec 2022
- Dr. Harbinder Singh, Associate Dean Research received the letter of invitation from **Bureau of Indian Standards** to deliver an expert talk on 22nd Oct 2019
- Institute has been organizing blood donation camps in collaboration with the **Vishwas Foundation & Rotary club** over the years. These societies have also appreciated the efforts of the institute .
- One of our NCC cadets, MedhaviTomar was awarded as the best cadet in the senior wing, Army category and was felicitated by our Honorable Prime Minister of India, Sh. Narinder ModiJi during the **Republic Day** & by the Governor of Punjab V.P Singh Badone. Also Kunal Sagar,student of computer science engg. Participated in the Republic Day Camp 2019 at New Delhi .
- The **Sarpanch's o**f the Maujpur village, Swaravillege, , Saidpur village of Mohali and other private and Govt colleges like Gulzar College ,Indoglobal college. **Govt. College of Engineering And Technology, Jammu** issued appreciation letters to the institute for conducting various extension activities for creating awareness amongst the residents about the entrepreneurship
- Students of Mechanical Engineering were awarded for the best project "Solar Powered Automatic River Cleaning System" under Chandigarh's **Time Innovation Challenge** at SATPI, Mohali.
- Appreciation letter from district Immunization Officer,SAS NAGAR Mohali for conducting **COVID Vaccination Camps**
- Mechanical faculty **Dr.Saurabh Chaitanya** awarded with letter of appreciation for his efforts in supporting the learners of the Swayam NPTEL Local Chapter, as a Single Point of Contact.

| File Description | Document |
|---|---|
| Provide Link for 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:** 74

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**

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 15 | 20 | 21 | 12 | 6 |

| File Description | Document |
|------------------|----------|
| Institutional data in the prescribed format | [View Document](#) |
| Detailed report for each extension and outreach program to be made available, with specific mention of number of students participated and the details of the collaborating agency | [View Document](#) |
| Provide Links for any other relevant document to support the claim (if any) | [View Document](#) |

## 3.5 Collaboration

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

**Response:** 50

| 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 institute has adequate infrastructure and physical facilities as per the statutory guidelines.

**Academic infrastructure and physical facilities:**

- The institute has adequate number of well-furnished, well ventilated, well illuminated and spacious Classrooms, Tutorial Rooms, Drawing Halls, laboratories and Workshops.
- All the classrooms and tutorial rooms are equipped with adequate furniture, whiteboards, computers, projectors, fans, lights and power backup.
- The Drawing Halls are equipped with Drawing Tables, Computers, Projectors, Engineering Models etc. for the understanding of practical application of Engineering Drawing, and practice of drafting software, AutoCAD software is available in the computer graphic labs.
- The laboratories are well equipped with adequate and well-maintained equipment.
- All the shops in the workshop are equipped with necessary equipment such as lathe, drilling, calipers, micrometers, vices etc., for hands on experience and better understanding on various basic industrial operations.
- All the necessary documents such as lab manuals, stock registers, the list of experiments, names of equipment, safety precautions, have been displayed at strategic locations in the labs and Workshops.
- Sufficient safety measures to be taken and the first aid boxes have also been mounted in the laboratories and workshops.
- Adequate number of Air-Conditioned seminar and Conference halls having LCD projectors, computers and internet connectivity etc.
- ICT enabled smart classrooms fitted with smart boards. Apart from this, all the classrooms are ICT enabled with computers and projectors, to help the faculty to make the teaching learning activity even more interactive and for better clarity of concepts to the students.

**Non-Academic infrastructure and physical facilities:**

- A **multipurpose ground** with open air stage to perform during various cultural activities.
- **Indoor sports facilities** such as Badminton Court, Table Tennis set up, Gymnasiums, Carom Boards, and Chess Board and **Outdoor sports facilities** such as Basketball Court, Cricket Ground, and Volley Ball Court.
- The **gymnasium** with the latest fitness equipment within the campus. Also, to give equal space and privacy, college has separate gyms for boys and girls.

- A state of Art Centrally Air Conditioned, **Auditorium** with capacity of 500 persons. It is equipped with proper public address system and LCD Projector with large screen to augment the audio visuals of all the events.
- The institute conducts both indoor and outdoor **Yoga** activities from time to time.
- **A Dispensary within campus to** provide round the clock medical facilities to the students and its employees. It is equipped with all the necessary infrastructure, a qualified doctor, nursing staff, free medicines, 02 ambulances and to deal with emergency cases.
- **Separate hostels** for boys and girls.
- A well-furnished **crèche facility** with day care arrangements is provided in the campus, at no profit no loss basis.

**Other facilities:**

- Transportation facility for students and faculty
- Canteens and Food Courts
- Music and Dance Room
- Common Rooms
- Brand Studio
- Branches of two banks
- 4 ATMs.
- Tuck Shop

| File Description | Document | |
| --- | --- | --- |
| Provide Link for Additional information | [View Document](View Document) | |

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

**Response:** 28.69

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

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
| --- | --- | --- | --- | --- |
| 469.48 | 341.76 | 532.99 | 570.75 | 492.85 |

| 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:**

The institution offers a large, WI-FI and LAN enabled Central Library in addition to Department Libraries with sufficient seating capacity for students that is spread out across two levels with 24-hour video surveillance (CCTVs) and has a total carpet area as per AICTE rules.

**AUTOMATED INTEGRATED LIBRARY MANAGEMENT SYSTEM:**

Library works on **LIBSYS SOFTWARE** on cloud.  Library Collection's WEBOPAC is made available with URL http://cgcopac.lsease.in/ via institution's website https://www.cecmohali.org/.

**DELNET**: The library has subscription of DELNET database via link http://www.delnet.in  since the year 2013 and is subscribing e-journals and e-books through World e-book library via link http://database.worldlibrary.org/                and            Gale            journals            via            URL https://go.gale.com/ps/start.do?p=SPJ.SP04&u=chandigarhengg

**EBSCO**: Provides access to e-journals and   e-books of renowned publishers.  EBSCO resources can also be remotely accessed on EBSCO App. or on link http://search.ebscohost.com

**National Digital Library (NDL),** Lakhs of e-books can be accessed through NDL via link http://ndl.iitkgp.ac.in//.

**NPTEL Video lectures**: Stream wise NPTEL video lectures can be accessed via ftplink - ftp://192.168.100.14

**TURNITIN SOFTWARE**: To promote and support the research activities, the institute subscribes to TURNITIN SOFTWARE since the year 2020 for checking of plagiarism/similarity index.

