



SELF STUDY REPORT

FOR

1st CYCLE OF ACCREDITATION

CANARA ENGINEERING COLLEGE

**BENJANAPADAVU, BANTWAL TALUK DAKSHINA KANNADA DISTRICT
574219**

www.canaraengineering.in

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Submitted To

NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL

BANGALORE

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1. EXECUTIVE SUMMARY

1.1 INTRODUCTION

Canara Engineering College (CEC) is a premier engineering institute of the Mangalore region. CEC is established by the Canara Group of Institutions (Canara High School Association) founded by the late Ammembal Subba Rao Pai. The college is affiliated to Visvesvaraya Technological University, Belgaum, recognized by Government of Karnataka and approved by AICTE, New Delhi.

About Association and Founder

Canara Engineering College is run by Canara High School Association (CHSA), an association based in Mangalore contributing towards Konkani linguistic minority education. The group was founded by the late Ammembal Subba Rao Pai (also founder of Canara Bank) in 1891.

About the Institution and its location

Established in the year 2001 as a new millennium project of CHSA, Canara Engineering College (CEC) has evolved as one of the premier Engineering institutes in the region and attracts students from diverse backgrounds across the country.

Our institution is located at a very serene location 25 Kms from Mangalore city in Benjanapadavu Village, Bantwal Taluk (**12.8987° N, 74.9845° E**). The campus has a sprawling area of 26 acres, set in a picturesque locale and has aesthetically designed eco-friendly buildings amidst the green belt within the vicinity of Mangalore City.

Type of the institution

The institution is completely self-financed and does not receive grants from any source for running the institution. In 2001, 3 Branches of Engineering were started with total 180 seats. Two more Engineering branches were added in the year 2004. Three more were added in 2021 and currently we have 7 UG programs and three PhD research centres and a total intake of 504 seats including 24 seats of SNQ for UG degree.

40% of the seats are allotted through the CET cell, 30% seats are filled under 'Konkani' and General Merit by KRLMPCA quota and the remaining 30% under NRI/Management quota.

The main objective of the college is to provide excellence in technical education based on knowledge, ability and self-confidence, creative thinking based on sound logic and fundamentals. All round human resource development is the corner stone and the guiding principle of this Institution.

Vision

OUR VISION

To be an Engineering Institute of the highest repute and produce world- class engineers catering to the needs of

mankind.

Mission

OUR MISSION

- Provide the right environment to develop quality education for all, irrespective of caste, creed or religion to produce future leaders.
- Create opportunities for pursuit of knowledge and all round development.
- Impart value education to students to build sense of integrity, honesty and ethics.

1.2 Strength, Weakness, Opportunity and Challenges(SWOC)

Institutional Strength

Canara Engineering College has gained a name for itself due to following strengths:

- The legacy of our association Canara High School Association (CHSA), which is known for giving quality education at affordable cost.
- Policy driven management with voluntarily involving professional members.
- Decentralised and participative organization system
- Qualified and motivated workforce.
- Industry oriented Training facility.
- Placement opportunity in top MNCs
- Alumni support for training and placement.
- Academic enrichment programs being a part of the academic schedule in addition to regular curriculum prescribed by the University.
- Social Outreach Programs to nurture a sense of responsibility among students towards society.
- Student mentoring system and professional counselling facility.
- Grievance redressal process to address grievances of students.

Institutional Weakness

We have identified following weaknesses in our journey towards becoming world class organization.

- Lesser number of faculties with doctorate degree.
- Funding from Government and private bodies for research projects.
- Industry sponsored laboratories.
- Quality publications and IPR creation are yet to become prominent.
- Research facilities at the institution are yet to be optimised.

Institutional Opportunity

Following opportunities need to be capitalised by the institution.

- Location of the college- starting production and training of agricultural equipments for local youth.
- Starting TECH PARK to become hub of technology development to overcome issues related to R and D.
- Becoming hub for higher education and competitive exams training.
- Harnessing renewable energy in the campus.
- Implementing NEP-2020 to get linked to institutions and industries of repute.

Institutional Challenge

Institution is facing following challenges enroute to excellence

- Since we are in rural area, transportation is one of the challenges.
- Starting incubation centre at such location is another challenge.
- Starting of private Universities with higher intake poses challenge to affiliated colleges.
- Permission to foreign Universities to open their campus in India is the latest challenge that small HEIs will face

1.3 CRITERIA WISE SUMMARY

Curricular Aspects

Canara Engineering College is affiliated to Visweswaraya Technological University, Belagavi, Karnataka. In addition to the curricula prescribed by the University, institution prescribes courses as per the requirements of the industry to help students stay in line with modern technological developments.

College adheres to a planned academic schedule in line with the University's schedule. All departments adhere to the institute's including CIE, technical and cultural events.

Currently, we are following CBCS system under 2018 and 2021 scheme as per the University syllabus. The academia includes courses that make students not only technocrats but also responsible citizens. Students study courses related to constitution, environment, ethics and Universal Human Values, communicative english and PWSE. Emphasis is given to improve their communication skills and interpersonal skills by studying courses such as internship, technical seminar and project work.

Many add on courses to promote self-learning are also on the card. MOOC courses such as NPTEL, Spoken Tutorials are a part of regular academic schedule.

In order to assure success of our plans and ensure continuous improvement of the teaching learning process,

feedback from stakeholders is taken regularly. This helps us to understand our commitment to improvement. Actions are initiated based on the feedback taken from stakeholders after detailed discussion with experts of IQAC.

Teaching-learning and Evaluation

Canara Engineering College follows totally learner centric methodology for imparting quality education for students from all sections of society. This institute is registered as Konkani linguistic minority institution. The seats are reserved as per the quota prescribed by the Government.

To prove our commitment to quality teaching, we have been maintaining student – teacher ratio of below 20:1 irrespective of relaxation by the statutory boards. While recruiting staff, preference is given only for merit. Students are given maximum opportunity for participative learning and better learning experiences in the form of internships, projects, industrial visits, publications, conferences, cocurricular activities, etc.

To make the recruitment policy transparent, guidelines of the University are followed. Maximum care is taken to keep all staff posts filled as per the requirements of the University and AICTE.

Such of those faculties who wish to pursue their research, institute provides financial assistance for their research degree. Promotions are given for internal faculties after they upgrade their degree based on the availability of positions.

The evaluation system is followed in a highly transparent manner with regular academic audit. Students are given opportunity to express their grievance both via online and offline.

The Course Outcomes are measured at the end of every semester which helps us to deliver better in coming years. Program outcomes are measured at the end of the graduation to understand and plan for better deliverables. Such measures have improved the students' performance in terms of academic results and placements.

Research, Innovations and Extension

Institution has created an ecosystem for research activities for both faculties and students. Every year we send applications for Government funding under DST, VGST, and University grants. Last year one grant worth Rs. 31 Lakhs is granted for plastic recycling studies. Private industries are also approached to get funding for research activities. Staff and students are encouraged to publish their research works in refereed journals. Faculties have published their patents based on their research work. Students are motivated to start their own firms by providing incubation facilities. During last five years, 67 articles are published in refereed journals, 42 publications in conference proceedings, books and book chapters are published.

Faculty Development Programs are conducted regularly in the institution to help faculties upgrade their knowledge in upcoming technologies.

Institute gives equal importance to both curricular and extra-curricular activities. During last five years our students have participated in more than 200 Social Outreach Programs which includes Swachh Bharath Abhiyan, teaching activity for school children, Afforestation programs, blood donation and stem cell donation

camps, Vaccination drives during Covid situation. College has received many recognitions for its commitment towards society. Five villages are adopted under UBA and programs to cater to the needs of the local are being conducted regularly.

Institute has collaborated with many industries and Universities for better interaction with the outside world. Industrial and agricultural projects are done to assist farmers and SSI with better technology at lower cost.

Infrastructure and Learning Resources

Institution has taken utmost care to build the infrastructure to cater to the needs of students in every respect. All 36 classrooms and laboratories are fitted with modern furniture satisfying the ergonomics principles, CCTV for safety and security, ICT facilities like projectors, and LAN for accessing internet and IMS. Equipment are upgraded and calibrated regularly to get the best results. A leased line with 300MBPS is available for use. There are 651 computers exclusively available for students' use.

Students are provided with outdoor and indoor sports facility, Gymnasium to maintain their physical health. A community health centre supported by a renowned private hospital is in place for staff and students.

College has well maintained library meeting all the requirements of staff and students to access the information on time. All the regulations of the statutory body are being followed to assist students with both online and offline books and journals facilities. In the library, there are more than 47000 books, 52 Indian Journals, 16 Technical magazines and 03 International Journals in print version. We have access to more than 11000 online journals, more than 21000 E books, 7800 Abstracts Articles, Remote Access facility through Knimbus, 5,30,000 IEEE proceedings from various publishers. We have home grown ILMS named CANSYS for managing library.

Every year sufficient budget is allocated to upgrade and maintain the infrastructure and other facilities to ensure our commitment to continuous quality improvement.

Student Support and Progression

The college has a holistic system in place for student support and progression. A well-established Student Welfare cell takes great care to monitor students' academic and overall development. A robust Teacher Guardian mentoring system helps track student academic, co-curricular and extra-curricular progress. In house and out-sourced training on soft-skills, aptitude, placement interviews and technical know-how is provided at regular intervals to boost students' confidence and communication levels.

A plethora of facilities are available to students to help manage their financial, mental and physical well-being. Student education is supported through several scholarships provided by the Government and the college Management. A professional counsellor visits the institution on a regular basis and helps students tackle their emotional / mental exigencies. The grievance redressal cell addresses all grievances received promptly and promotes a

sense of optimism amongst the stakeholders. Zero tolerance to ragging or sexual harassment has helped make the campus devoid of any deplorable incidents. Medical and health facilities are provided to students through a doctor visiting campus on a daily basis, a community health centre functional within the campus once a week and MOU with the local hospital to attend

to medical emergencies. Aspirations of higher studies in India or abroad are recognised and students are connected to various platforms such as Planet Education, IDPS and the like. Besides the college encourages extra-curricular activities through participation in University / state level sports and cultural activities. Our students have brought us several laurels in sports over the years. Student clubs – literary, technical, cultural – organise events and activities throughout the year providing students a platform to showcase their talents and skills. A variety of cultural and entertainment events are organised for and by the students to keep the campus engaged and happening. The Alumni association of the college is well connected to the institution and students through talks, workshops and entrepreneurial engagements.

