



## CRITERION 7: INSTITUTIONAL VALUES AND BEST PRACTICES

### KEY INDICATOR: 7.1 Institutional values and social responsibilities

Metric No.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

Assessment Year	2021-22
Number of Activities	03

### LIST OF ACTIVITIES – 2021-22

Sl No.	Name of the Activity	Date
1	Quality Manual	10/11/2021
2	Waste Management	30/03/2022
3	Go paperless	30/04/2022



**CITY**  
ENGINEERING COLLEGE

CEC/IQAC/C7/2021-22/OR/01

Circular

Date:20.10.2021

This is to inform all the students and staff that Quality Audit team is going to visit the campus to inspect and collect the data for ISO certification on 21.10.2021. Kindly cooperate and required data may be given by the assigned staff members.



PRINCIPAL  
CITY ENGINEERING COLLEGE  
Kanakapura Main Road, BANGALORE - 560 051

**Dr. Thippeswamy H.N**  
**Principal**



**CITY**  
ENGINEERING COLLEGE

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## **REPORT ON THE PREPARATION OF QUALITY MANUAL FOR ISO CERTIFICATION**

For the ISO certification Quality manual is prepared by the Principal and Vice Principal with the help of 7<sup>th</sup> criterion members and submitted to Audit for ISO certification on Feb 22<sup>nd</sup> 2022. Inspection started from verification of the same is done by Mrs. Vanaja Hiremath, Special Officer, AMC institutions. Inspection is done by the Audit team in various sectors and details are mentioned in Quality Manual. Quality manual is finalized.



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**Dr. Thippeswamy H.N**  
**Principal**



**CITY**  
ENGINEERING COLLEGE

QUALITY MANAGEMENT  
SYSTEM  
ISO 9001:2015

Quality Manual

Doc. No.

Is. No.

Re. No.

Effective  
Date

CEC/QM/01

Is\_01

Re\_00

10.11.2021

# City Engineering College

## Quality Manual – CEC/QM/01

**Purpose:** To define the compliance of ISO 9001:2015 quality management system requirement in City Engineering College

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	Quality Manual	Is. No.	Is_01
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		Effective Date	10.11.2021

<b>Organization Profile</b>		
<b>City Engineering College</b>		
<b>Quality Manual</b>		
<b>CEC/QM/01</b>		
Quality Management System	ISO 9001:2015	
Is. Number	01	
Re. Number	00	
Rev. Date	-	
Ph No	-	
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<b>Campus</b>		
Kanakapura Road, Doddakallasandra, Bikasipura, Bengaluru, Karnataka 560062.		
	<b>Prepared By</b>	<b>Approved By</b>
Name	<b>Dr. Thippe Swamy. H. N</b>	<b>Dr. K. Mallikharjuna Babu</b>
Designation	<b>MR</b>	<b>Director</b>
Signature		

All documents (QMS manual, procedures and formats) in organization are prepared and approved by above mention authorized person only.

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## 2.0 City Engineering College

### College Profile

City Engineering College, Bangalore affiliated to Visvesvaraya Technological University (VTU) is centrally located in Bangalore. The College has expanded over the last 20 years with sophisticated infrastructure as a part of the Institution's commitment to provide higher quality education in the area of Engineering. The highly facilitated landmark building – provides a perfect ambience for creativity and learning. CityEngineering College is known for its academic excellence, friendly welcoming atmosphere and community spirit.

At present the college offer UG(B.Tech) in following disciplines,

- i) Computer Science & Engineering
- ii) Information Science & Engineering
- iii) Artificial Intelligence and Machine Learning
- iv) Electronics & Communication Engineering
- v) Mechanical Engineering
- vi) Civil Engineering
- vii) Basic Sciences

PG(M.Tech) in Computer Science and Engineering.

Ph.D. in Computer Science and Engineering.

Ph.D. in Mechanical Engineering.

### Our Vision

Making Remarkable Contribution by Disseminating Knowledge and Imparting Training on Emerging Trends in Engineering and Technology through various Programmes to Excel both at National and International level.

### Our Mission

M1 To Encourage Knowledge Acquisition and Foster Research and Innovation. M2 To Prepare Students for Immediate Employment, which leads to Technological and Socio-Economical Growth. M3 To Provide Lifelong Learning for a Long Productive Career.

## 2.2 Scope of Certificate

The manual is prepared as per guidelines of ISO 9001:2015 for "City Engineering College.". The ISO 9001:2015 system has been implemented for;

**"Academic Delivery and Knowledge Creation resulting in award of University Degree."**

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### 2.3 Permissible exclusion

8.3 Design & Development

### 2.4 Authorization statement

**City Engineering College** is committed to the establishment and maintenance of Quality Management System given in this manual and implemented by the the College to meet the requirements of ISO 9001:2015.

The members of the Organization shall strictly adhere to the various quality procedures and Standard Operating Procedures as supported by the policies outlined in this manual.

**Dr. Thippe Swamy. H. N** has been appointed as management representative (MR) of the College. MR is responsible for ensuring compliance with the quality requirements stipulated in this manual. He is authorized to ensure that the quality system is established, implemented and maintained by the College. **The Director & Head CEC** give full support and co-operation to MR and he is authorized to ensure that system is implemented.

**Dr. K. Mallikharjuna Babu**  
**The Director & Head CEC**

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### 3.0 Control and Distribution

#### 3.1 Structure of Quality Manual

This manual is prepared according to the table of contents. Each chapter begins with page 1 and the numbering continues within the chapter and not throughout the manual. This has been done to facilitate future addition / deletion of pages.