**DIGITAL LIBRARY**: Adequate numbers of systems are placed in Digital library for the students to

access e resources and internet.

**OER REPOSITORIES:** Library provides teaching and learning materials that are freely available and offered online (OER Links attached in Additional Information as Annexure 1) for all the students to use.

**PRINT RESOURCES**:

Library collection includes Reference books, Text books, General / Subject and Competition books.

| Scheme of classification | Dewey decimal classification (DDC) |
|---|---|
| Collection - Bar-Coded and Computerized | Yes |
| WEBOPAC search on library premises and remote | Yes |
| Printed - National Journals | Yes |
| Bound Volumes of Journals previous years | Yes |
| Technical and non-technical magazines | Yes |
| National and Regional newspapers | In 3 languages English, Hindi, and Punjabi |
| Weeded out old edition/torn/mutilated / out of syllabus | Yes |
| Reprographic and Scanning Facility | Yes |
| Library timings | 9am to 7pm (During Exam. 9am to 9 pm) |
| Book Bank Facility | Yes |

**USAGE REPORTS:**

- Circulation Counter is available for issue, return and renewal of books. All the transaction details are intimated to its users through Email and SMS simultaneously. Through the library software **LIBSYS, all Reports Related to The Library Collection** (accessions and transactions, etc.) and its **Users** (faculty, students, and non-teaching staff) can be generated.
- Library Entry Register tracks the daily footfall of students.
- Usage of E resources can also be generated from the respective E Resource website.

As a part of its User Awareness Programme, the library hosts expert talks, vendor presentations, training sessions, and other events for the institute's students, researchers, and faculty. To make sure that students are aware of the library's services, the library organises an **Orientation Programme** for new students at the start of the academic year.

| File Description | 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:**

Over the years, a dedicated department, viz IT Department has been developed in the institute. This department is headed by senior Network Administrator well supported by System Administrator and an experienced team of Network and Desktop Engineer. This department provides continuous and uninterrupted services by coordinating and extending hardware & networking support to all the Academic Departments, Examination Branch, Administration Offices, Central library, Hostels, and other Central Facilities. This department is a single point of support for procuring, installing, interfacing, troubleshooting, and maintaining of IT devices and peripherals situated at various locations of the college.

The IT infrastructure in the institute has been increased and upgraded from time to time to provide the best computational infrastructure to the students, faculty and to cater the academic and research needs in the Campus. The exercises have been arranged in a manner that, the IT framework and related offices are dependably keeping pace with best-in-class innovation.

The sufficient number of computers and other IT facilities are increased from time to time.

- Over the years, the following additions and up gradations have been observed:

1. The computers have been upgraded in terms of configuration especially SSD and RAM (2GB to 4GB).
2. The cabling has been upgraded from Cat 5 to Cat 6.
3. The Switches have been upgraded from Unmanaged (D-Link TP) to Managed 2960 CISCO.
4. The Connectivity has been upgraded from Fibre to Star Topology.
5. The Routers have been upgraded from Conventional to Managed Wi-Fi with controller-based solution.
6. The bandwidth has been upgraded from 50 Mbps to 1.2 Gbps.
7. The Security has been upgraded from Cyberoam 1000D to Fortinet 1500D.

- The computers and other peripherals are write-off continuously, as per the guidelines of the Punjab Pollution control board and computers are also donated.
- Currently the Institute is using high speed leased line link of 1.2 Gbps from RCom and HFCL connect.
- An optic cable network from reliance communication, of appx. 5 kms connects all the building blocks of the institute.
- The institute has 50 Wi-Fi Access Points, 75 network switches, 9 Servers hosting different applications, 10 system software and 50 application software, 1604 computers, 52 Printers, 120 Projectors, 90 CCTV Cameras, which provide computational environment.
- All the academic blocks including Laboratories are connected by UPS with average backing up of 15 Mins.
- The Institute has CISCO spark kit plus video conferencing unit, which is being used for various

events such as Smart India Hackathon.
- The Institute also has Dish TV connection for Swayam Courses.
- In campus, faculty and students are also provided with dedicated Login credentials for accessing internet facility in the campus, using next generation Firewall facility (FortiGate 1500D), also known as second generation firewall, which protects campus through advanced security features. FortiGate firewall provides functions like deep-packet inspection, intrusion prevention (IPS), advanced malware detection, application control, and overall increased network visibility through inspection of encrypted traffic.

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

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

**Response:** 3.17

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

Response: 1298

| File Description | Document |
|---|---|
| Extracts stock register/ highlighting the computers issued to respective departments for student's usage. | [View Document](#) |
| Provide Links for any other relevant document to support the claim (if any) | [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:** 39.12

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

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---|---|---|---|---|
| 443.61 | 366.04 | 848.00 | 745.94 | 879.42 |

| 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](#) |
| Provide Links for any other relevant document to support the claim (if any) | [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:** 83.88

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**

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 3513    | 3656    | 4020    | 4170    | 4310    |

| File Description | Document |
|------------------|----------|
| Year-wise list of beneficiary students in each scheme duly signed by the competent authority. | [View Document](#) |
| Upload policy document of the HEI for award of scholarship and freeships. | [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](#) |

**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](#) |
| Institutional data in the prescribed format | [View Document](#) |
| Provide Links for any other relevant document to support the claim (if any) | [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:** 86.52

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

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---|---|---|---|---|
| 3568 | 3819 | 4125 | 4245 | 4530 |

| 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:** A. All 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](#) |
| Provide Links for any other relevant document to support the claim (if any) | [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:** 78.7

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

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
| --- | --- | --- | --- | --- |
| 1027 | 1050 | 1134 | 1081 | 1031 |

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

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
| --- | --- | --- | --- | --- |
| 1207 | 1280 | 1411 | 1424 | 1442 |

| 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](#) |
| Institutional data in the prescribed format | [View Document](#) |
| Provide Links for any other relevant document to support the claim (if any) | [View Document](#) |

**5.2.2** *Percentage of students qualifying in state/national/ international level examinations during the last five years*

**Response:** 10.96

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.)**

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---|---|---|---|---|
| 40 | 25 | 24 | 32 | 37 |

| 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](#) |
| Provide Links for any other relevant document to support the claim (if any) | [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:** 190

5.3.1.1 *Number of awards/medals for outstanding performance in sports/cultural activities at national/international level (award for a team event should be counted as one) year wise during the last*

*five years*

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 04 | 00 | 66 | 64 | 56 |

| File Description | Document |
|------------------|----------|
| list and links to e-copies of award letters and certificates | [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](#) |

**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:** 32.2

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

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 29 | 19 | 39 | 42 | 32 |

| 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 CGC Landran Alumni Association, a registered body, functions as an organization through which its members interact amongst themselves, as well as with their Alma Mater. Every person receiving any degree from the constituent institute of Chandigarh Group of Colleges, Landran automatically becomes a life member of the CGC Alumni Association.