Governance, Leadership and Management

Canara Engineering College is a unit of Canara High School Association which is 130 years old, established by Sri Ammembal Subba Rao Pai, who is also the founder Canara Bank.

The entire governance is based on the values laid down by the late founder. Transparency and decentralisation are integral part of our governance. To demonstrate participative management, we have staff and students from all departments in every committee. The strategic and perspective plans are prepared and deployed with full support from the management. Policies are in place and the top management including IQAC ensures that the policies are properly followed by everyone related to the institution.

e-governance is being applied to all sections of the institution with the IMS developed by our own faculties. This has helped us to execute the work more effectively.

Institution has many welfare schemes for faculty and staff. To support them to gain knowledge, they are sponsored for attending FDPs, conferences and publishing articles in journals. performance appraisal of all faculty and staff is conducted every year to assess their performance in the previous year and direct them for more achievements in the coming year.

College strictly adheres to transparent financial transactions with regular internal auditing and annual external auditing.

IQAC was instituted during 2017 and every year meeting with external experts as per statutory guidelines is held to discuss the plan and feedback from stakeholders. This has helped us to get NBA accreditation for some of our programs from 2015 onwards.

Institutional Values and Best Practices

Our college has been thriving towards imparting value-based education right from its inception. These efforts are displayed even in our day-to-day work. College supports festivals that replicate harmony and integration. Encouragement is given to every student without any prejudice towards their societal and financial background.

We are committed to preserve this environment for generations to come. Hence, we have been involving our staff and students to sustain this environment with plantation programs, energy conservation plans, waste

management systems. Green audit is conducted and implemented with complete dedication. More than 50 programs are conducted every year to promote environmental sustainability.

Sewage treatment plant is installed to treat the sewage water and the same is used for gardening purpose. Rainwater harvesting system and water ponds are constructed to conserve water for tomorrow's use.

Ramps are constructed, lifts are installed to assure barrier free environment. Sanitary pad vending machines are installed at ladies waiting rooms to ensure health and hygiene.

Our best practices are plastic recycling and student counselling. We have demonstrated our commitment to reduce plastic by following a practice of recycling every piece of plastic generated inside the campus. We educate students and staff for not to use single use plastics. They are educated to use the bins appropriately for particular types of plastics. Then, project groups are involved to conduct research on blending and converting them to useful items. Students can utilize counselling facility from a professional counsellor to overcome any sort of problems and achieve their goal.

2. PROFILE

2.1 BASIC INFORMATION

Name and Address of the College	
Name	CANARA ENGINEERING COLLEGE
Address	Benjanapadavu, Bantwal Taluk Dakshina kannada district
City	Bantwal
State	Karnataka
Pin	574219
Website	www.canaraengineering.in

Contacts for Communication					
Designation	Name	Telephone with STD Code	Mobile	Fax	Email
Principal	Ganesh V Bhat	0824-2278666	9880872001	-	2ganeshvbhat@gmail.com
IQAC / CIQA coordinator	Venkatesh N	0824-2278667	9945677811	-	venksati@canaraengineering.in

Status of the Institution	
Institution Status	Private and Self Financing

Type of Institution	
By Gender	Co-education
By Shift	Regular

Recognized Minority institution	
If it is a recognized minority institution	Yes Minority status letter Final.pdf
If Yes, Specify minority status	
Religious	
Linguistic	Konkani Linguistic Minority
Any Other	

Establishment Details				
State	University name	Document		
Karnataka	Visvesvaraya Technological 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	Continuation of affiliation

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

Location and Area of Campus				
Campus Type	Address	Location*	Campus Area in Acres	Built up Area in sq.mts.
Main campus area	Benjanapadavu, Bantwal Taluk Dakshina kannada district	Rural	26	32919

2.2 ACADEMIC INFORMATION

Details of Programmes Offered by the College (Give Data for Current Academic year)						
Programme Level	Name of Programme/Course	Duration in Months	Entry Qualification	Medium of Instruction	Sanctioned Strength	No.of Students Admitted
UG	BE,Computer Science And Engineering	48	II PUC	English	157	156
UG	BE,Information Science And Engineering	48	II PUC	English	63	63
UG	BE,Electronics And Communication Engineering	48	II PUC	English	63	55
UG	BE,Mechanical Engineering	48	II PUC	English	32	0
UG	BE,Artificial Intelligence And Machine Learning	48	II PUC	English	63	63
UG	BE,Computer Science And Business Sytsem	48	II PUC	English	63	61
UG	BE,Compute	48	II PUC	English	63	61

	r Science And Design					
Doctoral (Ph.D)	PhD or DPhil, Computer Science And Engineering	60	M.Tech.	English	16	5
Doctoral (Ph.D)	PhD or DPhil, Electronics And Commu nication Engineering	60	M.Tech.	English	16	4
Doctoral (Ph.D)	PhD or DPhil, Chemistry	60	M.Sc.	English	8	1

Position Details of Faculty & Staff in the College

Teaching Faculty												
	Professor				Associate Professor				Assistant Professor			
	Male	Female	Others	Total	Male	Female	Others	Total	Male	Female	Others	Total
Sanctioned by the UGC /University State Government	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/Soci ety or Other Authorized Bodies	8				13				85			
Recruited	7	1	0	8	6	1	0	7	50	35	0	85
Yet to Recruit	0				6				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				30
Recruited	15	15	0	30
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				33
Recruited	19	14	0	33
Yet to Recruit				0

Qualification Details of the Teaching Staff

Permanent Teachers										
Highest Qualification	Professor			Associate Professor			Assistant Professor			
	Male	Female	Others	Male	Female	Others	Male	Female	Others	Total
D.sc/D.Litt/LLD/DM/MCH	0	0	0	0	0	0	0	0	0	0
Ph.D.	7	1	0	3	1	0	2	1	0	15
M.Phil.	0	0	0	0	0	0	0	0	0	0
PG	0	0	0	3	0	0	48	34	0	85
UG	0	0	0	0	0	0	0	0	0	0

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

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

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

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

Programme		From the State Where College is Located	From Other States of India	NRI Students	Foreign Students	Total
UG	Male	221	9	0	0	230
	Female	220	9	0	0	229
	Others	0	0	0	0	0
Doctoral (Ph.D)	Male	0	0	0	0	0
	Female	0	0	0	0	0
	Others	0	0	0	0	0

Provide the Following Details of Students admitted to the College During the last four Academic Years					
Category		Year 1	Year 2	Year 3	Year 4
SC	Male	3	0	0	0
	Female	3	0	0	1
	Others	0	0	0	0
ST	Male	5	1	4	2
	Female	4	1	1	2
	Others	0	0	0	0
OBC	Male	139	63	98	94
	Female	131	67	67	84
	Others	0	0	0	0
General	Male	93	72	89	82
	Female	69	46	56	66
	Others	0	0	0	0
Others	Male	2	0	0	0
	Female	0	0	0	0
	Others	0	0	0	0
Total		449	250	315	331

Institutional preparedness for NEP

1. Multidisciplinary/interdisciplinary:	<p>Canara Engineering College is a HEI affiliated to Visveswaraya Technological University. It offers UG degree in multiple engineering disciplines which includes core and emerging disciplines. It is planned to transform into multidisciplinary institution in coming years by starting new UG and PG programs in multidisciplinary disciplines such as data science, cyber security, automation and robotics. Since the institution is affiliated, we do not have the flexibility to introduce or modify the curricula. However, it is planned to get the autonomous/ University status by 2025 which will enable us to integrate humanities and science with STEM. Currently, we are following University syllabi which includes courses on UHV,</p>
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	<p>ethics and environment. University has introduced the multiple entry and exit system as per Government norms which will be followed by us. In our endeavors towards multidisciplinary approach, firstly, we have started a multidisciplinary research and innovation center, under which research is going on in the field of plastic recycling, e-vehicle, and agricultural equipment. This involves faculties from multi disciplines such as Mechanical, Electrical, Electronics and Computer Science. Following projects are under progress under in this center. 1. Development of filaments for 3D printing and other applications from recycled PET bottles and other plastic waste 2. Retrofitting a 3-wheeler with electric motor 3. Multipurpose seed dryer Secondly, we have multi-disciplinary clubs that undertake training of students in different technologies. One such endeavor, has helped one batch of students to reach top 25 in the event e- YANTRA challenge organized by IITB, Mumbai. In this event students need to design a robot using abstracted gamified problem statements (called Themes) which range from a variety of skills including ROS, Machine Learning, Image Processing, 3D Designing, Embedded Systems, and Functional Programming</p>
2. Academic bank of credits (ABC):	<p>Our institution is working towards registering for ABC. We have collaborated with Nitte University which is ranked 76th in NIRF list to promote research activities in our campus. Faculties of our institution are encouraged to offer new courses in each semester to meet the industrial requirements. We are also in contact with foreign Universities for internationalization of education. In addition to regular courses, faculties are encouraged to offer courses which are completely prepared and delivered by them in the regular academic calendar.</p>
3. Skill development:	<p>To impart necessary skills for students for their career, we are running an elaborate training program. The training program is designed to cover topics related to soft skills and technical skills. A MOU has been signed with Q-Spiders to impart the necessary skills which makes the students employable. A skill enhancement center is constructed to encourage students to gain lifelong learning skills. Faculties are trained to teach UHV-I and UHV-II as per curriculum. In coming years, it is planned to start vocation courses as per AICTE guidelines to impart</p>

	skill to our students.
4. Appropriate integration of Indian Knowledge system (teaching in Indian Language, culture, using online course):	Our institution is keen on promoting technical education in Indian languages. Two of our faculties have translated one NPTEL course each to Kannada and Malayalam language. It is planned to integrate Indian language and technical education by collaborating with such organizations which impart technical education in local languages. We encourage students to conduct many events which portray Indian culture and traditions such as Onam, Holi, Ayudha Pooja etc.
5. Focus on Outcome based education (OBE):	OBE was made an integral part of the regular academic schedule by following learning outcomes from 2014. Students are being told clearly about the essence of OBE during the I year orientation program. Faculties have studied the course on OBE via NPTEL platform. Hence, faculties can clearly make students what is OBE and why it is important for them. University announces learning outcomes of each course. The course coordinator in consultation with department experts and department advisory committee, finalize the course outcomes of each course. At our college we prepare 5 outcomes, one for each module. On the first class of each course, the learning outcomes of the course are explained to all students. Program Outcomes are printed on lab records, displayed in college website, corridors to make students know the learning outcomes of their respective programs. The feedback on the learning outcomes are collected at the end of each course and program. The results are analyzed and actions are taken if found necessary. Thus, we are trying to imbibe OBE in our curriculum. Additional courses to make students keep abreast with the latest technology are offered via MOOC platform. These efforts have helped students not only score good results but also demonstrate the outcome. Students involve in various software development activities which are used during annual college day and intercollegiate Techno-cultural event organized by the institution. Various prizes have been won at state/national level technical events.
6. Distance education/online education:	We had to migrate towards online mode of teaching during Covid -19 pandemic. This gave us an opportunity to explore various nuances of online teaching. We have published more than 4500 videos

related to all courses. We have received huge appreciation and viewership as more than 1 lakh viewers have made use of our videos. We are planning to become autonomous degree offering institutes / University by 2025-26 as per NEP and we will offer vocational courses via ODL mode. Our experience in preparing for online classes will certainly help us in offering degrees and certificates in distance mode.