The manual is supported by documented information to establish good quality system covering Process Flow Chart (PFC) and Standard Operating Procedure (SOP). In addition, a glossary of terms is given in annexure - I. Also overview of process flow of our activity at macro level is documented in flow chart given in the annexure - III.

The manual is issued in loose leaf and is accessible to the staff and students.

The implementation of this manual is mandatory for all departments. The changes made in this manual are affected through the document control and must be approved by the **The Director & Head CEC.**





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#### 4.0 Context of the organization

##### 4.1 Understanding the organization and its context

The College has a well-established risk identification and mitigation plan in place where MR receives the Risk tracker sheet (risks identified from different departments and also the mitigation plan). This table is reviewed periodically to effectively handle the risk mitigation. City Engineering College has determined the internal and external issues in the following areas considering above intention of implementing the QMS.

##### Internal Issues

Description of issue
Students & Students Union
Faculty & Unions
Non-Teaching Staff
Communication.

##### External Issues

Description of issue
University Grant Commission (UGC)
University
And Other Stakeholders

MR/Concerned HOD is responsible for updating this list and will discuss it in management review meeting.

##### 4.2 Understanding the needs and expectations of interested parties

City Engineering College has determined interested parties that are relevant to the quality management system. The list of all such interested parties are identified and listed below.

1. Students.
2. UGC and University
3. Regulatory bodies
4. Statutory bodies
5. Teaching & Non-Teaching Staff.
6. Parents

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7. Suppliers and Vendors
8. Corporates
9. Recruiters
10. Accreditation bodies

#### 4.3 Determining the scope of the quality management system

City Engineering College has determined the boundaries and applicability of the quality management system and the scope is documented as below.

##### Documented Information for Scope:

**"Academic Delivery and Knowledge Creation resulting in award of University Degree"**

When determining documented information of scope, City Engineering College has considered:

- a) The external and internal issues as listed in above para 4.1;
- b) The requirements of relevant interested parties as listed in above para 4.2;
- c) The Products and services provided by the College.

All the requirements of ISO 9001:2015 is applicable for our activities and scope covered as above and documented in this Quality Manual.

Note: Scope should cover type of products and services provided by the organization.

#### 4.4 Quality management system and its processes

##### 4.4.1 City Engineering College has established the QMS system as described in this Quality manual. It is implemented, and maintained.

City Engineering College has defined various QMS processes for quality management system and their application throughout the College is documented and it includes;

- Inputs required and outputs expected from these processes.
- Sequence and interaction of these process.
- Responsibilities and authorities for these processes.
- Risks and opportunities as determined for each process in accordance with the requirements of QMS.

The College has the practice of evaluating the QMS processes based on feedback from HOD and discussion in management review meeting and implementing the changes, if any, at least **once in a year** to achieve their intended result. The criteria and method to evaluate all these processes are defined in department wise functional objectives and monitored with the help of objective monitoring sheet to improve the processes and the

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QMS. Necessary resources are provided for this processes and job descriptions are prepared to assign responsibility and authority.

- 4.4.2** The College has defined Standard operating procedure to support the operation of its processes. The college has retained the documented information in the filled forms to have confidence that the processes are being carried out as per plan.

## **5.0 Leadership**

### **5.1 Leadership & Commitment**

#### **5.1.1 General**

The Director & Head CEC attends various meetings and provides evidence of its commitment to the development and implementation of the Quality Management System for continually improving its effectiveness. He demonstrates the commitment and leadership as given below:

- Taking accountability of effectiveness of the QMS and review the College objectives and functional objectives.
- The Quality Policy and Quality objectives are established, kept as documented information in this Quality Manual and provided for ready reference to the employee. They are compatible with the strategic direction and the context of the organization.
- Integration of QMS requirements and the business processes and accordingly preparing process documents.
- Identifying the College level risks with mitigation plan and given in risk analysis sheet and monitored for implementation. Promoting awareness of the process approach and risk-based thinking.
- Ensuring that the resources needed for QMS are available and discussed in formal/informal meetings.
- Communicating the importance of effective Quality management and of conforming to QMS requirements during internal meetings and management review meetings.
- Ensuring that the QMS achieves its intended results and verifying the same with the help of internal audits and objective reviews.
- Engaging, directing and supporting persons to contribute to the effectiveness of the quality management system.
- Promoting improvement.
- Supporting other relevant management roles to demonstrate leadership as it applies to their areas of responsibility as identified in job description of The Director & Head CEC.
- Once in a year, management review meeting is conducted for review of our activities and is attended by The Director & Head CEC.

City Engineering College has identified resource requirements and provided adequate in-house resources in terms of qualified personnel, test equipment and facility for operation and testing. The Director & Head CEC is responsible for providing appropriate resources and trained personnel for effective implementation of the Quality Management System in their respective areas. MR reports to The Director & Head CEC for any need of resources.

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## 5.2 Policy

### 5.2.1 Establishing the quality policy

City Engineering College has defined a quality policy as given below in terms of the characteristics of the business, the organization, our location and technology. It is appropriate for the purpose and context of the organization and provides frame work to set quality objectives. The Quality Policy and objectives are documented and given below.

## Quality Policy

The Institution believes in providing High Quality Education to the Students using necessary quality benchmarks in the area of Faculty Recruitment, Development and Student Learning processes through sustained efforts.