**Roles/Responsibilities of Alumni Association**

1. Alumni Association of Chandigarh Group of Colleges, Landran functions to strengthen the bond between the institute and its alumni.
2. The Alumni Association acts as a platform where the existing students and the alumni can interact for a healthy, mutually beneficial relationship.
3. The prime responsibility of our association is to foster relations between the Alumni and the Institute.
4. The association organizes various events such as Annual Alumni Meet, Alumni Chapters, Expert Talks to keep the alumni in constant touch with the institute and also help them in networking amongst themselves.
5. The association also tracks and highlights the achievements and successes of alumni so as to provide impetus to the institute and its students.

Alumni Committee created a Digital Platform of more than 30,000 data by 'Vaave Networks' for accumulation of data of the Alumni to regularly communicate with alumni of various batches, branches, location groups, to organize mentoring sessions for current students, posting job opportunities for students in their organizations who are not placed or simply for social networking. We have our alumni under different categories as Corporate, Entrepreneurs, Defense Forces, Govt officials, Celebrities, pursuing higher education and others. Vaave offers a Robust Technology Platform to power your exclusive alumni portal with an integrated mobile app. The platform is a comprehensive one-stop solution with all the features required to build and manage an alumni community. Alumni connect is also strengthened by collecting their current status details with constant efforts of faculty-alumni coordinators. Faculty is the biggest connect other than social media and the software.

 CGC Alumni also takes the responsibility of guiding the students from time to time and acquaint them with industry demands and answer their doubts and queries in the peer mentoring sessions.

CGC launched different city chapters across India as well as Abroad to name few cities in India- **Delhi**, **Bangalore**, **Pune** and **Chandigarh** and an International Chapter in British Columbia (Canada) which was inaugurated by our hon'ble Chairman CGC.

**Contributions from Alumni Association members:**

- Expert Speakers on Current trends in Industry and related to curriculum.
- To render assistance to students at the institute through Career Counselling, peer- mentoring sessions.
- Academic guidance, Guest Lectures, Placements etc.
- Help in Curriculum enrichment by suggesting need of the hour topics/subjects as and incorporated in TPP programs run by the institute.
- Serving the Institute as employees.
- Helping the IQAC as active members for quality enhancement.
- To render services as stakeholders in various committees.
- Facilitator for campus recruitment through the HR of their respective companies.

| File Description | Document |
|---|---|
| Provide Link for 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:**

**The governance and leadership is in accordance with vision and mission of the institution:**

- Chandigarh Engineering College-CGC, Landran, popularly known as CEC-CGC, was established in the year 2002. It is a self-financed Engineering and Management Institute registered under the Societies of Punjab Act XXVI of 1961 and managed by Shri Guru Ramdas Educational Society.
- The Institute has a comprehensive Vision and Mission that focuses on an innovative approach to quality teaching and research in engineering and management to bridge the gap between industry, society and academia.
- The governance of the Institute demonstrates strong leadership in tune with the Vision and Mission statements.
- The Vision and Mission of the institute are developed taking into account the views of all stakeholders, i.e. management, faculty, students, parents, alumni, and industry.
- In order to ensure quality and instill the culture of excellence, the Institute has developed a Perspective/strategic plan aligning with vision and mission of the Institute.

**Various institutional practices such as decentralization and participation in the institutional governance:**

- Decentralization and participatory management are firmly entrenched in the Institute's administration.
- The Institute strongly believes in transparency, participative leadership, delegation of authority at multiple levels and decentralization of its operations. This is reflected in the entrustment of necessary powers and responsibilities in the hierarchy.
- The Institute has decentralized its operations and delegated authority at various levels from Director-Principal to the Deans/Hods to Faculty and students to ensure effective governance.
- Hierarchical clusters are created from top management to lower level to clearly outline duties, responsibilities, accountability, and authority at each level.
- To promote participatory management, Various Statutory and Non-Statutory Committees are in place with representation of various stake holders as per norms defined.
- Care has been taken to ensure that all stakeholders are adequately represented in the participatory governance from Director-Principal's involvement in BOG, Finance Committee and Academic Committee etc to faculty's representation in BoG, Academic Committee and IQAC etc to student's participation in the IQAC, Anti Ragging Cell etc. The opinions of the students are taken into consideration through various other fora forums like open house, meeting with Director-Principal, HoD etc.
- Participative Governance and delegation of powers are clearly evident in routine financial matters also. There is an independent, fully fledged finance office and finance committee at institute level

in which the various hierarchical levels participate.
- The delegation of Powers can be understood in the financial authority given to Director-Principal and to HoDs as imprest funds to efficiently manage their routine finance matters.
- All Financial transactions are audited both at internal and external level.

| File Description | 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:**

The functioning of the institutional bodies is effective and efficient as visible from policies, administrative setup, appointment and service rules, procedures.

**Policies**

- The institution has established written policies for all important aspects of governance.
- The participation of all key stakeholders in decision-making processes is also specified in the relevant policy.
- Therefore, through the structures, processes, and practices of governance, everyone associated with the institutional bodies works together for the development of the institution.

**Administrative Set Up**

- The institute has well-structured hierarchical management involving all key stakeholders.
- The CGC management/ BoG takes policy decisions regarding the academic and administrative affairs of the institution.
- The Director-Principal serves as the institution's head. He looks after the smooth functioning of the academic system by creating an excellent, creative and participative learning environment in the institution.
- HoDs are responsible for executing the academic plan of the department and making decisions concerning department affairs.
- Faculty take care of duties of Academic Coordinators, Class Counsellors (Student Mentors), Course Coordinators, Alumni Coordinators etc.
- The overall functioning of the entire CGC is managed by Campus Director, CGC on the behalf of Management and Director Administration and Assistant Director Admin makes decisions about all administrative affairs of the institution.
- The Corporate Resource Centre (CRC) and Training and Placement Programme (TPP) are tasked to organize on- and off-campus placement drives and running placement preparedness programs.
- A separate HR department under Director, HR takes care of personnel matters such as recruitment,

promotions, service rules and policies etc.
- The librarian is responsible for acquisition and provision of library resources.
- The DSW office Looks after all students oriented cocurricular and extra-curricular activities.
- The office of the Registrar and Finance look after all university and academic related matters and financial matters respectively.
- A separate R&D department and International Affairs department are also existing to take up the related matters.