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
1381	1343	1543	1647	1828

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

2 Teachers

2.1

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

Response: 138

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

2.2

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

2021-22	2020-21	2019-20	2018-19	2017-18
98	107	106	118	113

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
696.464	471.209	799.04	874.934	897.243

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:

- Canara Engineering College (CEC) is affiliated to Visvesvaraya Technological University (VTU), Belagavi, Karnataka. Hence the curriculum prescribed by the affiliating university is followed for all the programs of the institution.
- The University (VTU) notifies the academic calendar every semester. The academic schedule of Institution is planned by the academic committee in compliance with the calendar of the affiliating university. The College calendar comprises the details of Reopening day, internal assessment dates, annual day, training/UHV programs, sports day, examination dates, technical events, General holidays, last working day. All the holidays as per the University calendar are marked. Dates of the CIE are marked, Heads of the departments are consulted before finalising the CIE dates. College has 29 central committees to assist the Head of the Institution for smooth functioning. After fixing the central committee events, the calendar is circulated to the Departments for filling up of departmental events. The college calendar is circulated to all Programs at the beginning of semester. Departments may prepare their own calendar after the college calendar is finalised.
- Each of the committees prepare the budget for the event that they have planned and take approval from the Principal and Management at the beginning of each financial year. The Head of the institution monitors every central committee as per the academic schedule. He is ably assisted by Dean and a team of senior faculty members, who oversee the adherence to the college calendar. The Departments prepare the Time Table as per academic schedule of the Institution. Subject allotment is done well in advance for the faculty members to prepare their Course Lesson plan, and lecture notes.
- The faculty members prepare well-structured Course lesson plan, adhering to the calendar for all courses, approved by HOD. The faculty members enter Course lesson plan course delivery and attendance after each class in the Institutional Management System (IMS) software indigenously developed by the college. The Content delivery of all courses are available in the College IMS software. The faculty members adopt various innovative teaching and learning methodologies and ICT tools to create the best learning environment for students.
- CIE is conducted as per the academic schedule given by the college coordinated at the department level. The academic events, CIE, and other activities are conducted as per academic schedule, except unforeseen circumstances. A moderation committee consisting of HOD, Senior faculty is formed for academic audit purpose. The committee reviews the question paper setting, scheme of evaluation, coverage of the entire syllabus in CIE and the marks awarded during evaluation process thereby ensuring fool proof system. Teacher-Guardian meetings are conducted to assess the performance of students under the chairmanship of Principal and coordinated by Student Welfare Officer. The counselling facility is provided to the needy students. Remedial classes are conducted to support the slow learners based on their performance in continuous internal evaluation.

- In this manner, college ensures planning, delivery and documentation of the entire teaching learning process including conduction of continuous internal evaluation.

File Description	Document
Upload Additional information	View Document

1.2 Academic Flexibility

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

Response: 157

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

1.2.2 Percentage of students enrolled in Certificate/ Add-on/Value added programs as against the total number of students during the last five years

Response: 42.38

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

2021-22	2020-21	2019-20	2018-19	2017-18
430	479	754	973	645

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

1.3 Curriculum Enrichment

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

Response:

To integrate cross cutting issues relevant to gender, human values, professional ethics, environment and sustainability, various courses are introduced as a part of the curriculum, which make students better human beings.

Human Values: It is necessary to have a curriculum to enhance good human values among the students. Our institution always believes to make each student to be good engineer with strong human values. Many employers are inclined towards hiring students with very high human value quotient. At the beginning of their graduation, students are given induction program with contents which promotes **Universal Human Values**. Such program makes students realise how important human values are in their engineering career. In order to make them not to lose track, a discipline committee is constituted in each department as well as centrally headed by senior faculty members. College has anti ragging cell headed by principal and senior faculty members of each department to ensure ragging free environment. College has constructed ramps at various locations for physically challenged students. Lift facility is also made available for the needy students.

Professional ethics: Professional ethics is a code of conduct applicable to different professions. Some of the expected components of professional ethics are integrity, honesty, transparency, respect full ness towards the job, confidentiality and objectivity. A course on professional ethics will be studied by students during their first year, which gives the direction on how a person should act towards peers. College inculcates an ethical environment right from top management which motivates students to follow and implement this system in their life.

Environment & sustainability:

"Environmental science" is the study of the interactions among the physical, chemical and biological components of the environment with a focus on pollution and degradation of the environment due to human activities. Many of our activities have an impact on biodiversity which has challenged sustainability. College emphasizes on importance of green environment for the benefit of students, staff and faculty. The campus has a sprawling area of 26 acres, set in a picturesque locale and has aesthetically designed eco-friendly buildings amidst the green belt within the vicinity of Mangalore City. One course on environment studies in the program makes students realise the importance of an engineer towards their role on sustaining the environment for many generations to come.

Gender Equality: As college follows Co-education system, the department maintains gender equality in academic and non-academic activities. Institute invigorates boys and girls to participate in various activities. College has functional Women's welfare/ sexual harassment cell headed by experienced senior faculty members who look into the problems of girl students regarding personal & academics issues. Internal Grievances cell has been established for addressing the grievances from time to time. Though there are no specific courses prescribed by the University on gender equality, we have not ignored this crosscutting issue. To make girl students who are almost 50% of the entire student population, the Women's welfare cell regularly organizes various programs that gives them confidence to work on equal terms with boys.

File Description	Document
Upload Additional information	View Document

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

Response: 26.43

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

Response: 365

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

1.4 Feedback System

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

Response: Yes

File Description	Document
Upload supporting document	View Document

Criterion 2 - Teaching-learning and Evaluation

2.1 Student Enrollment and Profile

2.1.1 Enrolment percentage

Response: 72.32

2.1.1.1 Number of students admitted year wise during last five years

2021-22	2020-21	2019-20	2018-19	2017-18
424	232	295	307	391

2.1.1.2 Number of sanctioned seats year wise during last five years

2021-22	2020-21	2019-20	2018-19	2017-18
480	420	420	480	480

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

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

Response: 78.15

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

2021-22	2020-21	2019-20	2018-19	2017-18
243	114	143	147	190

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
225	198	198	225	225

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

2.2 Student Teacher Ratio

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

Response: 14.09

2.3 Teaching- Learning Process

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

Response:

College provides an effective platform for students to develop latest skills, knowledge, attitude, values for overall development of personality and mould them from student to a professional. All departments conduct innovative programs which stimulate the creative ability of students and provide them a platform to nurture their problem-solving skills and ensure participative learning.

The students are guided towards healthy participation and learning by organizing inter institute and intra institute events in technical, cultural and social activities. The institute focuses on the student-centric methods of enhancing lifelong learning skills of students.

Faculty members make efforts in making the learning activity more interactive by adopting the below-mentioned student-centric methods and ICT tools.

Experiential learning: Each department conducts add-on programs to support students in their experiential learning. The institution imparts the following experiential learning practices to enhance creativity and cognitive levels of the students –

- Industrial projects
- Technical workshops
- Hackathon/Makathon
- SAE activity
- IEEE students chapter Activity participation

During last 5 years approximately 500 students have been benefitted.

Participative learning: Students are encouraged to participate in activities where they can use their specialized technical or management skills.

- Involvement in department clubs/forums and students' council
- Volunteering in placement drives
- Involving in academic and technical and cultural committees
- Organize social outreach programme
- Participation of students in seminars, conferences etc.
- Participation in self learning initiatives.

During last 5 years approximately 500 students have been benefitted.

Problem solving methodologies

Following practices are adopted to enhance the problem solving skills of students

1. Web Development and research activities
2. MOOC courses
3. Mini Projects
4. Technical and general aptitude training

Use of ICT tools for effective teaching-learning.

The institution use ICT enabled class rooms and labs for teaching – learning to be more effective and attractive. LCD projectors are used for power point presentations, screening videos and animations. Online platforms such as Zoom/Google Meet and Google classrooms are effectively used to support the teaching-learning process.

Internet and Wi fi facility is made available to students all over the campus to access information. The library also provides access to computers and on-line journals available in public domain as well as subscribed journals.

Student attendance, internal assessment marks and term end assessment marks are uploaded on the College IMS portal. It is also used to provide feed back on the teaching learning process and facilities of the college. Faculty prepare video lectures on all courses, which are uploaded in the college You tube channel.

Information Communication Technology (ICT Tools) available in the college:

- Projectors- All the lecture halls and Laboratories are facilitated with over head projectors.
- Internet facility – All classrooms and staff rooms have accessibility to LAN via which both internet

and intranet can be accessed.

- Smart Board- One smart board is installed in the campus.
- Seminar hall is equipped with public address system, projector, cameras and computer system.
- Online Classes through Zoom, Google Meet, Microsoft Team, Google Classroom

Digital Library resources

File Description	Document
Upload 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: 97.31

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

2021-22	2020-21	2019-20	2018-19	2017-18
108	123	96	99	131

File Description	Document
Upload supporting document	View Document

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

Response: 12.18

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

2021-22	2020-21	2019-20	2018-19	2017-18
14	14	14	14	10

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

2.5 Evaluation Process and Reforms

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

Response:

Internal assessment for all courses: The institute conducts internal tests, assignments, quiz, seminars etc in each semester for the respective scheme of study as per the guidelines laid down by the university. The schedule of Continuous Internal Evaluation (CIE) for all courses is notified at the beginning of the semester and the entire process is monitored by an institutional internal test committee.

