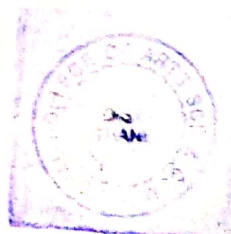


Royal College of Arts Science and Commerce  
(Autonomous)  
*Affiliated to University of Mumbai*

Program: B.Sc.  
Course: Computer Science  
Guidelines for Community Engagement  
Programme (CEP)

Syllabus for Undergraduate Programme as per  
National Education Policy (NEP-2020) with effect  
from the academic year 2025-2026



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SCIENCE & COMMERCE  
PENKAR PADA, MIRA ROAD,  
DIST : THANE. PIN : 401107.

# SEMESTER IV

Course/ Paper Title	Community Engagement Programme
Course offered as	CEP
Course Code	RUCSCEP401
Semester	IV
No. of Credits	2
Duration	30 hrs (Field Work+ Survey) +30hrs (Planning, Discussion + Report Writing) : Total - 60 hrs

Sr. No.	Course Learning Objectives
1	Identify and analyze societal challenges that can be addressed using digital technologies, such as cybercrime, digital illiteracy, lack of access to e-governance, and inefficient waste management systems.
2	Design, develop, and deploy basic technical interventions—including open-source tools, mobile apps, and cloud-based platforms, for promoting awareness, accessibility, and inclusion across diverse communities.
3	Apply data collection, analytics, and visualization techniques for solving community-based problems, such as tracking environmental changes or supporting small businesses through smart accounting tools.
4	Engage in collaborative technology outreach initiatives with NGOs, government agencies, and community groups, offering IT support services such as system maintenance, tech guidance, and digital financial literacy.
5	Demonstrate ethical computing practices, social responsibility, and teamwork while delivering sustainable and secure IT solutions, including awareness of e-waste management and cyber safety.

Course Outcome:	On completing the course, the student will be able to:
CO1	Apply technical knowledge to address real-world societal challenges through initiatives such as cyber safety awareness, digital literacy campaigns, e-governance outreach, and assistive technology solutions.
CO2	Design and implement technology-driven solutions including mobile app demonstrations, open-source software training, and cloud-based learning tools—to enhance community engagement and digital empowerment.
CO3	Develop and demonstrate data-driven decision-making skills by engaging in data collection, analysis, and visualization for community-centric projects such as environmental monitoring and smart accounting for small businesses.
CO4	Collaborate with social organizations and government bodies to provide IT support services, facilitating online scholarship/loan applications, and promoting digital finance tools for Self Help Groups (SHGs).
CO5	Foster ethical responsibility, teamwork, and technical problem-solving by contributing to sustainable technology practices like e-waste awareness,

	supporting the Swachh Bharat Mission with digital tools, and promoting responsible use of digital platforms.
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#### Module 1: Orientation and Planning (5 Hours)

- Introduction to CEP and its relevance to NEP-2020.
- Identification of local community needs where Computer Science is applicable.
- Planning outreach/awareness projects using digital tools.

#### Module 2: Community Engagement Activities (30 Hours)

Sr. No	Name of the Topic	Details
1	Cyber-crime, safety & security awareness Workshops	Cyber-crime, safety & security awareness and vulnerabilities, sensitization, information dissemination and awareness sessions in indicated focus areas.
2	Digital Literacy Camps / E-Governance Awareness	Conduct sessions on email, UPI payments, DigiLocker, Paytm, PhonePe, and net banking.
3	Cyber Safety Campaign	Creating awareness about phishing, scams, and safe internet practices.
4	Mobile App Awareness	Demonstrating beneficial mobile apps for education, health, transport, and payments.
5	Data Collection & Analysis	Conducting surveys (education, health, and environment) and analyzing data with Excel/Python.
6	Open-Source Software Training	Promoting use of free and open-source tools (LibreOffice, GIMP, etc.).
7	Cloud & Online Learning Platforms	Introducing platforms like Google Workspace, Coursera, SWAYAM.
8	Assistive Technology Awareness	Educating community about tools for differently-abled persons (screen readers, voice-to-text).
9	Environmental Monitoring Apps	Using computer/mobile applications to monitor pollution, waste management, etc.
10	Computer Maintenance & E-waste Awareness	Basic troubleshooting, safe disposal of e-waste.
11	Technology Support for Swachh Bharat Mission	Visit Swachh Bharat project sites and design waste management tracking apps or dashboards. Use data analytics to recommend better waste collection schedules and routes.
12	Digital Empowerment of Self Help Groups (SHGs)	Train SHG women members on using mobile banking apps, e-commerce platforms, and social media for product promotion. Help them set up