**Service Rules, Procedures, Recruitment and Promotional Policies**

- Service Rules, Procedures, Recruitment, Promotional Policies are framed as per the rules and regulations of management of Chandigarh Group of Colleges (CGC), of which CEC-CGC is a constituent part, in accordance with applicable norms of AICTE and Affiliating University from time to time and are available in the college website and circulated among teaching and non-teaching staff.
- Faculty promotions are done in accordance with CGC Promotion policy.
- Teaching and Non-Teaching staff is appointed as per norms based on the institute HR policy, in accordance with affiliated university and other statutory bodies from time to time as per requirement and sanctioned posts.

**Various Committees/Bodies**

- Various committees/bodies at institute level are formed for the effective functioning of the organization.
- The objectives and functions of the committees are framed and organized according to the instructions of the head of the institution and in compliance with the standards of Affiliating University and AICTE.

**Deployment of institutional Strategic plan**

Based on the analysis and deliberations at various forums, a strategic plan has been developed with respect to the following aspects:

- Teaching – Learning Process
- Student Centric Approach
- Research and Development
- Developing requisite competencies amongst students
- Human Resource Planning and Development
- Quality Admissions
- Career Enhancement
- Industry Interaction
- Society/Community Engagement
- Internationalization

| File Description | Document |
|---|---|
| Provide Link for Additional information | [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:** A. All of the above

| File Description | Document |
|---|---|
| Screen shots of user interfaces of each module reflecting the name of the HEI | [View Document](#) |
| Provide Links for any other relevant document to support the claim (if any) | [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:**

*The institution has effective welfare measures for teaching and non-teaching staff:*

The management offers several welfare measures for faculty and staff which are summarized as follows:

1. Provision of various leaves, vacations as per norms.
2. Existence of Employees' Welfare Fund, PF, ESI and Gratuity facilities as per norms
3. Maternity benefits as per CGC Maternity Policy.
4. In Campus Crèche Facility.
5. Medical care is available with full-fledged Dispensary.
6. Availability of Transportation Facility.
7. Facility of Interest free loan/ Advance Salary in case of emergencies.
8. Provision of Subsidized medical treatment for staff, faculty and their family members in Renowned Hospitals and accidental insurance.
9. Incentive scheme SHAGUN for marriage of staff or his/her immediate relative.
10. There is a comprehensive R&D Policy.
11. Faculty members are encouraged and given adequate support to pursue higher education, as per policy.
12. Orientation programs are conducted for the newly recruited faculty members.
13. Ph.D. enrolment is encouraged for non-doctoral faculty members. Existence of Increment policy on completion of Ph.D. Degree.
14. Opportunities for international exposure like faculty exchange etc as per norms.
15. Accommodation for staff and faculty on campus.
16. Yoga classes and psychological counselling.

17. Provision for use of various in-campus recreational facilities.

**Effective Performance Appraisal System for Teaching and Non-Teaching Employees**:

- CEC strictly follows the AICTE and Affiliating University Regulations on Minimum Qualifications for Appointment of Faculty and other Academic Staff in the institute.
- For its teaching and non-teaching staff, the performance of each employee is assessed annually after completion of one year of service.
- The goal is not only to objectively evaluate the performance as per established norms, but also to identify potential aspects for improvement that can eventually lead to further progress and growth of the employee.

**The salient features of the performance appraisal system are as follows:**

**Teaching Staff:**

Key points for faculty appraisal are:

1. Performance feedback session/Academic Results and written performance review.

2. Use of Participatory and innovative Teaching-Learning Methodologies, Updating of subject content, Course Improvement, Remedial Classes Conduction etc.

3. Research Papers/Books Published /Articles/Chapters etc.

4. Activities like FDP, Seminars/Workshops/conference etc. attended/organized.

5. Membership of Professional Bodies/Professional Bodies Chapter for students and its activities.

6. Ongoing Research projects and consultancies/innovative work done.

7. Efforts in Placements Activities and Research Guidance at PG/Ph.D. level.

8. Achievements/Awards/Recognition during the year:

9. Additional Responsibilities Performed etc.

**Non-Teaching Staff:**

- All non-teaching staff are also assessed through annual performance appraisal.
- The various parameters for staff members are assessed under different categories i.e.
    - Duties and Responsibilities
    - Professional Strengths and Weaknesses
    - Achievements, awards, Recognition during the year
    - Job Knowledge
    - Planning and Organizing
    - Responsibility and Cooperation
    - Communication

- Interpersonal Skills
- Initiatives
- Quality of Work
- Judgement
- Attendance
- Time Management

The overall assessment is based on the cumulative grade by the Reporting Officer/HoD, which is then forwarded to the Director and then to the HR Office. On satisfactory performance, all the employees are granted financial upgradation as per their performances, requisite experience, and qualifications.

**Benefits:**

The Performance Appraisal System has significantly helped in the evaluation of the performance of employees, in motivating them, analysing their strengths and weaknesses, and ensuring better performance.

| 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:** 51.81

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

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---|---|---|---|---|
| 278 | 83 | 264 | 155 | 177 |

| File Description | Document |
|---|---|
| Policy document on providing financial support to teachers | [View Document](#) |
| Institutional data in the prescribed format | [View Document](#) |
| Copy of letter/s indicating financial assistance to teachers and list of teachers receiving financial support year-wise under each head. | [View Document](#) |
| Provide Links for any other relevant document to support the claim (if any) | [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:** 87.1

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**

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 423 | 389 | 391 | 416 | 440 |

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

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 122 | 88 | 104 | 97 | 106 |

| File Description | Document |
|------------------|----------|
| Refresher course/Faculty Orientation or other programmes as per UGC/AICTE stipulated periods, as participated by teachers year-wise. | [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](#) |

## 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:**

**Institutional strategies for mobilization of funds and the optimal utilization of resources:**

- The institution is mobilizing funds and using optimum resources of the fund effectively throughout the years. Institute maintains & follows a well-planned process for the mobilization of funds and

resources.

- The funds are mainly self-sufficient for the academic and research related activities of the Institution.

**Mobilization of Funds**:

- The student's tuition fee, Hostel fees and Transportation fees including scholarships from various agencies is the major source of income for the institute.
- Extensive efforts are undertaken to secure sponsored and consultancies funding from various government and non-government agencies under different schemes.

**Mechanisms used to monitor effective and efficient use of financial resources:**

Before the commencement of every financial year, Director-Principal submits a proposal on budget allocation, by considering the recommendations made by the heads of all the departments.