Details of the assessment process:

- The course coordinators prepare the question papers and scheme of evaluation as per RBTL and mapping to the relevant COs with equal weightage for all COs.
- Approval of the set question paper and its scheme of evaluation is taken from Moderation committee.
- Students answer all the three tests of a theory course in single blue book for each course of the study issued by the college.
- The answer papers are evaluated within one week of completion of the test.
- Scheme of evaluation is discussed in the class by the course instructor teaching the course prior to the distribution of the blue books and student's grievances are addressed in the class.
- College has an academic audit process to evaluate test scripts for each section by moderating the scripts of students who have scored minimum and highest in the section.
- For practical courses, final CIE is based on weekly assessment, lab records and final test at the end of the semester.
- All Internal test marks, assignment marks, seminar marks are uploaded to the college IMS and information is available to the students and parents in college website through their respective login. Also, internal test marks are sent to the parents via SMS.
- For project work, Internal marks are based on presentations during various stages of the work and final demonstration and project report.
- Technical seminars and internship are evaluated based on the presentations and seminar/internship report.

External assessment for all courses: The tentative schedule for Semester End Examination (SEE) is notified by the university and final schedule is announced after taking the feedback of all stakeholders. The university conducts SEE in each semester for the respective scheme of study and evaluation of answer

scripts is carried as per the scheme of evaluation provided by the university at the designated VTU valuation centres by the faculty appointed by the university. About 10% of answer scripts evaluated by the evaluator is moderated by a senior faculty appointed by the university. After the announcement of the results, students are given an opportunity to apply for revaluation of the answer scripts within a timeframe as notified by the university.

File Description	Document
Upload Additional information	View Document

2.6 Student Performance and Learning Outcomes

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

Response:

Being a professional institution, Canara Engineering College gives utmost importance for the course outcomes and program outcomes. We have been following the guidelines as per National Board of Accreditation since 2014. Hence, COs and POs have become integral part of our system.

1. COURSE OUTCOMES:

Each student takes up more than 60 courses during his engineering study. Each course is connected with few objectives and outcomes. Course Objectives and course outcomes are given by the University along with course content. Since there are 5 modules in each of the course, for the convenience of calculation and analysis of outcome, we have restricted to one COs for each module.

Following steps are followed to communicate COs to every student.

- Minor finetuning of COs are done if necessary, in order to make students understand the CO properly without deviating from the main theme provided by the University.
- At the beginning of every semester, the course instructor will explain the course outcomes for their respective courses.
- Students are made to write COs of laboratory courses in laboratory manuals to make them aware of COs.
- At the beginning of each semester, the course instructor will upload the COs for their respective courses to the college IMS, which is also displayed in the college website.

1. PROGRAM OUTCOMES:

At our institution we follow Program Outcomes as per the guidelines of NBA. Program outcomes and

program specific outcomes are displayed on the college website, departmental notice boards and respective classrooms so as to make students aware of the same.

1. EVALUATION OF POs AND COs

Assessment of course outcomes: Attainment of course outcomes for each course is measured based on

- Student's performance in Internal Assessment Tests.
- Student's performance in University Examinations.
- Students feedback.

Rubrics Developed to Calculate CO attainment:

Calculation of attainment of CO for 2018 scheme

In calculating CO attainment, criteria followed are shown below:

a. **Direct assessment** — from CO attainment — **80%**

i) CIE marks linked to 5 COs **-40%*** - This includes both test and assignment marks in the ratio **30:10**.

ii) SEE marks linked to COs — Based on SEE Marks, Equal Distribution for all COs — **60%***

CO Attainment level (Direct) = $0.3 * \text{CIE (IA)} + 0.1 * \text{CIE (ASMT)} + 0.6 * \text{SEE}$

*This value is subject to change as per the guidelines of the University.

b. **Indirect assessment** — CO feedback from students — **20%**

Final CO level attained = $0.8 * \text{CO (direct)} + 0.2 * \text{CO (Indirect)}$

Calculation of attainment of PO for 2018 scheme

PO attainment is calculated using the following rubrics:

1. Direct assessment –
 1. From CO attainment
 2. From Events
2. Indirect assessment – Exit feedback (EFB) with 10% weightage

Rubrics:

Final PO level attained =

a. $0.9 * \text{CO} + 0.1 * \text{EFB}$ (If events=0)

- b. $0.8*CO+0.1*events+0.1*EFB$ (If CO-PO counts>100 and events<5)
- c. $0.7*CO+0.2*events+0.1*EFB$ (If CO-PO counts>100 and events?5)
- d. $0.8*CO+0.1*events+0.1*EFB$ (If CO-PO counts<100 and events<5)
- e. $0.7*CO+0.2*events+0.1*EFB$ (If CO-PO counts <100 and events?5)

File Description	Document
Upload Additional information	View Document

2.6.2 Pass percentage of Students during last five years

Response: 94.99

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

2021-22	2020-21	2019-20	2018-19	2017-18
317	379	391	441	424

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

2021-22	2020-21	2019-20	2018-19	2017-18
338	391	406	466	454

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

2.7 Student Satisfaction Survey

2.7.1 Online student satisfaction survey regarding teaching learning process

Response:

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

Criterion 3 - Research, Innovations and Extension

3.1 Resource Mobilization for Research

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

Response: 35.74

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

2021-22	2020-21	2019-20	2018-19	2017-18
2.212	30.8273	0.455	0.16	2.085

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

3.2 Innovation Ecosystem

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

Response:

The Institution has created an ecosystem for innovation including incubation centre and other initiatives for creation and transfer of knowledge. The institution conducts workshop/seminars on Intellectual Property Rights (IPR) and Industry-Academia Innovative practices. Awards for innovation won by institution/teachers/research scholars/students, start-ups incubated on-campus are explicitly commended by the institution.

The research, innovation and incubation were considered as pillars for the development of our institution. The college is continuously striving towards development of a better research ecosystem to yield inhouse technology developments. Faculty members are motivated to carry out research work through research allowance for Ph.D pursuing scholars. In addition, incentive is also provided to present and publish scientific research articles in renowned conference, journals, book chapters and books. In the recent years, faculty has shown keen interest in filing patents, 5 Indian patents have been published till date. Further, seminars, workshops have been arranged in the last 2 years to inculcate patent applications and entrepreneurial process among students and faculty.

Support for incubators:

Institution has been supporting the incubates from many years as many graduates turn out to be successful entrepreneurs after their graduation. We have provided support to Mr. Clyde Lobo, a mechanical graduate from our college on machining centres during his early part of entrepreneurial journey with firm name M/s Lohatec LLP. Later he started his own firm, M/s Lohatec industries in Mangalore. We have incubated Mr. Shashikumar, a young graduate in Electrical Engineering. His interest in e-vehicle was initially nurtured. Currently with the help of investors, he started firm – Infienersol Pvt. Ltd., Baikampady, Mangalore.

Startups in the campus

Incubation and start-ups are motivated even in the recent years in spite of covid onslaught to inculcate the culture of industry. We have created facilities to incubate start-ups in the campus. Our effort in supporting entrepreneurship continues in the form of felicitation to successful entrepreneurs of our institution. We have recognized the efforts put by our graduates in startups and felicitate them during college annual day. Also, in the year 2021-22 our student of E&CE Dept has received Rs. 1,00,000/- as seed money for startup from Seventh Sense.

Inhouse Product Development

We have initiated product development activities in the college. Kakunje Software Pvt. Ltd. has funded to such projects. Further, we have also supported the local community by transferring the knowledge to the needy. We have taken up few projects of local industries and supported them to install machines designed by our faculties and students. We are also working continuously to support farmers with cost effective agricultural equipment that make their life more comfortable with higher productivity. Few such products are:

1. Collapsible drying trays
2. Honey extractor
3. Mulching tool
4. Vada making machine
5. Cup making machine

File Description	Document
Upload 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: 8

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
3	3	2	0	0

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

3.3 Research Publications and Awards

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

Response: 0.49

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

2021-22	2020-21	2019-20	2018-19	2017-18
13	23	11	8	12

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

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

Response: 0.3

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
12	16	4	5	5

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

3.4 Extension Activities

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

Response:

The motto behind conducting extension activities in and around the campus is to ensure the social interaction of students and faculty with the outside world, which in turn helps them to know the social problems which needs the attention of technological institutions.

To create awareness and sensitize students to social issues, NSS and Youth Red Cross unit of college organises events like awareness talks from the experts on the need of blood, platelets in emergency situations and blood donations camps to donate blood is in process from a decade. More than 10 blood donation camps donating more than 1000 units of blood and the students are motivated to take part in the noble cause as and when requirement arises in the neighbour hospitals.

To ensure the readiness of students for the natural calamities and emergency situations like floods, earthquakes, a Disaster Management Training program in association with Sri Satya Sai Seva Trust of Dakshina Kannada was arranged in the campus. The certified trainers deliver the theory behind every action which need to take in accidental, emergency, and practical demonstration to create awareness. The sessions include first aid demonstrations by certified medical officer and fire drill from Fire and safety department of the district authority.

The outreach programs conducted in and around the campus makes students to understand the need of implementation of technology in the day-to-day life. The activities conducted makes students learn working in team, planning, execution of the event and communicating the officials which leads to the overall personality development of the students involved.

The nature serving team in the campus motivates the students take part in vanamahotsava and work towards clean and green campus. Programs related to the environmental concerns like use of eco friendly bags in place of plastic bags, cleaning the local premises and creating awareness about Swachh Bharath Abhiyan, maintaining the historical places clean were taken as a part of social outreach programs by the students. More than 100 such programs have been conducted during last two years

Career guidance programs to the high school and pre university students are the part of extension activities.

Demonstration of science experiments which makes students to understand the theory in better way and organizing science model exhibition brings out the creativity in them.

To find the happiness in sharing and caring, collecting and donating the needy people in and around the campus is a part of outreach program. Donating to the prime minister relief fund during north Karnataka flood, donating flood relief fund the local needy near Kodagu district are part of share the happiness programs.

Students have demonstrated their belongingness to the society by collecting and donating the fund to the needy. SPARK, community development centre is such an initiative taken up by our own alumni to educate the under privileged poor students as a part of extension activity.