### Quality Objectives

- Development and application of quality benchmarks/parameters for the various academic and administrative activities of the Colleges.
- Facilitating the creation of a learner-centric environment conducive for quality education and faculty maturation to adopt the required knowledge and technology for participatory teaching and learning process;
- Arrangement for feedback responses from students, parents and other stakeholders on quality related institutional processes;
- Dissemination of information on the various quality parameters of higher education.
- Organization of institutional workshops, seminars on quality related themes and promotion of quality circles
- Documentation of the various programs/activities of the College, leading to quality Improvement.
- Acting as a nodal agency of the college for coordinating quality-related activities, including adoption and dissemination of good practices
- Development of the Annual Quality Assurance Report (AQAR) of the College based on the quality parameters/assessment criteria developed by the relevant quality assurance body (like NAAC, NBA) in the prescribed format;

***Director***

**10.08.2019**

### 5.2.2 Communicating the quality policy

All the employees are advised to undergo Quality Policy training on joining the College as well as made aware of it immediately after preparation or modification. MR ensures that the respective employees understand the Quality Policy and comply with the Quality Management system documented information. Also display of the Quality policy at prime location is done and kept in this manual in para 5.2.1 as documented

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information. The Quality policy is kept on web site and reception as appropriate etc. The Quality policy is reviewed once in a Year for continual improvement of the effectiveness of the Quality Management System in management review meeting.

### 5.3 Organizational roles, responsibilities and authorities

- (a.) The head of City Engineering College has established a clearly defined organization structure, and the authorities and responsibilities have been clearly defined in service rules. The Director & Head CEC has defined responsibilities, authorities and their interrelation for all the persons and communicated within the organization. All staff members are responsible for maintaining the quality of their own work and for informing their Respective Heads for any conditions, which are adverse to the quality of the work being produced or adverse to the satisfactory operation of the quality system. A detailed Organization structure is prepared and supported in Anx – IV to this manual.
- (b.) Personnel in City Engineering College at various level are responsible and have the authority within their defined areas of control for:
- The quality of work carried out.
  - Initiating action to prevent the occurrence of product Non-Conformance.
  - Identifying and recording quality problems.
  - Initiating, recommending and providing solutions to quality problems.
  - To verify the effectiveness of the solutions.
  - Controlling further processing until all conditions are satisfactory.

The MR is given authority and responsibility for

- a. Ensuring that the QMS conforms to the requirements.
  - b. Ensuring that the processes are delivering their intended outputs.
  - c. Reporting to The Director & Head CEC on the performance of the QMS and on opportunities for improvement and on the need for change or innovation.
  - d. Ensuring the promotion of customer focus throughout the organization.
  - e. Ensure integrity of the QMS is maintained, when changes to QMS are planned and implemented.
- (c.) Authority and responsibility for all the concerned persons is documented in job description and communicated to them in order to facilitate effective Quality Management System. It is communicated and understood by all and MR ensures that employees have read their respective job descriptions and are aware of their roles, responsibility and authority in the College.

## 6.0 Planning

### 6.1 Actions to address risks and opportunities

City Engineering College has considered the internal and external issues referred in chapter 4 and based on that City Engineering College has identified risk and opportunity and is available as documented information as listed below.

1. Risk Analysis Sheet is prepared for overall major risks along with mitigation plan. Minor process wise risk and opportunity is identified and documented.

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The risk and opportunities identified is addressing:

- The quality management system achieves its intended outcome.
- To enhance desirable Results and to prevent, or reduce, undesired Risk related to Education.
- To achieve continual improvement.
- To plan actions to address these risks and opportunities.
- To integrate and implement the actions into its quality management system processes.
- To evaluate the effectiveness of these actions.

In the risk analysis sheet, risk mitigation actions are identified and documented. The system is identified for multiplication factor of occurrence and severity and legal as well as customer concern is taken in to account. Accordingly, risk is divided in to high, medium and low as a part of planning. if any risk reaches to high level then actions are initiated as per risk plan given in the risk analysis sheet. The effectiveness of action taken is reviewed by MR for major risk and for process related risk by the Director and Head, CEC on monthly basis. Necessary action against such risk is to reduce the risk, retain the risk or creating opportunities by adding new products, new market, new customers, new technology or new partnership etc.

**References:**

- Procedure for Risk Management CEC/SP/09
- Risk Analysis Sheet CEC/F/09

**6.2 Quality objectives and planning to achieve them**

**6.2.1** The quality objectives are prepared based on quality policy, measurable, and relevant to product or service related and for enhancement of customer satisfaction. City Engineering College has defined quality objectives as documented information for the College as listed below.

- From the College level objectives, the functional objectives are prepared and the Director and Head, CEC monitors the objectives status on monthly basis in objective monitoring sheet. The objectives are communicated to all concerned persons by The Director and Head, CEC and are updated annually based on discussion in management review meeting.
- Quantifiable quality Objectives are established based on documented quality policy given above at relevant function and consistent with the quality policy. The quantifiable criteria are dynamic and reviewed in management review meeting for our commitment to continual improvement.

**6.2.2** The objective management plan is prepared to achieve the quality objectives. The Objective plan includes:

- a) What will be done.
- b) What resources are required.
- c) Responsibility.
- d) Time when completed and method of evaluation of results.

**References:**

- Procedure for Objectives and Targets CEC/SP/12
- Objectives Monitoring Sheet CEC/F/12

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### 6.3 Planning of changes

Top Management will review the quality management plan at regular frequency and determines the need for changes to quality management system. The changes in QMS is done in a planned way.