- Institute budget includes both recurring and non – recurring expenses.
- The expenses allocated will be monitored by the accounts department as per the budget and approved by the BoG.

**Utilization of Funds**

- An internal financial panel exists to monitor the optimum utilization of funds for various recurring and non-recurring expenses.
- The finance committees ensure that the expenditure lies within the allotted budget and maximum percentage out of allocated budget is utilized.

**Optimal utilization of resources**

The college aims at promoting research, development, consultancy, and such other activities, involving the faculty and staff at various levels.

- Thus, the faculty manpower resources, who exhibit initiative and receive substantial grants for R&D works to strengthen the infrastructure in the institute, would be encouraged.
- Effective utilization is ensured through the appointment of adequate and well-qualified manpower and through encouraging innovative teaching-learning practices.
- Labs and related infrastructures beyond college hours for students to carry out different projects and allied co-curricular activities/extra-curricular activities.
- The college infrastructure and manpower is utilized as an examination facilitator for Government examinations/University Examinations/examinations conducted by various agencies.
- Library functions beyond the college hours for the benefit of students and faculty.
- Providing college sports and other facilities to organise various inter-university sports competitions.
- To provide college infrastructure to various social agencies, outside agencies for conducting various social activities, promotional activities, Youth Fest etc.

**Institution conducts internal and external financial audits regularly.**

- The Institution has established a mechanism for conducting both the internal and external audits on the financial transactions every year to ensure financial compliance.
- Internal audit is conducted regularly by a panel of internal Auditors. They thoroughly verify the income and expenditure details, and accordingly approve/suggest amendments.

**Process of external audit:**

The Institute has appointed a firm of Chartered Accountants for external audit.

- The auditor is given access to all legal documents, correspondence, books of accounts, government orders, office orders and other information associated with the accounts and as deemed necessary by the auditors.
- The auditors ensure that all payments are duly authorized and approved by the competent authorities and remain in sync and within the budgetary proposals.
- After the audit, the report is sent to the management for their information.

All these mechanisms exhibit the transparency being maintained in the financial matters.

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

## 6.5 Internal Quality Assurance System

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

**Response:**

The Institute established an Internal Quality Assurance Cell in 2017 as per the guidelines of NAAC.

- The IQAC regularly holds meetings with Head of Departments/Coordinators whenever any decision has to be taken to improve the processes.
- Representatives discuss suggestions from the staff and students in the IQAC 's meetings.
- The approved decisions are communicated to the staff and students.
- Takes initiative in organizing Seminars/Workshops related to effective implementation of any area of importance to the institute.
- The IQAC conducts a host of awareness, training and orientation programs with a view to imbibe quality among its stakeholders.
- Continuous feedback, Comprehensive Academic and Readiness Audits, Feedback from alumni, industry, students, and teachers helps it to institutionalize quality culture.
- Strengthen institute's academic structure by forming different committees/clubs/cells to address the needs of the students in curricula and co curricula aspects.
- Frames/Finalizes/Approves various structures and policies such as Academic Calendar, MST

structures, feedback forms etc.
- Collaborative quality enhancement activities.
- Plans and guides students for add on courses.
- Documents the activities and achievements of the departments at the end of each year.

Due to continuous efforts notable initiatives have resulted. The measures are to comply the two key policy.

**A) Modern Training Methodologies towards skill enhancement**

The measures taken are:

1. IIT Mumbai Spoken Tutorials – Certification courses.
2. NPTEL Active Chapter
3. Center of excellence
4. Virtual Lab, IIT Delhi
5. Compulsory Internship for Students

**B) Quality Infra for Imparting Value Based Education**

The measures taken are

1. Smart Classrooms, ICT enabled Classrooms and Seminar Halls
2. Facilities in Laboratories for Open ended and Design Experiments beyond Curriculum
3. Learning Management System (LMS)
4. CSE and ECE– NBA Accredited for implementing Outcome based Education.
5. Professional Society Chapters (e.g. CISCO Academy, CSI, ACM, Geeks for Geeks, SAE, ACS, IETE Student forum, The Institutions of Engineers etc.)
6. Common Computer Centre, Well Stacked Library, Digital Library to Promote Self Learning

**IQAC is monitoring the institute in the following quality assurance strategies and process issues:**

- Identify the processes needed.
- Ensures availability of requisite information and resources
- Measure, monitor and analyze.
- Ensure, achieve planned results and improvement.
- Suggest modifications to academic planning & Curriculum.
- Readiness of Departments in the beginning of the semester.
- Pre and Post audit execution
- Adherence to institutional academic calendar
- Stake holders' Feedback, analysis and action taken
- Attainment of Cos, POs, PSOs by the Departments.
- Course Files
- Weak and bright students' identification and action taken.
- Students' Academic performance.
- Students' participation in competitions at various levels.
- Exposure of students to foreign Universities.
- Placements.
- Add on Certification courses.

- Publications and Patents by students.
- Skill enhancement.
- No. of Doctorate Faculty.
- Record of subject wise attendance.
- Displaying attendance.
- Informing parents about shortage of attendance/marks.
- Students submit medical certificates immediately after reporting to institute if the absence is on medical grounds.

**The efforts of IQAC have resulted in improvement in various aspects, e.g.**

- No. of placements from 70.25% in 2017-18 to 84.01% in 2021-22
- No. of Add on/Certificate/Value added programs offered from 16 in 2017-18 to 226 in 2021-2022

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

**6.5.2 Quality assurance initiatives of the institution include:**

1. **Regular meeting of Internal Quality Assurance Cell (IQAC); 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:** A. Any 4 or more of the above

| File Description | Document |
|---|---|
| Quality audit reports/certificate as applicable and valid for the assessment period. | [View Document] |
| List of Collaborative quality initiatives with other institution(s) along with brochures and geo-tagged photos with caption and date. | [View Document] |
| Provide Links for any other relevant document to support the claim (if any) | [View Document] |
| Link to Minute of IQAC meetings, hosted on HEI website | [View Document] |

# 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:**

Gender equality is one of the key issues prevailing in society despite of regular initiatives by Government. Our Institute Contributes in the initiatives by organizing various gender equity programs such as celebration of Women's Day, Panel Discussions, Guest speakers (male & female) from prominent field are invited to speak on the given topic which highlights the importance and contribution of women in the society and ways to empower women.