File Description	Document
Upload Additional information	View Document

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

Response:

Being an institution that offers high-quality education at affordable cost, the college NSS unit's primary goal is to educate the rural public in various aspects, including social, economic, agricultural, health, and technology. To promote Government schemes such as Digital India, Swatch Bharath Abhiyan, Unnath Bharath Abhiyan, COVID vaccination Drive, Har Ghar Tiranga etc., the students of CEC actively participated under Social-Out-Reach campaign in various villages of Karnataka. As Education is very important as it helps an individual to have a better perspective of life and to become independent in life, students were done various skill enhancing activity to uplift the quality of rural children to improve the education excellence of Government schools. In this digital age, different activities were carried out to promote and educate the rural population about digital banking and cyber security. The use of natural resources like water and waste management are the two main problems for emerging nations. There were several activities undertaken to teach people about waste management, correct segregation and disposal of waste, and water management.

The students participated in raising knowledge of SOP standards, handling circumstances with precaution, and organising vaccination drives during the pandemic. The students' unit promoted and participated in numerous cleanliness programmes at the grama-panchayath, municipal, and corporation levels in accordance with the vision of the honourable Prime Minister to be "Swatch Bharath and Swasth Bharath."

For their participation in social welfare initiatives, the NSS students received awards and recognition from a number of schools, government agencies, and NGOs. Prominent awards received are:

1. Stem Cell donation registry by DKMS, Bangalore during 2018-19
2. For Blood donation camps by KMC, Mangalore every year from 2012-13

3. Swachh Bharath Abiyan for renovating rainwater Canal at Honnavar, by Municipality, Honnavar during 2019-20
4. For various afforestation activities by Forest Department, Bantwal range, GoK during last three years

File Description	Document
Upload Additional information	View Document

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

Response: 63

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

2021-22	2020-21	2019-20	2018-19	2017-18
17	10	15	12	9

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

3.5 Collaboration

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

Response: 13

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

Criterion 4 - Infrastructure and Learning Resources

4.1 Physical Facilities

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

Response:

Canara Engineering College Established in the year 2001 as a new millennium project of CHSA, has evolved as one of the premier Engineering institutes in the region.

The primary objective of the college is to provide excellence in technical education. However, to develop an all-round personality of the student, they are encouraged to actively take part in sports, games and other activities. To support students, achieve these, a supporting infrastructure is also built.

Classrooms:

The Institute has well-furnished, spacious, well illuminated, and ventilated classrooms maintained as per AICTE norms for proper visibility and excellent audibility. All 35 classrooms are equipped with ergonomically designed furniture and ICT facilities.

Laboratories Computing facilities:

College has 30 laboratories the latest tools, equipments and ICT technology enabled facilities. All the required softwares are available, that offer the most appropriate environment for learning. The institution has 651 computers to cater to academic as well as OBE compliant beyond the curriculum needs.

Cafeteria:

The College consists of two Cafeterias located within the campus and easily accessible. These cafeterias serve vegetarian and non-vegetarian food in Indian and Chinese style. Cafeterias are have seating arrangements for 325 people and other necessary adequate facilities.

Medical Facility:

Institute provides community medical center for students and faculties for normal health related issues. For medical emergencies and higher order care college has tie up with Father Mullers Hospital, Mangalore. A college vehicle is available in the campus for 24X7 to meet any emergencies.

Cultural Activities:

Encouraging students to participate in cultural activities is the most effective way to develop their personality. We conduct many events like Annual cultural events, Onam festival, Ayudha Pooja, Farewell program, Branch entry program, Fresher's day, Kannada Rajyothsava etc. these programs are conducted either at a AC seminar hall with a seating capacity of 400, or at open stage with temporary seating arrangements of around 1700. Every year various cultural activities highlighting both traditional and contemporary styles are conducted. Such events have helped students to develop teamwork skills, leadership skills and develop holistically.

Sports and Games:

A sports ground spanning around 10 acres has outdoor sports and games facilities like Volleyball, Basketball, Football, Throwball, Ball badminton, Cricket and Hockey. A 200Mts track is available for athletics events. An indoor sports facility with shuttle badminton courts, table tennis tables, carrom and Chess boards are available for both students and staff with a daily usage rate of around 100. Physical Director and sports committee members are available for guidance.

CAN Gym (Gymnasium):

CAN Gym facility is equipped with necessary apparatus as per international standards. The main objectives of the gym is to enhance the overall development of the students as they will be exposed to many types of exercises to improve their fitness and endurance power. A separate batch for girls is arranged to support their participation.

Transportation:

College has 9 buses for supporting students and staffs to travel to college without any delay. Students and staff can avail the facility at discounted rate.

File Description	Document
Upload Additional information	View Document

4.1.2 Percentage of expenditure, excluding salary for infrastructure augmentation during last five years (INR in Lakhs)

Response: 31.09

4.1.2.1 Expenditure for infrastructure augmentation, excluding salary during the last five years (INR in lakhs)

2021-22	2020-21	2019-20	2018-19	2017-18
329.431	165.81	230.023	204.765	232.303

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

4.2 Library as a Learning Resource

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

Response:

General information:

Central library of CEC is located close to the academic block and is easily accessible to its clients. Library has got an independent building with carpet area of 1305.68.sq. mts, spread over 2 floors. It can accommodate 300 users at a time. In the Reading section, 118 users can be accommodated simultaneously, 154 in the Reference section, and 32 in the Digital Library. In the library, there are more than 47000 books, including General Book Bank books and SC/ST Book Bank books. The Library has textbooks for issue and for reference, competitive examination books like GATE and CAT, general knowledge books, novels by popular authors, and some social impact books, which help students, develop all-round personalities. During last five years, 5679 books worth Rs 23.80 lakhs have been added to the library. Library has a Reading Room, a Stack Hall for books, a Reference section, and a Book Bank. There are 32 computers in the Digital Library with internet access with a speed of 300MBPS.

Journal and e-library Section:

Library subscribes 52 Indian Journals, 16 Technical magazines and 03 International Journals in print version, for use by UG Students Faculty and Staff. CEC library has access to more than 11000 online journals, more than 21000 E books, 7800 Abstracts Articles, Remote Access facility through Knimbus, 5,30,000 IEEE proceedings from various publishers, Turnitin Plagiarism Originality online Check Tool, Lanquill Grammar Tool, etc. are available through VTU Consortium from the academic year 2021-2022. During the last five years, we have spent Rs.61.20 lakhs on journals and e-resources. We had Knimbus Remote access service till March 2022. From April 2022, we have subscribed to the MAP System Remote access service under the VTU Consortium.

NDL membership:

CEC is registered as an institutional member of the National Digital Library and NDLI Club, sponsored by the MHRD and designed by IIT Kharagpur. During 2021-22, Seven events have been conducted for the club members as per the directions of NDLI.

e-resources available:

The Shodhganga@INFLIBNET Centre provides a platform for research students to deposit their Ph.D. theses and make it available to the entire scholarly community in open access. e-journals and e- books are subscribed under VTU consortium.

Daily usage of the library:

On average, 200 people visit the library everyday with 116 for the reading section, 70 for reference section and 30 for Digital library and 100 for e-resource access.

Library Automation

In view of the problems encountered during manual handling of library facilities, it was decided to automate the entire library system by using a home grown software. In 2017, the Computer Science and Engineering Department, CEC designed and developed ILMS ERP software named CANSIS. Currently we are using Version 3.0, which is used to manage in-house activities of the Library. Users can search books by author, title, and keywords using any web browser with an Online Public Access Catalogue (OPAC), which provides a clear interface for library users. Library circulation module automates the borrowing and returning of books. All books are bar-coded.

File Description	Document
Upload Additional information	View Document

4.3 IT Infrastructure**4.3.1 Institution frequently updates its IT facilities and provides sufficient bandwidth for internet connection****Response:**

Canara engineering college has provided state-of-the-art IT facilities to its students so that they can use these resources to reach their best use. In this progressing world it is very essential to be acquainted with IT tools and technology. After the pandemic, this has become an inevitable part of any person. We will be left behind if we don't keep pace with the changing world. To enable this, the college frequently updates its IT facilities in the campus which includes classrooms, seminar hall, auditorium, faculty rooms, office, and laboratories. During last 5 years, all classrooms are well equipped with LCD projectors and wi-fi facilities. Seminar halls have projectors, wi-fi and audio-visual systems. The entire campus is under surveillance of CCTV. The CCTV installed in each classroom, corridors, faculty rooms, office, canteen, security gate and hostel to monitor any such activities in the campus which may cause damage to life or property. Wi-Fi connection facility is provided in the campus. Staff members and students can access through their mobile phone, tablet, or laptop in the College campus. Information about upcoming events will be posted on the website, IMS, SMS service, Digital Signage. IMS helps students and parents to monitor their attendance, marks, and assignments. The technology at college is constantly updated.

Network Details

Name of the Internet Provider: BSNL

Bandwidth Details: 100 Mbps 1:2 Leased Line from 01/03/2018 to 30/11/2018

: 200 Mbps 1:2 Leased Line from 01/12/2018

: Optical fiber cable Link

Wi-Fi : Availability

No of Hotspots: 6 Ruckus outdoor Access Point.

The internet facility has been upgraded from 100 MBPS to 300 MBPS during last 5 years.

Currently institution has a bandwidth of 300 MBPS internet facility.

Splitting of Bandwidth for various requirements like

Utilization for Principal: Direct Access

Utilization for HODs and Faculties: 50 MBPS

Utilization for Students: 25 MBPS

Security Arrangements:

Dell Sonic Wall 4600 Firewall with 3 years of subscription. The SonicWall Network Security Appliance (NSA) 4600 is a Next-Generation Firewall for growing medium-sized organizations. It combines multi-core hardware and enterprise-class features with SonicWall's Reassembly-Free Deep Packet Inspection® (RFDPI) engine for uncompromising performance.

- Supports Unrestricted Nodes
- 6 Gbps Stateful Throughput
- 800 Mbps UTM Throughput
- 2 10GbE SFP interfaces
- 4 1GbE SFP, 12 1GE copper interfaces

Server:-

Xen Project runs in a more privileged CPU state than any other software on the machine. Responsibilities of the hypervisor include memory management and CPU scheduling of all virtual machines ("domains"), and for launching the most privileged domain ("dom0") - the only virtual machine which by default has direct access to hardware. From the dom0 the hypervisor can be managed and unprivileged domains ("domU") can be launched.

CentOS is a Linux distribution that provides a free, enterprise-class, community-supported computing platform functionally compatible with its upstream source, Red Hat Enterprise Linux (RHEL). In January 2014, CentOS announced the official joining with Red Hat while staying independent from RHEL.