When the changes are excising quality management system, organization takes into consideration of:

- Purpose of changes and its potential consequences.
- Integrity of the quality management system is maintained.
- Availability of recourses.
- Based allocation or reallocation the authority and responsibility are revised in job description.

## 7.0 Support

### 7.1 Resources

#### 7.1.1 General

City Engineering College has identified resource requirements and provided timely in terms of qualified personnel, test equipment. The resource for implementation and maintenance of Quality Management System as well as improving its effectiveness is provided. The adequate resources to enhance College Education by meeting Students & Universities requirements.

Adequacies of these resources are reviewed, for example during:

- Management Review.
- Contract Review.
- Internal Quality Audit Results.

MR considers the capabilities and constraints on existing internal resources. In cases, in house resources are limited then services of external providers are taken.

#### 7.1.2 People

Personnel assigned to work affecting conformity to product requirement are suitably trained and / or experienced. Their work competence is checked based on applicable education, training, skills and experience. For effective implementation of QMS and operation and control of processes, competent persons are provided.

#### 7.1.3 Infrastructure

Appropriate facilities are determined, available and maintained to achieve conformity of product and services. At present, City Engineering College had adequate infrastructure for QMS implementation as listed below.

- Buildings and associated utilities.
- Equipment & Tools.
- Transportation resources.
- Information and communication technology.

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#### 7.1.4 Environment for the operation of processes

The Director and Head, CEC identifies the required environment for the effective implementation of the processes. The necessary appropriate work environment is provided and maintained as suitable to achieve conformity of the products and services. Good lighting, ventilation is available. At work place, necessary steps are being taken from time to time to create proper social environment and no discrimination is made between various employees as well as calm and confrontational work environment is created.

#### 7.1.5 Monitoring and measuring resources

##### 7.1.5.1 General

The College does plan and establish monitoring of QMS with a view that output of instruction process is as per the specified requirements. College shall use statistical techniques to analyze trends and initiate measures to continually improve the effectiveness of QMS

##### 7.1.5.2 Measurement traceability

**Student Satisfaction:** The College takes the feedback from student's regarding their satisfaction during the course. The College does monitor this information relating to student perception as to whether the College has met student requirement.

**Internal Audit:** The College conducts periodic planned internal audits to determine whether the Quality Management System:

- Conforms to planned arrangement of the requirement of the international standard and to the quality management system established by the College and
- Is effectively implemented and maintained Planning & preparation for audits and performance of audits is comprehensively described in the Quality Assurance Process.

**Monitoring and Measurement of Processes:** If the processes are monitored, it would naturally lead to the quality outcome. The measurement of process could be based on following:

- Periodic tests on students, which in turn measures the effectiveness of delivery of instruction.
- Student Feedback on effectiveness of delivery process.
- Informal Feedback by Director or Head of Department as per the need.

**Monitoring and Measurement of Skill/Competence:** The College monitors and measures knowledge/ skill/ competence of the students by way of suitable combination of following:

- Mid semester Written Examination
- Internal assessments that may include the following:
  - Projects/ assignments
  - Role plays
  - Records of attendance, punctuality, discipline and social aspects identified by the College
- Evaluation through viva voce in case of post-graduation students

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g. End Semester Written Examination

**Control of Non-conforming product**

- a. Student performance is evaluated by way of evaluation criteria as described in the previous section
- b. Following situations are considered as non-conformances:
  - Students who have not performed well in evaluation criteria, in one or more subjects or in non-scholastic activities.
  - Students whose behavior is undesirable in the college.
- c. Students who have not performed well are short listed and the subject Faculty determines their understanding difficulties.
- d. Subject Faculty solves the learning difficulty of the weak students and implement strategies and technique to enable students to make progress towards their targets
- e. Progress of the students is reviewed by subject faculty time to time
- f. For problematic students or those students whose behavior is not proper their name(s) are informed to Registrar/ Director. Efforts are made to find out the root cause of the problem/ behavior and accordingly actions are initiated. Counseling is preferred to improve such students.

**7.1.6 Organizational knowledge**

The college determines the knowledge necessary for the operation of its processes and to achieve conformity of products and services. Such knowledge is gained with the help of experienced, competent persons in the organization or arranging the seminars and training programs in house.

When addressing changing needs and trends, MR considers current knowledge and determine how to acquire or access any necessary additional knowledge and required updates. For sharing the knowledge, the help desk is created and all past failures and reasons are created as a part of lessons learned as well as successful projects details and process improvement cases. Also, The Director and Head, CECS are attending the conferences and seminars and industry trade shows as well as exhibitions and provide in house presentation on knowledge sharing.

**7.2 Competence**

The MR identifies competency of employees performing activities affecting conformity of product requirement based on performance review and provides necessary training and on the job training for their staff for upgrading their knowledge and achieve the necessary Competency. The skill matrix, competency matrix and training records are prepared as documented information. During routine work, due to change in area of work or any other reason, the training needs are identified and provided.

Also ensure that the necessary competence has been achieved and appropriate records for the education, experience, training and qualification are maintained in competency matrix.

**References:**

- Procedure for competence, Awareness and Training CEC/SP/07
- Training Needs & Identification CEC/F/06a

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- Training Participation Record CEC/F/06b

### 7.3 Awareness

Functional Heads ensures that persons doing work under our control are aware of the quality policy, relevant quality objectives, importance of their activities and how they contribute to the effectiveness of QMS, benefits of improved performance and implications of non-conforming with the QMS requirements.