The institute provides equal opportunities to all individuals irrespective of gender (male, female, and transgender), race, caste, colour, creed, language, religion, political or other opinion, national or social origin, property, birth or other status. This unique work culture, healthy traditions and ethos have led to enrolment of more than 22% female students and more than 50% female faculty. The administrative posts in the institute are held by both the genders in satisfactory ratio. Safety, security and well-being, along with gender parity and friendly work ambience are the assets of the institute.

The gender equity promotion programs organized by the institution along with the other facilities that are provided are given below:

### 1. Safety and Security

- Well-trained and vigilant women security guards are stationed across the campus.
- Security checkpoints at all the campus entry and exit gates.
- Extensive CCTV surveillance network with 24x7 monitored control rooms.
- Strict implementation of Anti-Ragging cell /Squads
- Awareness campaigns on women safety and gender sensitivity through various events
- Separate hostels for males and females with dedicated and trained wardens (separately for males and females).
- Eco-friendly crèche facility is also available for the kids of our employees which is supervised by a dedicated and trained staff.
- Awareness programs on health and hygiene of the women (students /staff)
- 24*7 Female Nursing staff in the hostel and College Dispensary.
- Parlour facility in the campus for girls.
- Female Psychologist is also available to deal with the emotional and mental issues of the girls.

### 2. Gender Concerns & Redressal

- Grievance Redressal Committees is constituted especially for staff and students
- Internal Complaint Committee is constituted to scrutinize the issues regarding sexual harassment or gender biasness.
- Gender sensitization camps are organized in slums and nearby rural areas of the Institute.

- ○ Women's rights, Health & Hygiene, Anti Dowry, Female Foeticide, Beti Padhao, Beti Bachao Campaigns had also been conducted.
- ○ Events on Women Entreprenurship had also been organized.
- ○ Orientation Programmes for Teachers and Students.

**3. Common Rooms:**

Separate common rooms have been allocated for females in the institute.

**4. Commemorative Days and Festivals Celebrations:**

The institute celebrates Engineers Day, Guru Nanak Dev Jayanti, Dr B R Ambedkar Jayanti, Teachers Day, Women's Day, Youth Day, National Science Day, etc. Festivals like Lohri, Holi, Baisakhi and Eid etc. and other days like Happiness Day, Cancer Day, and Heart Day etc. are also celebrated in the institute.

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

**7.1.2 The Institution has facilities and initiatives for**

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

**Response:** A. 4 or All of the above

| File Description | Document |
|---|---|
| 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](#) |
| Provide Links for any other relevant document to support the claim (if any) | [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:** A. All 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](#) |
| Policy document on environment and energy usage Certificate from the auditing agency | [View Document](#) |
| Green audit/environmental audit report from recognized bodies | [View Document](#) |
| Provide Links for any other relevant document to support the claim (if any) | [View Document](#) |

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

**Response:**

The institute provides an inclusive environment for everyone with tolerance and harmony towards cultural, regional, linguistic, communal socioeconomic and other diversities. It takes pride in having a cosmopolitan environment where students from 20 different states, study, depicting diversity and brotherhood. Students reside together in hostels and also attend classes thereby experiencing diverse cultural exchange. Different sports and cultural activities organized inside the college promote harmony among them. Regional festivals like Holi, Teej, Janamasthmi, Eid etc. are celebrated in the college. This establishes positive interaction among students of different racial and cultural backgrounds. Student grievance redressal cell and Internal Complaint Committee (ICC) have been constituted to deal with the grievances of the students without any racial or cultural biasness.

The institute works on three core Values: Integrity, Inclusiveness and compassion that has to be followed by all the students, staff, faculty and every employee of the institute, irrespective of their cultural, regional, linguistic, communal socioeconomic and other backgrounds or diversities.

In addition to laying a strong academic foundation for the student community, the college works hard to transform its students into better citizens of the nation. In this manner, the institute promotes a sense of unity among the student community through a variety of activities and programmes, besides offering professional and technical education.

Every Year the Annual Technocultural fest 'Parivartan' is organized based on a particular theme to spread

awareness among students, faculty, staff and community, in general. Following are the themes for the past few years: Say No To Drugs, Experience the Joy of Giving, One for All, All for One, Innovate, Create & Celebrate etc.

The Institute ensures that the students participate very enthusiastically in all such activities so as to learn from them. From the last five years, the college has strived forward with great effort to increase the level of awareness and appropriate practices amongst the students with regard to the following areas

**1. National Identities and Symbols:** The institute has always taken various direct and indirect steps to promote the awareness about various National Identities and Symbols. The Indian Tri-colour stands tall at the main entrance of the Campus and in this way the College spreads the message of nation first policy. The College celebrates the Independence Day and Republic Day with great pomp and vigour. NCC Cadets and NSS volunteers participate in various competitions in this context.

**2. Fundamental Duties and Rights of Indian Citizens:** Various awareness sessions have been organized for the propagation of the Fundamental Duties and Rights of the Indian citizens. Expert talks are organised to familiarise the young minds with the importance of Human Rights.

**3. Constitutional Obligations:** The institute celebrates the Republic Day as Samvidhan Divas on 26th November. We also organize student centric activities like speeches, Debate, declamation & essay writing competitions etc. to promote awareness among students about various aspects of Constitutional Obligations as Indian citizens.

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

## 7.2 Best Practices

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

**Response:**

# BEST PRACTICE - I

**1. Title:**

Building Careers, Transforming lives through strong career guidance with the Training and Placement Program (TPP).

**2. Objectives of the Practice**

The training and placement program (TPP) aimed at improving employability skills by enhancing their personality.

- **Employability-**To make the students employable.
- **Holistic Development-**To develop the Overall Personality of the students.
- **Beyond Curriculum Training**- To help them polish their technical, verbal, and aptitude-based skills.
- **Bridge the Gap** -To bridge the gap between the corporate sector and educational institutions.
- **Career Guidance**- To assist the students to get the good placements, clear competitive exams get higher education and be a successful entrepreneur etc.

## 3. The Context

At present the competition for employment is increasing and placement has become a challenging task. A full-fledged Training and Placement program (TPP) functions in our institute to enrich the capability of the students at par with industry standards.

**Features of the Program:**

- **Overall development**- Advanced training on changing industry requirements to students is provided during their academic sessions.
- **Practical Orientation**- Focus is on enhancing practical knowledge.
- **Team building**- The students undergo regular GD sessions to build collaborative skills.
- **Leadership skills-** Students are encouraged to undertake industry projects, presentations, case studies, research work, and some are working as trainees to get experience of the industrial working environment.
- **Confidence-** Activities are organised to boost the confidence of the students.
- **Success in challenges**- Emphasis is given to Inculcate Professional Etiquettes and Discipline along with effective grooming and presentation skills to develop the winning attitude.