File Description	Document
Upload Additional information	View Document

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

Response: 2.12

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

Response: 651

File Description	Document
Upload supporting document	View Document

4.4 Maintenance of Campus Infrastructure

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

Response: 10.36

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
90.082	71.027	90.587	76.175	59.613

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

Criterion 5 - Student Support and Progression

5.1 Student Support

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

Response: 32.8

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

2021-22	2020-21	2019-20	2018-19	2017-18
584	589	90	680	596

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

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

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

Response: A. All of the above

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

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

Response: 34.99

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
304	689	679	605	432

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

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

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

Response: A. All of the above

File Description	Document
Upload supporting document	View Document

5.2 Student Progression

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

Response: 74.33

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
272	310	344	314	289

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
339	392	413	458	455

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

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

Response: 100

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

2021-22	2020-21	2019-20	2018-19	2017-18
7	5	2	3	0

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

2021-22	2020-21	2019-20	2018-19	2017-18
7	5	2	3	0

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

5.3 Student Participation and Activities

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

Response: 15

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
5	0	2	4	4

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

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

Response: 14.2

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
15	4	16	19	17

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:

ALUMNI ASSOCIATION OF CANARA ENGINEERS

For any institution, alumni are one of the very prominent pillars. The growth of an institution is deeply dependent on how alumni are involved in development of the organization. Their knowledge sharing resource sharing will play a vital role in creating the brand of the institution.

Keeping these points in mind, Alumni Association of Canara Engineers is registered on Monday 19th of January 2015 under the Karnataka Societies Registration Act, 1960. The Society Number is DKM-S175-2014-15.

Alumni Association creates and maintains a life-long connection between the Institute and its alumni. In collaboration with an extremely dedicated volunteer board of directors, the Alumni Association works to connect alumni, support students and build an unforgettable Institute experience through diverse events, programs and services. Anyone who has completed four academic years as a student at Canara Engineering College is eligible for life membership.

Support Services to the institution by the Alumni:

Alumni Talks: More than 100 alumni talks have been organized during last 5 years in order to support the institution in the field of placement, career guidance, competitive exams and higher education. Students of prefinal and final year are benefited by it.

Alumni Entrepreneur Meet: In order to expand the network of Alumni entrepreneurs, to motivate and guide the students in the area of entrepreneurship and to nurture the young budding student entrepreneurs, alumni Entrepreneurs meet was conducted in March 2021.

Project Guidance: Some of the student projects and mini projects are remotely proctored and mentored by Alumni who are experts respective project domains. Students who seek such support acknowledge the alumni in their dissertation.

Internship and Placement: Alumni support their juniors by referring them for internships and recruitments via college's placement department.

Workshops: Alumni are invited to deliver a guest lecture or conduct a workshop for the students in the areas of their expertise in order to bridge the gaps between industry and academia.

Mock interviews: In order to mentally prepare the students to face their first interview, rectify their conversation mistakes and boost the confidence level, Mock interviews are conducted by alumni either remotely or physically in the campus before the commencement of placement season.

Alumni Feedbacks: Feedbacks are collected from alumni who visit the institution. The valuable feedbacks are analyzed to identify and frame the additional courses beyond the curriculum for the students for industry preparedness. The suggestions regarding the training and other co-curricular activities are suitably implemented for the benefit of students.

Alumni contribution: Alumni have contributed to our institution in terms of both money and things. More than 30 lakhs are donated by alumni during last 5 years and are being used for different student welfare activities. The amount collected from alumni is audited every year. The things donated are appropriately used to serve the purpose for which it is donated.

File Description	Document
Upload Additional information	View Document

Criterion 6 - Governance, Leadership and Management

6.1 Institutional Vision and Leadership

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

Response:

The Institute's focus and core ideology is reflected in its Philosophy, Vision and Mission, as indicated below:

PHILOSOPHY: Persistent Perseverance in Pursuit of Perfection

VISION: To be an Engineering Institute of the highest repute and produce world- class engineers catering to the needs of mankind.

MISSION:

- Provide the right environment to develop quality education for all, irrespective of caste, creed or religion to produce future leaders.
- Create opportunities for pursuit of knowledge and all round development.
- Impart value education to students to build sense of integrity, honesty and ethics.

The organizational structure reflects the focused approach towards the achievement of vision and its mission. It presents a highly decentralized flow of the authority, through upward communication, delegation, and participative management by involving various stakeholders irrespective of their caste, religion and gender. For operational convenience and to meet any exigencies, certain decision making powers are delegated to the Principal, Deans and Heads of the Departments.

Practice 1: Decentralization is practiced in terms of financial autonomy to the principal to a tune of Rs. 8,00,000/- annually. The principal is empowered for deputing faculty to various training programs, FDPs, and other value-added courses. The departments can also propose various activities for the benefit of faculty and students based on the relevance of the program. Such practices help the organization to retain best faculties for a long time. It is observed the average time period that our present faculties have been with the institute is around 9 years.

Practice 2: Institute ensures seamless management systematically, encouraging participative leadership by involving various stakeholders at appropriate levels of decision-making. A trusting environment is cultivated where employees have autonomy to function effectively. Participative management is practiced in terms of conducting the activities by constituting committees. Each committee is headed by a chairman and designated members who meet regularly and take decisions for the benefits of students.

Coming to reflection on vision, the positions occupied by our graduates during last 15 years speak for itself. We have students occupying top positions such as vice president, team leaders, domain heads in world class companies such as Google, HackerEarth, Oracle, Infosys, HCL, Volvo, GE Healthcare etc. They even have demonstrated their commitment towards mankind by becoming entrepreneurs.

Coming to our missions, we have students from all sections of the society. irrespective of their caste, creed or religion, students are encouraged to participate in events outside the institution to explore their potentials. Such practices not only give opportunities to stakeholders to tap their potential for all round development but also impart a sense of integrity, honesty and ethics which are very critical for any graduate during their career.

Finally, CEC provides one of the best working environments to work with. It has attracted faculties from all parts of the state.

This has been possible because of value-based practices of education, inclusiveness, and unbiased approach of 130 years old management. All these facts have reflected that the institution's governance and leadership is in accordance with its vision and mission.

File Description	Document
Upload Additional information	View Document

6.2 Strategy Development and Deployment

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

Response:

Canara Engineering College is a part of Canara High School Association established in the year 1891. The highest administrative body is the Governing Body, which is responsible for making policies that govern all 14 organizations under the association. Governing council (GC), being the apex body for CEC, directs the institute for implementation of policies in the institution. The correspondent of the institution being the member of the GC is the link between the institute and the management. GC is entitled to monitor and act upon on regular basis. Other functions of the GC are:

1. Taking decisions regarding the intake and addition or discontinuing of any program and instructing the principal to take formal steps with the affiliating body to put this into action.
2. Fix the fee structure and any charges as applicable.
3. Approve the budget for the respective financial year.
4. Amend and approve faculty and staff welfare policies from time to time.
5. Approve the appointment of faculty members recommended by the selection committee of the institution in accordance with the norms prescribed by AICTE and VTU.

The administrative set up of the institution is very transparent in every step of its functioning. The employees of the institute believe being an integral part of the institution by encouragement given in terms of self-growth and in turn contributing to the institute's growth. The institute is headed by the principal with four deans supporting him in matters related to Academics, Accreditation and Extension activities, Student welfare and Placement & Facilities. Other supporting heads are administrative officer, heads of the departments, heads of central committees, and Internal Quality Assurance Cell (IQAC).

At CEC we follow three formats of plans with following goals

Short term goals – 1st 1-3 years

Medium term goals – Next 5 – 6 years

Long term goals – Next 5 – 6 years

During 2013-14 a strategic plan was prepared by the academic committee headed by the principal and approved by GC.

Following outcomes are visible by the end of 2022

- Outcome-based education (OBE) as integral part of the academics.
- Digital transformation of education systems via e-learning.
- Establishment of Program Educational Objectives, Program Outcomes, Course Outcomes, and Program Specific Outcomes for all programs to ensure attainment of graduate attributes as defined by the statutory bodies. This has resulted in accreditation of four programs by NBA during 2019 and extension up to 2025 for three programs during 2022.
- Involve students in extension and social outreach activities that make them closer to the society.

Now, in order to keep pace with the changing world and to implement NEP 2020, a revised strategic plan is prepared by the deans' desk and the same is sent for the approval from management and will be taken approval from GC.

Thus, the entire organization has satisfactorily implemented policies and strategic plans to achieve set goals in a steady manner.

File Description	Document
Upload Additional information	View Document

6.2.2 Implementation of e-governance in areas of operation

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

Response: A. All of the above

File Description	Document
Upload supporting document	View Document

6.3 Faculty Empowerment Strategies

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

Response:

Institution, which is a part of 130 years old association, has a legacy of keeping faculties on top priority. Various measures to cater to the needs of the welfare of the faculties are in place.

1. In addition to salary as per AICTE scale, to promote research and encourage faculties to take up research and additional responsibilities, institution supports such of those who are pursuing Ph.D./additional responsibility with allowance.
2. To encourage faculties to upgrade their skills and knowledge, financial support is in place for attending FDPs and publishing in Scopus indexed journals.
3. Internal progression of faculties and staff are followed as and when they upgrade their academic degrees.

Welfare measures:

Institution provides

1. Government regulations such as ESI, Maternity leave, Gratuity, EPF, encashment to all eligible employees.
2. Transportation facility at a discounted rate.
3. Life insurance coverage in case of accidents up to Rs. 100,000 to meet the emergency expenditures.
4. Free health care facility at the campus and better medical care at Father Muller Hospital, Mangalore.
5. All sports facilities including gymnasium are made available to upkeep their health.
6. An indoor sports facility is being created for faculties and staff to overcome stress and improve their physical as well as mental health.
7. Fee concession 50% for wards of all employees at their own institution as well as other sister institutions.
8. Free hostel accommodation for bachelors.

Performance Appraisal system

Faculty appraisal system is being followed to assess performance of faculties and non-teaching staff is being followed by the institution. The major objective of the appraisal system is to tap the actual potential of each one, thereby helping them grow along with the institution. Revised Faculty Performance Appraisal

is being followed from 2021-22 for better assessment and better tapping of potential of all faculties. The revised appraisal is carried out based on following four verticals:

1. *Teaching, Learning and Evaluation.*
2. *Research and Academic Contributions.*
3. *Co- Curricular and Extra Curricular Activities.*
4. *Professional Activities, Leadership, and Institutional Governance*

Appraisal process:

Faculties are asked to complete a self-appraisal form based on their contribution to the above mentioned criteria.