Suitable quality system awareness programs are arranged for all the persons to ensure that the requirements are well understood at all level.

### 7.4 Communication

The College ensures internal and external communication between functional heads and various levels of employees regarding the processes of the Quality Management System and their effectiveness. Such communication related to QMS includes:

- On what it will communicate.
- When to communicate.
- With whom to communicate.
- How to communicate.
- Who communicates.

### 7.5 Documented Information

#### 7.5.1 General

City Engineering College has established, documented, implemented and maintained a Quality Management System and continually improved its effectiveness in accordance with the requirements of ISO 9001 2015.

- Macro level QMS is documented in this Quality manual against how ISO 9001:2015 is implemented. This manual is also known as the Quality Manual which outlines the scope, structure and general principles of the operation of Quality Management System and serves as a declaration of the intentions of the top management to satisfy various clauses of ISO 9001:2015.
- The standard operating procedures are documented for college.
- Forms/formats are prepared and filled up to retain documented information.

#### References:

- Procedure for Control of Record CEC/SP/02

#### 7.5.2 Creating and updating

The written documents are prepared in the college as per list given below considering the size of College, type of activities, the complexity of processes and their interactions and the competence of personnel.

 <b>CITY</b> ENGINEERING COLLEGE	QUALITY MANAGEMENT SYSTEM ISO 9001:2015	Doc. No.	CEC/QM/O1
	Quality Manual	Is. No.	Is_01
		Re. No.	Re_00
		Effective Date	10.11.2021

- Documented Statement of Quality Policy and Quality Objectives.
- Quality Manual.
- Standard operating procedures.
- Quality Records.

All documented information is identified by date, rev no, approved by title of document and some identification number as per document identification and codification. All documented information is kept in English and it is used in soft copy or hard copy in paper form.

All the documented information is reviewed and approved for suitability and adequacy by authorized person as listed below.

<b>Table – 1</b>		<b>Responsibility Matrix for Documents</b>	
<b>Type of Document</b>	<b>Responsibility</b>		
	<b>Document Review Modification and Approval</b>	<b>Maintaining document Master list and issuing as per distribution</b>	
1. Quality Manual	THE DIRECTOR & HEAD CEC	MR	
2. Process Flow chart	THE DIRECTOR & HEAD CEC	MR	
3. Standard operating procedures	THE DIRECTOR & HEAD CEC	MR	
4. Applicable Standards and Documents of External Origin	THE DIRECTOR & HEAD CEC	MR	
5. Formats	THE DIRECTOR & HEAD CEC	MR	
<b>Note:</b> - Master copy of all the documents are kept with MR, who is authorized to issue and distribute the same.			

### 7.5.3 Control of documented information

**7.5.3.1** All the documented information relating to the Quality System requirements are controlled as per details given below.

- A) They are reviewed for adequacy and are approved by authorized persons as per table-1
- B) The documents are updated as necessary, reviewed and re-approved by the same authority. Copies of superseded documents are identified and retained as necessary to maintain specified / required traceability.
- C) The current revision status of the document is identified by revision number. Also, the latest changes are identified by suitable marking. Each document or data will have its revision status by rev. no. or revised date as applicable. Such changes are distributed to authorized copy holders of the document. Any revision is affected by changing rev no. of particular page for quality manual / document for all other documented information

 <b>CITY</b> ENGINEERING COLLEGE	<b>QUALITY MANAGEMENT SYSTEM</b> ISO 9001:2015	Doc. No.	CEC/QM/O1
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- D) The respective functional heads / MR is responsible for ensuring that the latest relevant versions of applicable documents are available at point of use where and when it is needed. They will also ensure that documents remain legible, readily identifiable and retrievable. Such documented information is also protected from loss of confidentiality, improper use or loss of integrity.
- E) All the controlled documents have been identified, legible and system of preparation, issue, distribution and maintenance of documented information.
- F) The MR is ensuring that all external documents those needed for use in the QMS is identified and proper control is established. Similar controls shall apply to the external documents necessary for the planning and operation of the quality management system. The external documents are identified and distribution is controlled. external documents referred to are those needed for use in the QMS.
- G) Master list and distribution list with current revision of documents (latest revision number) and distribution list of all the documents is maintained for all the documented information to prevent unintended use of obsolete documents. If any obsolete documents are kept for future reference then stamp of obsolete document is put on the document.

### 7.5.3.2

City Engineering College has established a system to define the control needed for identification, storage, protection, retrieval, retention and disposition of documented information (records). They are kept legible, retrievable and readily identifiable. The system is described as below.

- a) For all the documented information the current revision status and distribution list is maintained in master list and distribution list of records. The access, retrieval and user details are given in master list of records.
- b) Proper control is established for storage and preservation of documented information to ensure that such information is available when it is needed. The hard copy of documented information is stored in cupboard or safe places with the Director and Head, CEC/authorized person. It is ensured that records are legible and properly preserved during storage. The soft copy is kept with authorized access control by password and back up is taken weekly.
- c) Control of changes (e.g. version control) is established with the help of change note and revision number is changed to identify the latest copy of documented information.
- d) Retention and disposition: The retention period for documented information is identified and after retention period, it is destroyed for disposal of hard copy of documented information. The soft copy is deleted.