## 4. The Practice

The Program named Training & Placement Program (TPP) is 360 degrees in nature and covers various Training needs of the students including technical skills, Aptitude, Communication Skills, and Overall Personality Development. Renowned industry experts are regularly roped in for interaction with students on various topics. Based on the inputs from the best in the Training Industry, the TPP Program offers training that results in overall personality development of the students, which in turn opens the following avenues for them:

- **Placements**

TPP ensures that the students receive the best placement offers. Consequently, it regularly conducts employability tests to enhance the employability quotient in partnership with leading assessment companies.

- **Higher education**

Career counseling sessions are provided at regular intervals so that students can ascertain multiple prospects in higher education.

- **Competitive exams**

Training sessions are provided timely to the students so that they can crack various competitive exams such as SSC, SSB, Banking, CAT, TOEFL, GATE, defence services, etc. Students are provided with proper reference material/books made by the TPP department. Entreprenurship**.** Guidance related to entrepreneurship is imparted so that students can launch and run new businesses. Expert talk sessions on entrepreneurship are provided timely to students for a deep understanding of business.

**Training Process:**

The students have to undergo a systematic procedure of campus placement selection process which initiates with the registration of students under our Corporate Resource Centre (CRC). Pre-placement training sessions are held for the students and their performance is evaluated regularly by assigning them the daily work and assignments. The short listing of the students for placement is done on the basis of Aspiring Minds Computer Adaptive Test (AMCAT)and academic scores. Pre-placement talks are conducted for the students by the companies in the form of presentations. Further, the students appear for the written test based on technical, aptitude, and verbal. Those who get qualified further participate in the group discussion. After this round, the shortlisted students have to clear the personal interview round which may have combined or separate HR and technical interviews. The whole process ends with this final selection round.

## 5. Evidence of Success

Based on the recommendations of the expert team, the TPP department works with the primary objective of making the students Industry-ready and ensuring that each student gets quality placements, Entrepreneurship, higher studies, and government recruitment.

- **Placement offers**- Over the years, there is a remarkable performance by students in Campus placements. Students are placed in top-notch companies such as Google, Amazon, and HCL etc. with remarkable offers.
- **Entrepreneurship**- Students have been encouraged to work as per their interests and capabilities; henceforth a segment of students has turned entrepreneurs.
- **Higher studies**- By virtue of expert guidance, the students have got admission in the in various National and International institutes of repute. The institute has sent many students to Countries like USA, UK, Australia, Canada, New Zealand, Belgium, etc. for higher studies.
- **AMCAT Score improvement**- AMCAT is a globally recognized adaptability assessment for employability skills assessments for a wide variety of recognized employers. An improvement in the AMCAT is visible evidence of success of TPP.
- **Government recruitment-** Under the training sessions of TPP experts, students have successfully cracked many competitive exams in the field of banking, defence and SSC etc.

## 6. Problems Encountered and Resources Required

- **Assessing needs, goals and success metrics** - The first challenge was to understand the need and thus develop a robust training program for students.
- **Designing of the curriculum** - Understanding the requirement of industry and varying technologies, the designing of the curriculum was a challenge.
- **Implementation** - It was difficult to motivate the students and thereby practically implement the program, which was over and above the basic PTU curriculum.
- **Students from different level of learning** – The students come from different levels of learning. It

remained difficult to bring them to a common platform and train them.

- **Extra time and extra effort -** Apart from regular academic sessions sparing time for training sessions was a challenge.
- **Recruitment** - Hiring extra faculty and trained professionals to provide training was a challenge.
- **Infrastructure - The infrastructure requirement was a challenge.**

# BEST PRACTICE - II

**Title of the Practice**

Creating transformation and transition in innovation through valuing Intellectual Property protecting novel technologies and prioritizing protection for Intellectual Property (IP): For Detailed Information about Best Practice-II,

Kindly find attached the following link for Details about Best Practice - II

 **https://www.cecmohali.org/public/documents/naac/Best_Practice_2_IPR.pdf**

| File Description | Document |
|---|---|
| Any other relevant information | [View 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:**

**Research Innovation, Sponsored projects & Entrepreneurship: In Quest of Excellence**

The institute was established with the vision to become a leading institute of the country for providing quality technical education in a research based environment for developing competent professionals and successful entrepreneurs. In order to realize the vision the promoters of the group left no stone unturned and made incessant endeavors to translate our vision into a reality. In order to create research and innovation conducive environment, a separate centre has been created with the name Research Innovation, Sponsored projects & Entrepreneurship (RISE). In order to realize the vision of the institute, the centre has

excelled in the following domains and created a niche for itself.

**Policies**

Chandigarh Engineering College, Landran, that aims to foster the spirit of Research, Innovation and Entrepreneurship, for which a detailed R&D policy, IPR policy and Startup policy is in place.

**Incubation Support**

The institute has a fully functional incubation center, where currently 36 startups are being incubated. Over the years the center has been funded by Government of India under various schemes to promote entrepreneurship, recently we have received funding from AIM NITI Aayog Government of India of Rs. 2,49,24,000/. We have been recognized as the host institute by Ministry of Micro, Small & Medium Enterprises for the incubation component.

**Tie-ups & Collaborations**

We have premier MOU's signed with National & International bodies. We have laboratories set up by premier organizations. Business Analytics laboratory has been set up by IBM, Drone Technology laboratory by Fly X, Red hat Linux Lab in collaboration with Red hat, Oracle Lab by Oracle Academy, Fresco Lab, Raju Bros IoT lab, NVIDA sponsored Artificial Intelligence lab, virtual labs in collaboration with IIT Delhi. Apart from that we have tie-ups with government agencies like CDAC Mohali, CSIR CSIO Chandigarh, Startup Punjab.

Crossing the borders, few of our faculty members are doing collaborative research projects with foreign universities and research organizations that includes University of La Mancha, Madrid, Spain, Institute of Optics, Madrid, Spain, and Institute of Information Theory and Automation, Prague, Czech Republic.