Based on the self-appraisal filled, a one-to-one discussion will be done by HOD with individual faculty. HOD will overview the self-assessment done and give his/her observations and suggestions for improvement of the faculties.

Later, the principal and dean (academics) will discuss with individual faculty and contemplate on observations and suggestions of HOD and give their suggestions with a perspective of institutional development. It is expected that each of the faculties score at least 70%, below which, suitable support will be extended for improvement.

During the appraisal, principal assigns a few goals/responsibilities for the next semester/year to be attained by the faculty. These goals will be assessed for completion during coming year's appraisal. Finally, the appraisal report will be submitted to the Correspondent /Secretary for his perusal.

Thus, institution follows inclusive growth both of teaching and non-teaching staff with various welfare measures and performance appraisal system.

File Description	Document
Upload Additional information	View Document

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

Response: 32.47

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
8	0	65	47	56

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

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

Response: 72.98

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

2021-22	2020-21	2019-20	2018-19	2017-18
124	153	140	99	70

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
51	51	52	57	50

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

6.4 Financial Management and Resource Mobilization

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

Response:

Canara Engineering College is a self-financed institution. Resource mobilization is done by the following means.

1. Tuition fees

2. Funds from government agencies

Major source of income for CEC is the tuition and other fees collected from students to provide them academic and related services. This source amounts to nearly 70% of the total income of the institution. The fees may differ from one batch of students to the other as per Government regulations.

The amount thus collected is utilized for paying salary of employees, purchase of equipment, software and hardware and for regular maintenance. Association will support the institution in case of any shortfalls for meeting the expenditure of the institution.

Apart from tuition fees, institution receives funds in the form of donations towards scholarships. Donations thus received at the parent body, CHSA, are directly distributed for the meritorious and needy students to continue their studies without any hurdles. Every year on average an amount of Rs. 30 lakhs are distributed as scholarships.

Further, institution receives funding from Government bodies also. During last five years, CEC has received around Rs. 32 lakhs from Government and private agencies for funded projects from DST (2020-21), Rs.91000 for 20 students' projects from KSCST and Rs.279,000 from AICTE towards ATAL FDPs (2010-21) and Rs. 50,000 for UBA activities (2019-20).

Financial audits:

Financial management at CEC is done as follows:

1. Head of the Departments are informed to submit the budget for the next year normally during December of every year.
2. HoDs will prepare the budget for consumables and new facilities if any for next year based on the expenditure of the current year. Normally, around 5 – 10% will be added to the previous budget to counter inflation rate. Total budget placed is around 30 Lakhs per year on average.
3. The central committee heads also prepare the budget for the next year to undertake various events under their committee. They also add 5-10% to the previous year's budget. Total budget placed is around 3.5 crores on average.
4. The budget is placed for approval at the annual Governing Council meeting
5. After the approval, approved copy is sent to each HoD and committee heads duly signed by the secretary.
6. HoDs are given autonomy to propose the activities and get approval from higher authority as per the budget. In case of any emergency requirement of any equipment or software not mentioned in the budget, Principal will take special permission from President and Secretary for purchase of the

same.

External Auditing:

CEC has registered auditors for getting the financial statement audited every year. The accounts section will prepare the financial statements which get audited two times every year. At CEC, financial auditing is done twice every year by external auditors. Interim auditing is done during January and the final auditing is done during May of every year. Last five years' auditor's report is available on the college website.

Thus, all finance-related matters are transparently handled by the institution.

File Description	Document
Upload Additional information	View Document

6.5 Internal Quality Assurance System

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

Response:

IQAC at Canara Engineering College has been set up to promote a learner-centric system for continuous improvement of students. During IQAC meeting which is held once a year, suggestions from various stakeholders are discussed. Apart from this, academic committee under the chairmanship of the principal, reviews and monitors the implementation of suggestions from the IQAC. We have discussed two best practices which were observed and suggested for improvement related to learning outcomes during IQAC meeting.

Case study 1:

During IQAC meeting of 2018, members had given following suggestion:

- Students need to be trained for their job roles in addition to analytical, reasoning, and communication skills.

In view of the above suggestion, it was planned to have more technical training related to their future job roles related to software industries. Experts from industries and trainers with the required expertise were involved in the training program.

Objective of the practice: The main objective of introducing the technical training pertaining to their future job roles in software industries was to improve the employability of students. The courses were planned to enhance their technical knowledge in software programming languages like Python, Java, C, C++, and Data structures.

The practice: The training program was made a part of the academic schedule and was completed during the vacation of students. To sustain the competency level, the technical training sessions were handled by faculties with the required expertise.

Outcome: This exercise has helped students to perform better in the campus selection programs which has improved from 45% during 2016-17 to an average of around 75% during last four years.

Case study 2:

During IQAC meeting of 2018, members suggested that students must be encouraged to work beyond college hours on specific projects. Labs need to be kept open to support such activities. In this regard, following initiatives were taken up to support students work on specific projects

1. **Creating Special facilities for students:** A separate facility was created to work on SAE BAJA project of All Terrain Vehicle (ATV). Students designed, built, tested, and competed at the national level with colleges of repute such as NITs and IITs. This resulted in not only improvement of technical knowledge of students but also enhanced their individual and team working abilities. In 2019, they secured 6th position in endurance test and 11th overall.
2. Students were allowed to work in laboratories beyond the normal working time of the institution. They were involved in various software development activities. A team of students from Computer Science and Information Science were instrumental in developing the entire webpage for AAKRITI- 2019, 2020, and 2022 the state level intercollegiate Techno- cultural event organized by the institution.

Our college has put suggestions from IQAC on top and strives hard to implement every possible suggestion within one year.

File Description	Document
Upload Additional information	View Document

6.5.2 Quality assurance initiatives of the institution include:

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

Response: A. All of the above

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

Criterion 7 - Institutional Values and Best Practices

7.1 Institutional Values and Social Responsibilities

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

Response:

Canara Engineering College aims at providing the right environment to develop quality education for all, irrespective of caste, creed or religion to produce future leaders.

Right to Equality is a Fundamental Right that includes the right to equality before law, prohibition of discrimination and equality of opportunities in matters of employment. In this direction, College has constituted Women Welfare /Sexual Harassment eradication cell (WW/SHEC) since September 2013 to promote Women empowerment and prevent the commission of acts of sexual harassment and to provide the procedures for the resolution, settlement, or prosecution of acts of sexual harassment by taking all steps required, and to be proactive by developing a conducive atmosphere in the campus. The WW/SHEC organizes various guest lecture, workshops, commemorative events and competitions to create awareness on social issues and legal rights of women.

To maintain safety and security to the girl students and women employee's CCTVs are deployed across the campus for round-the-clock surveillance. Women warden and staff look after the girl's hostel. Lady Security guards are available in the hostel 24/7. In order to ensure students' safety and make them more responsible, an out pass system is being practiced for hostel inmates. The Anti-Ragging Committee actively involves guaranteeing that there is no ragging in campus.

The college also has various committees like Student Counselling / Grievances Redressal Committee, Internal Complaint Committee to address the issues of students irrespective of gender. The college has MOU with Manashanthi Counselling, Training and Research centre for counselling of students. They provide exclusive counselling sessions for girls by lady counsellor. The student welfare officer also involve herself in addressing grievances of students.

The institute has health monitoring and addressing system via community health centre supported by Father Muller's Hospital and by an on-campus doctor. First aid kits are managed as per norms and if necessary, student will be taken to nearby hospitals during emergency. The ground floor of the building has an exclusive women's restroom with two beds for emergency cases. The sanitary napkin vending machines are installed in the rest room for the health and hygiene maintenance for the girls.

The institute has Women in Engineering (WIE) affinity group under IEEE which is vibrant in organizing many events.

Every year National and International commemorative days, events and festivals are celebrated in the Institute with great enthusiasm and fervour. Various activities are conducted on the different commemorative days and messages are posted in the Institute Social Media groups. Nearly 40% of students without any prejudice over gender, caste, region or religion participate actively in the events. Republic Day, Independence Day, Teacher's Day, Engineer's Day, Karnataka Rajyotsava, International Women's Day, National Sadhbhavana Divas and Aakriti and College Day are some of the important National and International commemorative days observed in the campus.

Finally, we would like to say that the college's entire operation is based on the coexistence and performance of all students and faculty.

File Description	Document
Upload Additional information	View Document

7.1.2 The Institution has facilities and initiatives for

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

Response: A. 4 or All of the above

File Description	Document
Upload supporting document	View Document

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

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

Response: B. Any 3 of the above

File Description	Document
Upload supporting document	View Document

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

Response:

Our institute Vision:-

To be an Engineering Institute of the highest repute and produce world class engineers catering to the needs of Mankind.

Our Institute Mission:-

Provide the Right environment to develop quality education for all, irrespective of caste, creed or religion to produce future leaders.

Create opportunities for pursuit of knowledge and all round development

Impart value education to students to build sense of integrity, honesty and ethics.

Our Institute Vision and mission are in line with creating responsible citizens as reflected in the Constitution of India. In order to inculcate the sense of patriotism and to make students understand the values and visions of our forefathers “Constitution of India, Professional ethics and cyber law” is being taught as a core subject in the second year of engineering for students of all the branches. This course gives an insight on constitution of India. It highlights key features of Indian Constitution, like directive principles of state policy, fundamental rights and duties of citizens, the various organs of governance. This course instils the sense of responsibilities that we need to follow and be proud of as citizens of this country. The Professional ethics part aids in understanding the ethical principles and ethical dilemma in the professional world. It is intended to provide students with the ability to analyse ethical situations with engineering specific profession. The chapter on Cyber law provides an insight into the field of law which looks into and rectifies legal issues related to the World Wide Web. The issues that form a part of Cyber Law like – Hacking, Cyber terrorism, Credit card frauds, IPR violations, etc. are covered. After completion of this course the student will be able to know the fundamental political codes, structure, procedures, powers, and duties of Indian government institutions, fundamental rights, directive principles, and the duties of citizens, and understanding of the Constitutional Election process. Student shall have constitutional legal literacy and understand the functioning of the Indian Judicial system. Student will be able to realize the importance of engineering ethics and responsibilities as engineers in their professional career; identify their individual roles and ethical responsibilities towards society. Student shall learn about the cybercrimes and cyber laws for cyber safety measures.