Documented information of external origin determined by the College to be necessary for the planning and operation of the quality management system is identified as appropriate, and listed in master list of documents. The latest copy of such documented information is collected and distributed to concern person.

Documented information retained as evidence of conformity is protected from unintended alterations by password protection or kept in cupboard with lock

 <b>CITY</b> ENGINEERING COLLEGE	<b>QUALITY MANAGEMENT SYSTEM</b> ISO 9001:2015	Doc. No.	CEC/QM/O1
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The system is applicable for hard copy of records as well as records maintained in electronic media. All the formats used as Quality Records are properly identified and controlled.

**References:**

- Master List of Record CEC/F/02

## **8.0 Operation**

### **8.1 Operational planning and control**

Planning for sequence of processes and sub processes is consistent with our QMS requirements. Our activity process flow chart is given in annexure → III of this manual.

City Engineering College plan, implement and control the processes as per the details given below.

- Functional level objectives are defined and monthly basis monitored to establish control on the processes.
- Determining the requirements for the services and prepared documented information for product specifications. It includes criteria of processes in process time cycle sheets as well as acceptance criteria for incoming product, in process stages and finish product.
- Necessary resources are provided and ensured by MR to achieve conformity to the product and service requirements.

MR and The Director and Head, CECs control planned changes and review the consequences of unintended changes, taking action to mitigate any adverse effects, as necessary.

City Engineering College shall ensure that outsourced processes are controlled.

The control for outsourced process is done as per established system and as per controls identified by The Director & Head CEC.

## **9.0 Performance evaluation**

### **9.1 Monitoring, measurement, analysis and evaluation**

#### **9.1.1 General**

The operational control plan is prepared and implemented to identify measurement and monitoring activities needed to assure conformity and achieve improvement. This includes parameters to be monitored and measured, methods, need and use of applicable methodologies and when it is monitored and measured. Organization has planned and implemented the monitoring, measurement, analysis and improvement processes needed to evaluate the effectiveness of QMS and retain the documented information like functional objective monitoring sheet as evidence.

#### **9.2 Internal audit**

 <b>CITY</b> ENGINEERING COLLEGE	QUALITY MANAGEMENT SYSTEM ISO 9001:2015	Doc. No.	CEC/QM/O1
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Audits are performed regularly and the interval between audits of any particular department is not greater than Six Months. Additional audits may be carried out at the discretion of The Director & Head CEC or MR based on need.

Internal audit of Quality Management System audit is carried-out at least **Once in a year** to

- a). Determine whether Quality Management System
  1. Conforms to the planned arrangements for Quality Management System and ISO 9001:2015 requirements.
  2. Is implemented and maintained in accordance with the requirements of Quality Management System as given in this Quality Manual.
  3. Is effective in meeting the Quality policy and objectives.
- b). Provide information on the results of audits to the Top Management for verify effective implementation of Quality Management System.

MR is responsible for the planning and implementation of the audit. The auditors, who are selected normally from within the College, will however assist him. The auditors are selected in such a way that they are trained for auditing and is not working in the same area, which is to be audited. If need arises, outside auditors can also be employed at the discretion of MR.

Internal Auditors are responsible to execute audit as per plan and verify the effectiveness of implementation of Quality Management System.

The internal audit is scheduled in the College on the basis of the status and importance of activity to be audited and previous audit results. MR prepares the audit plan covering with scope, schedule and other details. Personnel are nominated as auditors and provided audit training. It is ensured that the auditors are independent of the specific activities or areas being audited by them. The audit plan is prepared and circulated 1 week before audit execution to ensure availability of Process owners and auditors.

The auditor verifies implementation of documented Quality Management System in all the areas and objective evaluation of the organization structure, working practices, resources, accuracy of the work, process monitoring and measurement, risk and opportunities identified and effectiveness, verify documented information etc.

#### **Audit Report and Follow-Up**

The Auditor prepares non-conformity report on completion of the audit and the non-conformity is brought to the notice of auditee. The auditees take up discussion with the MR as well as with the reporting heads about the appropriate actions to be taken to close the non-conformities and plan the closure dates. Audit findings are documented and used as the main formal means of resolving problems and deficiencies detected in the Quality Management System. The HOD conform agreed time to close the non- conformity and within maximum 45 days internal audit findings are closed. The copies of such NCR are given to auditee and after taking timely corrective action on NC(Non- conformance) reports, the auditee calls auditor to verify it and to close NCR. After verification of action taken, the audit findings are closed. During next audit, implementation effectiveness of the corrective action taken on NCR's is reviewed and documented.

All the audit findings and verification of audit results are reported to the top management for review and evaluation of the system and also discussed in the management review meetings. The audit plan/Schedule, audit non-conformity reports

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and clause wise audit checklist are maintained as an evidence of the implementation of audit programme and audit results.

#### References:

- Procedure for Internal Audit CEC/SP/04
- Internal Audit Schedule CEC/F/04a
- Internal Audit Programme CEC/F/04b
- Internal Audit Observation Sheet CEC/F/04c
- Non-Conformity Report CEC/F/04d

### 9.3 Management review

#### 9.3.1 General

The quality system established and is systematically reviewed for its continuous suitability and effectiveness in confirming the requirements of ISO 9001:2015 in City Engineering College. The review includes implementation of the Quality Policy and Objectives to identify any area, which requires improvement, and evaluate need for changes for effective functioning of the system.

This review is carried out at least **once in a year** by The Director & Head CEC or their nominee by holding Management Review Meetings, which are attended by MR and all Functional Heads.