		online stores (Amazon, Flipkart, Meesho).
13	IT Support for NGOs	Assist local NGOs with website development, data management, and cybersecurity awareness
14	Education Loan & Scholarship Portal Guidance	Help students and parents apply for education loans and scholarships through online portals.
15	Smart Accounting for Small Businesses	Conduct hands-on training sessions for farmers, street vendors, and local shop owners on using digital accounting tools like Tally, Zoho Books, or free mobile apps such as Khatabook.

- Students must form a group of three or four and complete any one activity.
- Students must visit at least three to four different places to conduct the activity.

### Module 3: Documentation and Report Preparation (25 Hours)

- Preparing detailed report of activities conducted.
- Data analysis and visualization.
- Presentation of outcomes to peers/faculty/community representatives.

### Report Format

*All projects should be typed on A4 sheets, Font Size 12, Times New Roman, one and a half spacing on executive bond paper. The project report shall have ~~appropriate~~ chapter scheme and be presented in a minimum of 20 pages (Approximately minimum of 4000 to 5000 words).*

Title Page

Certificate by the Institute

Certificate by Mentor

Student's Declaration

Acknowledgement

Abstract

Table of contents

List of Figures and Tables

Chapter 1: Introduction

- Purpose of the visit
- Background Information:

- Scope of the Report:

Chapter 2: Literature Review

- Review relevant literature on the site(s) visited

Chapter 3: Methodology

Chapter 4: Description of the community interactions, Observations and Analysis

Chapter 5: Conclusion and Recommendations

References

Appendices

Evaluation Scheme

**Internal Assessment:**

- Participation and Attendance – 10 Marks
- Documentation and Report – 10 Marks


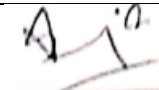
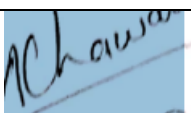
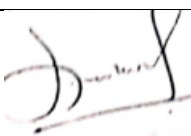


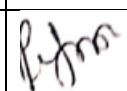
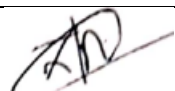
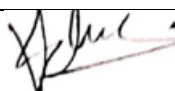
**Externals Assessment :**

- Presentation – 20 Marks
- Viva – 10 Marks
- Total – 50 Marks

Syllabus Prepared by:

Chairperson	Ms. Ritika Lala  Coordinator , Department of Computer Science  Royal College of Arts, Science & Commerce (IAutonomous)
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<b>Member</b>	Mr. Hasan Phudinawala Coordinator , Department of Data Science Royal College of Arts, Science & Commerce ( Autonomous)
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Name	Affiliation	Sign
Ms. Ritika Lala	Royal College of Arts, Science and Commerce Mira Road, Thane.	
Prof. Vipul Saluja	RD & SH National & SWA Science College Bandra (W), Mumbai.	
Dr. Anita Chaware	SNDT Women's University, Santacruz (W), Mumbai.	
Prof. Ashish Trivedi	Thakur College of Science and Commerce, Kandivali (E), Mumbai.	
Mr. Azhar Shaikh	Peepal Design , Pune	
Ms. Kamlesh Pal	Royal College of Arts, Science and Commerce Mira Road, Thane.	
Ms. Pramitha Santhumayor	Royal College of Arts, Science and Commerce Mira Road, Thane.	
Mr. Hasan Phudinawala	Royal College of Arts, Science and Commerce Mira Road, Thane.	
Mr. Vinay Dubey	Royal College of Arts, Science and Commerce Mira Road, Thane.	




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A Zoom meeting grid showing eight participants. The participants are arranged in a 2x4 grid. The top row includes Ritika Lala (pink shirt), Hasan Phudinawala (white shirt, glasses), and Kamlesh (yellow shirt). The bottom row includes ANNIE (white shirt), Pramitha Santhumayor (black top), and Khan Fatima Bela (white headscarf). Below the grid, there are three large profile cards: a green card with a white 'C' for ComputerScience RoyalCollege, a white card for Vinay Dubey with a red 'A' icon and the text 'From Azhar to everyone' and 'I am in another meeting', and a white card for Azhar.