**Grants**

- The institute received the very first grant to establish the **EDC** cell in the year 2014 to 2019 under IEDC.
- The Antenna & radiating system laboratory has been established for research work is funded by AICTE under MODROB Rural scheme.
- **DST** has granted a sum of **Rupees Fifty Seven Lakhs** to promote and disseminate environment friendly technologies to generate sustainable employment opportunities for SC community.
- Five of our incubated startup's received a seed fund of **Rs 3 Lakhs** each from **Startup Punjab.**
- Our incubated startup KieKie Tech private limited has won a seed fund of **Rs One Crore, from AIM NITI Aayog under ANIC 2.0.**

**Rankings**

- The first feather to our cap was added when we were the only private engineering college to get accreditation by the National Board of Accreditation (NBA) for 5 years (from 2009 to 2014). That to in the span of just seven years of existence. This achievement added wings to us and our institute never looked back. In the year 2022 again we have been given the NBA accreditation for 5 years.
- We have two center of excellence (COE) established at our institute for Drone Technology in association with Fly X,  Networking in association with CISCO Networking Academy.

- Chandigarh Group of Colleges has been placed at 4th rank in the list of Indian applicants for patents from academic institutes and universities for the year 2021-2022.
- Chandigarh Group of Colleges has been placed at 3rd rank in the list of Indian applicants for patents in the field of Information & Technology for the year 2020-2021.
- We are in the Excellent Band for the ARIIA ranking for the year 2021.
- The institute has been ranked on 139th position among the Top Engineering Institutions in India by NIRF, 2022.
- Institute received the highest 3.5-star rating by the Ministry of Education's (MoE) Institution's Innovation Council (IIC) for the year 2021-2022.

**Patents**

We have a dedicated IP cell that provides mentorship to the students as well as faculty. Weakly mentorship sessions are conducted by IP experts to foster the spirit of innovation. We proudly boost of filling **800**+ patents, **400**+ patents have been published, **10** innovation patents have been granted and **4** design patents have been granted.

**International & National Events**

National & International Workshops, Capacity Building Programs, IP Awareness Programs, Faculty Development Programs, Hackathons, Ideathons etc are being regularly conducted at the institute.

**MOOCs & Video Lecture Series**

In order to spread the knowledge of faculty members of the institute, regular MOOC sessions & Video lectures are recorded by the faculty members that are useful to the students of the campus as well as the students of other institutes as well. We have a separate YouTube channel to share the recorded sessions and courses (CEC Youtube Channel).

**Publications**

We at Chandigarh Engineering College, proudly state that till date we have published **1247** research papers in journals of National & International standards. We have **5922** citations to our credit. The institute has an **h index of 35** and **i10 index of 182** as per the google scholar on 21st March 2023.

**Training & Certifications**

The institute has tieups with CISCO, ICT Academy, Palo Alto, IBM, Amazon, Infosys Campus Connect, NPTEL, NASSCOM, Oracle Academy, Coursera  etc. and conducts regular training sessions in collaboration with these agencies.

**Industry Institute Partnership**

In order to bridge the gap between the industry and academia, the faculty and students of the institute undertake several consultancy projects. The departments have been offering consultancy to Solitare Infosys, GT Tech Solutions etc. Apart from that Drone Tech Solutions Private Limited is establishing a drone flying school at RISE center to provide skilled drone flying license.

We aim to be one of the best research institute in the state of Punjab. In the span of last 20 years, we have achieved a lot and still making efforts to further achieve further milestones.

| File Description | Document |
|---|---|
| Appropriate web in the Institutional website | View Document |

# 5. CONCLUSION

## Additional Information :

ACHIEVEMENTS:

The Institute has got the privilege to feature handsomely in various ranking and awards
years after years. It has ranked 139 th  among top Engineering institutions in National
Institutional Ranking Framework (NIRF) 2022.The institute is recognized in the band
"Excellent" under the category of "Colleges/Institutes (private/self-financed) (technical)" in
Atal Ranking of Institutions on Innovation Achievement (ARIIA) 2021.  It is also awarded with 3.5-star rating
by Innovation Council of the Ministry of Education. In Addition, the institute has continuously figured in
various renowned national rankings. It has validation and endorsements from corporations like TCS, Wipro,
Cognizant, Capgemini, L&T, Amazon and many more. The institute has the achievement of receiving the
World Bank grant of Rupees Four Crores under the TEQIP-II (Technical Education Quality Improvement
Programme) scheme. The institute has executed various Innovative Projects with funding from
DST, Government of India and prominent Industry houses. It has fully equipped ACIC incubation centres at
different departments to help develop ideas into products.

INSTITUTE SOCIAL RESPONSIBILITY
Institute Social Responsibility has always been an integral part of institute's vision. In a view
to contribute its share towards the society, the management of CEC-CGC, Landran, Mohali
has undertaken several initiatives towards the benefit of the Society at large:
ISR INITIATIVES:
? CEC-CGC, Landran, Mohali carry out the social development activities in rural areas
under Unnat Bharat Abhiyan. The Institute has adopted 5 nearby villages under this
scheme.
? Donation of computers for schools of nearby areas
? Fee Concession to meritorious students from weaker sections of society
? Beautification of allotted areas in the City Beautiful –Chandigarh.

? CEC-CGC, Landran, Mohali tied up with PGIMER, Chandigarh for blood donation to
needy emergency cases to save precious lives.

## Concluding Remarks :

Chandigarh Engineering College-CGC Landran Mohali is a prestigious and well-respected educational
institution, the institute has been providing high-quality education and training to students in various
engineering, technology fields. The college has consistently delivered quality education in the field of
engineering, management, computer applications, and other technical courses. With a focus on providing
students with practical training and exposure to the industry, the institute has become a preferred choice for
students who are looking to pursue a career in engineering.

From its humble inception in 2002, the institute has come a long way and established itself as one of the
renowned institutes in the field of technical education. True to its logo **"Building Careers, Transforming
Lives"**, the institute indeed made its mark across India with its state-of-the-art infrastructure, a conducive
teaching learning student friendly environment with every opportunity for students to grow in their chosen

career under one umbrella.

The zeal of its ever-progressive management to excel in every sphere with equal opportunity to every stakeholder in friendly and participative environment make CEC-CGC Landran Mohali an institution to rely upon by the thousands of parents aspiring for a promising and shining career for their wards.

The institute believes in progression never stops and as such ready to embrace any new creative positive ideas, innovation techniques to impart the best possible to its stakeholders in sync with the new education policy.

In conclusion, the institute is an excellent institution that has earned a reputation for academic excellence and overall development of its students. The college has a highly experienced and dedicated faculty, who provide students with a holistic learning experience through a combination of classroom teaching, practical training, and exposure to industry practices. Students at this institute receive comprehensive support from the institute and management to ensure their academic success and overall development. With its focus on providing quality education and producing highly skilled professionals, the institute has become a popular choice for students who aspire to build a successful career in the field of engineering and related fields.