#### 9.3.2 Management review inputs

The agenda and time and date of management review meeting is circulated to The Director & Head CEC to attend management review meeting with supporting documents related to agenda points to discuss in the meeting input to management review includes current performance and improvement opportunities related to the items listed here under.

- a) The status of actions from previous management reviews.
- b) Changes in external and internal issues relevant to QMS.
- c) Information on the performance and effectiveness of QMS, including trends in.
  - 1) Customer satisfaction and feedback from relevant interested parties and customer complaints.
  - 2) The extent to which quality objectives have been met.
  - 3) Process performance and conformity of products and services.
  - 4) Nonconformities and corrective actions.
  - 5) Monitoring and measurement results and Review effectiveness of system in achieving Quality objectives.
  - 6) Audit results/findings.
  - 7) The performance of external service providers. (referring to Outsourced activities)
- d) The adequacy of resources.
- e) Effectiveness of actions to address risks and opportunities.
- f) Opportunities for improvement.

#### 9.3.3 Management review outputs

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Based on management review process actions emerged for any of the items related to:

- Improvement of the effectiveness of the quality management system and its processes,
- Improvement of the product related to customer requirements;
- Need for resources

The above output is documented as an evidence in the MRM as Actions Planned in management review meeting. It is the responsibility of the MR to prepare the minutes of management review meeting covering details:

- Discussion held.
- Action planned.
- Person responsible to complete planned actions.
- Planned closure dates

**References:**

- Procedure for Management Review CEC/SP/03
- Management review Schedule CEC/F/03a
- Minutes of Management Review Meeting CEC/F/03b
- Management Review Meeting Report CEC/F/03c

**10.0 Improvement**

**10.1 General**

The MR and The Director & Head CEC determines and selects Opportunities for improvement and implements necessary actions to meet customer requirements and enhance customer satisfaction.

**These include:**

- Improving products and services to meet requirements as well as to address future needs and expectations.
- correcting, preventing or reducing undesired effects.
- Improving the performance and effectiveness of the quality management system.

**Examples of improvements made in our College by:**

- Correction.
- corrective action.
- continual improvement.
- breakthrough change.
- innovation and re-organization.

**10.2 Nonconformity and corrective action**

**10.2.1** City Engineering College has established the system for identification, documentation, evaluation, segregation and disposition of non-conformity including audit results

**Corrective action**

 <b>CITY</b> ENGINEERING COLLEGE	<b>QUALITY MANAGEMENT SYSTEM</b> ISO 9001:2015	Doc. No.	CEC/QM/01
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The corrective action planning should include evaluation of the significance of problems affecting quality. The major or repetitive non-conformities are identified for taking corrective action in the areas as defined.

- a. The process owner reviews non-conformities (including customer complaints) identified in their areas and analysed it.
- b. The root cause of non-conformities are identified in the areas like man, machine, material, management (system), money (Resources).
- c. Considering the evaluation and aspects like costs of non-conformance, vs. action taken, random failure, customer satisfaction etc. need for action is evaluated to ensure that non-conformities do not recur. For non-conformities of minor nature or random failure it is recorded in Quality Objectives form and no CAR is raised.

### 10.3 Continual improvement

The process is laid down for follow up of process for continual improvement of the Quality Management System. The Director & Head CEC take necessary action for continually improve the suitability, adequacy, and effectiveness of the QMS

The continual improvement of QMS is facilitated through the use of quality policy, objectives, and audit results, analysis of data, corrective action and output of management review to determine need or opportunities to be identified as a part of continual improvement.



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Ref no:CEC/IQAC/C7/ACY2021-2022/OR/02

## CIRCULAR

28/03/22

This is to inform all students, teaching, and non-teaching staff that Guest Lecture on “Waste Management by Mr. Madhusudhana HN (Former Scientist, ISRO)” will be organized on 30.03.2022. at 10:00 am in CSE seminar hall.

All are cordially invited



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Kanakapura Main Road, BANGALORE - 560 081

**Dr. Thippeswamy H.N**  
**Principal**



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**CITY COLLEGE ENGINEERING**

Doddakallasandra, Kanakapura Road, Bengaluru - 560061

**We welcome you to Celebration of Guest  
Lecture On Waste Management**

**Chief Guest  
Mr. Madhusudhana HN  
(Former Scientist, ISRO)**



**Date : 30-03-2022**

**Time: 10:00AM**

**Venue : CSE Seminar Hall**

**Dr. H. N. Tippeswamy  
Principal**

**Management, Principal & Faculty of City Engineering College**



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## Program on “Waste Management”

Program on waste management was organized on 30<sup>th</sup> March 2022 by Mr. Madhusudhana HN (Former Scientists, ISRO). Waste management is a critical issue that affects both urban and rural areas. Effective waste management strategies are essential to maintain environmental quality, public health, and overall community well-being. This seminar on waste management aims to bring together experts, policymakers, and practitioners to discuss innovative solutions, best practices, and the latest research in the field.



**Session by Mr. Madhusudhana HN (Former Scientists, ISRO)”**



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## Objectives:

The primary objectives of this seminar are:

1. **Raise Awareness:** Educate participants on the importance of effective waste management and its impact on the environment and public health.
2. **Share Knowledge:** Provide a platform for experts to share their knowledge and experiences related to waste management practices and technologies.
3. **Promote Best Practices:** Highlight successful waste management initiatives and strategies that can be replicated in different contexts.
4. **Encourage Collaboration:** Foster networking and collaboration among stakeholders, including government agencies, non-profit organizations, private companies, and community groups.
5. **Identify Challenges and Solutions:** Discuss the key challenges in waste management and explore innovative solutions to address these issues.
6. **Policy Advocacy:** Advocate for stronger policies and regulations to improve waste management systems at local, national, and global levels.