We celebrate our National Festivals i.e. Independence Day, Republic day to promote the pride of being an Indian and awareness about the sacrifices made to achieve this.

Student Induction program is conducted at the beginning of the engineering program for all students to make them aware about their responsibilities and contribution to the society as engineers. This program which is scheduled as per the Universal Human Values, familiarizes students with the ethos and culture of the institution, a healthy daily routine is set and a bonding between the students and faculty members are created, students get a holistic vision of Life. Students develop awareness and are sensitized about the social evils. A brief understanding of Universal Human values and its implications is imparted during this induction program.

File Description	Document
Upload Additional information	View Document

7.2 Best Practices

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

Response:

Title of the Practice:

1. Counselling

Objectives of the Practice

The main objective of counselling is to help students reach their full potential by concentrating on their conduct, career planning, academics, and creativity. It also aims to

- 1) Provide students the confidence and positive outlook they need to deal with both professional and personal life difficulties.
- 2) Inculcate in students a sense of self-respect and imbibe values for the ethics in life.

The Context

In today's hectic and competitive society, students rely more on social media. One of the key advantages of counselling for students is that it offers a lot of assistance when speaking with and directing someone. Through counselling, students can manage their emotions, interpersonal interactions and manage to overcome their weaknesses. In this regard, the institution started counselling in 2015 and have benefited more than 100 students till date.

The Practice

Counsellors provide counselling programs in three domains: academic, career and personal/social. The organization need to provide all possible facilities such as counselling room, a licensed counsellor, and other necessities. A memorandum of understanding has been signed between our organization and the Manashanthi Counselling, Research & Training Centre, Mangalore, to offer expert counselling services. A counsellor visits once in every two weeks.

Mentor of the student suggests students for counselling. The mentor, who oversees their wards' general growth, interacts with the students once a week. Any student who is determined to be irregular, academically weak, or experiencing any personal issues is encouraged to seek counselling. The mentor refers the specific student to the student welfare officer, who then refers a professional counsellor to the student. Sometimes students show up in person for counselling. Students receive information about the counselling appointment times via email. Face-to-face meetings are held during counselling sessions. There are approximately 7 to 8 students who receive counselling each day. Counselling reports are kept strictly confidential. Depending on the complexity of the issue, few students receive counselling from student welfare officer.

Evidence of Success

Counsellors support students directly in their academic life to foster, promote, increase interpersonal competencies and academic achievement. The Counselling departments believe that sound education involves the development of the student in every respect.

The assistance offered by counselling services is reflected in the academic and success of students in campus placements. The use of this strategy has helped students perform at greater levels. Feedback from students regarding counselling supports this. To successfully advance their careers and completely develop as professionals, students will gain insight into their own personal characteristics during this session and receive advice on areas they may improve.

Problems Encountered and Resources Required

The institution's practice of providing counselling to support students is quite successful. Nevertheless, it is essential to recognize and accept the drawbacks. A minor proportion of students who require counselling or who have been urged to do so by their mentors are reluctant to seek it as they are unwilling to disclose their feelings, limitations and difficulties. A counselling room, a professional counsellor and other essential services are offered by the institute.

Title of the practice:

2. Awareness Campaign on Reducing and Recycling of Single use Plastic

Objectives of the Practice

Objectives of this practice is:

1. To spread awareness about the hazards of plastic.
2. To impart knowledge about the reduction and re-use of plastic.
3. To contribute towards preserving the environment and reduction of plastic pollution.

The Context

The 3 R's -Reduce-Reuse-Recycle have long been important in economies around the world. In this context, each of the three Rs in terms of plastics is of utmost importance. Estimates of plastic garbage generation are increasing, with bottlenecks in the waste management system.

In this regard, the college has begun a unique practice of preventing plastic from entering the environment by repurposing all plastic generated on campus. We have a policy of **"if you can't decrease, reuse."**

The Practice

A student and staff volunteer group made the decision to put an end to the danger of single-use plastic consumption. It was determined to support the DST-funded initiative in this regard. The Azadi Ka Amrit Mahotsav effort to incorporate this activity was supported by the management members and NSS club.

To succeed in this goal following steps were followed.

1. As first step, awareness on Identification of different grades of plastic were created in the campus for both students and staff.
2. Following that, collection bins for separating plastics were distributed. The dust containers were classified according to the grades identified. Everyone was instructed to use the appropriate dustbins based on the category.
3. Plastics are sorted, cleaned before sending for recycling.
4. Finally, Transformation of collected plastics into simple products take place in the form of paver blocks, flowerpots, paper weights.

The above proposed campaign is being executed first in our campus and then connected to SOP activity and NSS activity and the same is illustrated to nearby schools and colleges by students.

Evidence of Success

Some of the sectors where waste plastic is emerging as a viable choice include construction material, converting waste plastic into fuel, household items and clothes. Among these, construction materials

modified with plastic waste have received a lot of interest. The modification of construction materials with plastic waste has a twofold purpose. It decreases the quantity of plastic trash that ends up in landfills or as litter, and it also reduces the usage of mined construction materials. In this aspect our institution has implemented Plastic Recycling using development of filaments and then converting into useful products such as interlocking bricks.

Problems encountered and resources required:

Following challenges were faced during the implementation.

1. Educating students and staff of the institution on plastic segregation according to the type and recycling by the members of 'DST Funded Project'.
2. Conduction of awareness camp and convincing students and staff of schools/colleges located at UBA adopted villages.
3. Connecting the awareness campaign with student groups associated with SOP and conducting the campaign as an SOP activity.
4. Converting the recycled plastic into useful items.

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

7.3 Institutional Distinctiveness

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

Response:

About the institution.

Canara High school association was founded by Late Ammembal Subba Rao Pai with the sole purpose of imparting the youth of Dakshina Kannada with modern education, blended with ancient cultural values. He was a great social reformer and philanthropist with a rare combination of the ideal and the practical.

Canara High School started by him in 1891 has grown into a group of 14 educational institutions, imparting quality education at affordable cost to over 13,000 young boys and girls of this part of Karnataka from nursery level to Engineering studies and a faculty strength of 600 which is ever growing. The Canara High School Association was founded by the late Ammembal Subba Rao Pai (also founder of Canara Bank) in 1891. Ammembal Subba Rao Pai started the Canara High School Association with its primary

project being the Canara High School, which was established in 1891 and functions even today. The group which is now primarily funded by alumni also runs several other educational institutions in and around Mangalore. He also founded the (now nationalised) Canara Bank in 1906. Canara Engineering College is the new millennium project of Canara High School Association.

Canara Engineering College was started as a Konkani Linguistic Minority Institution in the year 2001. Canara Engineering College is run by Canara High School Association (CHSA), an association based in Mangalore contributing towards Konkani linguistic minority education.

Canara Engineering College was started as a new millennium project of Canara High School Association with state of the art facilities and laboratories.

The institution is completely self-financing and does not receive grants from any source.

The main objective of the college is to provide excellence in technical education based on knowledge, ability and self-confidence, creative thinking based on sound logic and fundamentals. To develop an all-round personality of the student, they are encouraged to actively take part in sports, games and other activities. All round human resource development is the corner stone and the guiding principle of this Institution.

The College was started in the year 2001 with 180 seats in 3 Branches of Engineering. Two more Engineering branches were added in the year 2004. At present it has 8 sections with a total intake of 504 seats including 24 seats of SNQ.

OUR MISSION

- Provide the right environment to develop quality education for all, irrespective of caste, creed or religion to produce future leaders.
- Create opportunities for pursuit of knowledge and all round development.
- Impart value education to students to build sense of integrity, honesty and ethics.

OUR VISION

- To be an Engineering Institute of highest repute and produce world- class engineers catering to the needs of mankind.

Community Health Centre

Community health center provides competent healthcare services. A compassionate team provides healthcare services at our community health center.

In addition to regular checkups, primary care includes sick visits, the diagnosis and regular treatment of chronic diseases like asthma, diabetes etc. Preventative care in the form of screenings and tests are provided which greatly reduce the chance of bigger health issues occurring down the road. Better preventative measures are generally less expensive. A doctor's visit and prescription are cheaper than an emergency room visit or surgery. however, for serious issues doctor refers the patients to Father Muller Hospital in Thumbe.

Community health services aim to improve the health and wellbeing of local residents by:

Encouraging people to actively participate in their own health care working together with other primary health care providers such as general practitioners (GPs) to provide coordinated care liaising with other health agencies and service providers to fill service gaps, promoting prevention of lifestyle-related diseases and conditions developing health care programs and activities to improve social and physical environments in the community.

Following Services are offered at our health center Counselling and support services, Health promotion activities, Medical and nursing services, Allied health, including audiology, dietetics, exercise physiology, occupational therapy and speech therapy, Aged care services, Alcohol and drug programs, Maternal and child health services, Mental health programs, Disability services, Outreach services, Problem gambling programs, Support for self-help

Community health services are available to everyone Community health services offer affordable health care, particularly for people on low incomes. Services are available to all local residents, regardless of income, although fees apply. These fees are charged for services according to the client's ability to pay, and can be negotiated or waived if payment is difficult.

File Description	Document
Appropriate web in the Institutional website	View Document

5. CONCLUSION

Additional Information :

Canara Engineering College under CHSA enjoys the support of its alumni. All donations are routed via CHSA. many of the students who study here belong to socially and economically deprived part of the society. However, they are not deprived the right to education at our institute. Many such students are sponsored with full fees including hostel fees. After their graduation, they give back to the college via CHSA either in terms of money or things. Alumni are our strength. They have a goodwill which helps us to get admission as they suggest their friends and relatives to get admitted to CEC for better education and career.

Our students have done exceptionally good in Social Outreach Programs. We have supported local bodies and local PHC during Covid-19 pandemic, to spread awareness among rural people to get vaccination, assisted them in making the surveys. Our students went to schools including schools for specially abled children and helped them with apps and gadgets to study better.

Concluding Remarks :

Our institution has been thriving towards achieving optimum results in every aspect of its functioning. Everyone involved with the institution try to give their best towards reaching the goal. We work with a proper plan and concentrate towards achieving the goal. Management suggests and supports principal and deans to achieve its goal. We are sure of achieving the better heights in years to come as per our strategy plan 2023.