## Expected Outcomes:

By the end of the seminar, the following outcomes are expected:

1. **Enhanced Knowledge:** Participants will have a better understanding of the importance of waste management and the various strategies available to manage waste effectively.
2. **Actionable Insights:** Attendees will gain practical insights and ideas that they can implement in their communities or organizations to improve waste management practices.
3. **Networking Opportunities:** Establishment of new connections and collaborations among stakeholders, leading to potential partnerships and joint initiatives.
4. **Increased Awareness:** Greater awareness among participants about the environmental and health impacts of poor waste management, leading to more responsible behaviors and practices.

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**Principal**



Student Attendance list for "Waste Management" 2021-2022

Sl. No	USN	NAME	SIGNATURE
1	1CE22CS001	AARYAN SAHU	<i>Aaryan Sahu</i>
2	1CE22CS002	ABHINANDAN RAJENDRA HAVANNAVAR	<i>Havannavar.</i>
3	1CE22CS003	ABHISHEK K	<i>Abhi K</i>
4	1CE22CS004	ABHISHEK KUMAR	<i>A Kumar</i>
5	1CE22CS005	ABHISHEK M K	<i>Abhisheke</i>
6	1CE22CS006	ABHISHEK S GULER	<i>Abhishekskuller</i>
7	1CE22CS007	ADARSHA	<i>adashashe</i>
8	1CE22CS008	ADITHYA KUMAR	<i>Aditya K</i>
9	1CE22CS009	AISHWARYA K H	<i>Aishu</i>
10	1CE22CS010	AMITH	<i>Amith</i>
11	1CE22CS011	AMRUTHA R K	<i>Amrutha</i>
12	1CE22CS012	ANEESHA S	<i>Aneesha</i>
13	1CE22CS013	ANJALI	<i>Anjali</i>
14	1CE22CS014	ANUSHA A	<i>Anusha A</i>
15	1CE22CS015	ANUSHA B T	<i>Anusha B T</i>
16	1CE22CS016	AQEEB PASHA	<i>Aqeef</i>
17	1CE22CS017	ARAVIND SHRIMANTH CHAWAN	<i>Aravind</i>
18	1CE22CS018	ARPITHA M	<i>Arpitha</i>
19	1CE22CS019	ARPITHA A	<i>Arpitha A</i>
20	1CE22CS020	ARUNKUMAR D	<i>Arunkumar AR</i>
21	1CE22CS021	ASHIK K SHETTY	<i>Ashik</i>
22	1CE22CS022	ASHRITHA S	<i>Ashritha</i>
23	1CE22CS023	B PRASANNA	<i>B Prasantha</i>
24	1CE22CS024	B S AKSHATHA	<i>B s akshatha</i>
25	1CE22CS025	BALAJI	<i>Balaji.</i>



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Ref no: CEC/IQAC/C7/ACY2021-2022/OR/03

**CIRCULAR**

**02/04/2022**

This is to inform all the non-teaching staff that Program on 'Go paperless' is organized on 03/04/2022 as a green initiative, at 3PM. Kindly attend without fail



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**Principal**



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**CITY COLLEGE ENGINEERING**

**Doddakallasandra, Kanakapura Road, Bengaluru - 560061**

**We are delighted to extend our invitation to  
on go paperless program**



**Date : 03-04-2022**

**Time: 03:00 PM**

**Venue : CSE Seminar Hall**

**Co-ordinator  
PROF. NANDISH**

**Dr. H. N. Tippeswamy  
Principal**

**Management, Principal & Faculty of City Engineering College**



## Program on 'Go paperless'

Program on 'Go paperless' was organized for Office staff on 3/04/22 as a green initiative in the campus. Non-teaching staff were participated in the meeting and it was special program for office staff

### Objectives of the Program

#### Environmental Sustainability:

- **Reduce Paper Consumption:** Minimize the use of paper to lessen deforestation and conserve resources.
- **Lower Carbon Footprint:** Decrease energy consumption related to paper production, printing, and transportation.

#### Cost Savings:

- **Cut Operational Costs:** Save on expenses related to purchasing paper, printing supplies, and maintenance of printing equipment.
- **Reduce Storage Costs:** Lower costs associated with physical storage space and file management.

### Outcomes of the program:

Implementing a "Go Paperless" program can lead to a range of positive outcomes for an organization. Here are some key outcomes

#### 1. Environmental Impact:

**Reduced Paper Waste:** Significant decrease in the amount of paper used, leading to less waste and lower environmental impact.

**Conservation of Resources:** Lower consumption of natural resources like water and trees used in paper production.

#### 2. Cost Efficiency:

**Savings on Supplies:** Decrease in costs related to paper, ink, printers, and other office supplies.



Lower Storage Costs: Reduction in expenses associated with physical storage space and document management.

### 3. Operational Efficiency:

Faster Document Processing: Accelerated workflows through digital tools, resulting in quicker document retrieval and processing.

Streamlined Operations: Improved efficiency in handling, sharing, and updating documents.

### 4. Office staff understood the importance of the Program



Glimpse of the Event

  
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**Principal**