

DEPARTMENT OF CIVIL & ENVIRONMENTAL ENGINEERING  
BIRLA INSTITUTE OF TECHNOLOGY  
(A Deemed to be University u/s 3 of UGC Act)  
MESRA, RANCHI

Ref.-CEE/2023-24/ FA 2

Date: 17.05.2024

**Feedback Analysis and Action Taken Report (FAATR)**

**Department:** Civil Engineering  
**Batch:** SP 24  
**Semesters Covered:** IV, VI  
**Academic Year:** 2023-24

**Overview:**

Feedback Questions: 8

|   |                                                                                                                                                          |
|---|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| A | Q1. Content (breadth and depth), relevance and utility of the course                                                                                     |
|   | Q2. Availability of study materials and course coverage (w.r.t. syllabus and lecture plan)                                                               |
| B | Q3. Temperament, behavior, mannerism, and fairness of the teacher (in dealing with the students, and clarifying the questions and doubts raised by them) |
|   | Q4. Availability and approachability of the teacher and quality of slides, lecture materials or board work                                               |
| C | Q5. Pace, clarity, continuity of lectures and contents and ease to follow and interaction with students during or outside the class or laboratory        |
|   | Q6. Interest and excitement created among the students about the subject domain                                                                          |
| D | Q7. Assessment and grading (fairness, objectivity, transparency), Question paper, assignment                                                             |
|   | Q8. Level of learning, Satisfaction of teaching-learning process                                                                                         |

Method: ERP-based data extraction and deviation analysis

## Significant Deviations Report

HS- Highly Significant ( $\geq +10\%$ )

S- Significant ( $> 0\%$  and  $< 10\%$ )

CAN-Corrective Action Needed ( $\leq -20\%$ )

N- Neutral (between  $-20\%$  and  $0\%$ )

| Sem                | Subject Code | Subject Name                                  | Q1 | Q2 | Q3  | Q4 | Q5  | Q6 | Q7 | Q8 |
|--------------------|--------------|-----------------------------------------------|----|----|-----|----|-----|----|----|----|
| IV (Batch 2022-26) | CE303        | GEOTECHNICAL ENGINEERING                      | N  | N  | N   | N  | N   | N  | N  | N  |
|                    | CE209        | CONSTRUCTION ENGINEERING AND MANAGEMENT       | S  | S  | S   | S  | S   | S  | S  | S  |
|                    | CE421        | SOLID WASTE MANAGEMENT                        | HS | HS | HS  | HS | HS  | HS | HS | HS |
|                    | CE420        | AIR POLLUTION AND CONTROL                     | N  | N  | N   | N  | N   | N  | N  | N  |
|                    | CE208        | SURVEYING                                     | S  | S  | S   | S  | S   | S  | S  | S  |
|                    | CE207        | STRUCTURAL ANALYSIS II                        | S  | S  | S   | S  | S   | S  | S  | S  |
|                    | CE101        | ENVIRONMENTAL SCIENCE                         | N  | N  | N   | N  | N   | N  | N  | N  |
|                    |              |                                               |    |    |     |    |     |    |    |    |
| VI (Batch 2021-25) | CE417        | DESIGN OF HYDRAULIC STRUCTURES                | S  | S  | S   | S  | S   | S  | S  | S  |
|                    | CE302        | WATER RESOURCES ENGINEERING                   | N  | N  | CAN | N  | CAN | N  | N  | N  |
|                    | CE210        | EARTHQUAKE ENGINEERING AND DISASTER MANGEMENT | S  | S  | HS  | S  | HS  | S  | S  | S  |
|                    | PE309        | PROJECT MANAGEMENT                            | N  | N  | N   | N  | N   | N  | N  | N  |
|                    | CE308        | STRUCTURAL DESIGN II                          | N  | N  | S   | N  | S   | N  | N  | N  |
|                    | CE438        | TRAFFIC ENGINEERING AND MANAGEMENT            | N  | N  | N   | N  | S   | N  | N  | N  |
|                    | CE414        | PRE STRESSED CONCRETE                         | S  | S  | S   | S  | S   | S  | S  | S  |
|                    | CE435        | ADVANCED CONCRETE STRUCTURE DESIGN            | S  | S  | S   | S  | S   | S  | S  | N  |

**Subject-wise Analysis (Clause 2.4)**

| <b>Subject Code</b> | <b>Subject Name</b>                           | <b>Consistent Deviation</b> | <b>Nature</b> | <b>Action Category</b> |
|---------------------|-----------------------------------------------|-----------------------------|---------------|------------------------|
| CE303               | GEOTECHNICAL ENGINEERING                      | Across Q1–Q8: all negative  | Consistent    | N                      |
| CE209               | CONSTRUCTION ENGINEERING AND MANAGEMENT       | All Qs – All positive       | Consistent    | S                      |
| CE421               | SOLID WASTE MANAGEMENT                        | All Qs – All positive       | consistent    | HS                     |
| CE420               | AIR POLLUTION AND CONTROL                     | Q1–Q8 Negative              | Negative      | N                      |
| CE208               | SURVEYING                                     | Q1–Q8 Positive              | Positive      | S                      |
| CE 207              | STRUCTURAL ANALYSIS-II                        | Q1–Q8 Positive              | Consistent    | S                      |
| CE 101              | ENVIRONMENTAL SCIENCE                         | Q1–Q8 Negative              | Consistent    | N                      |
| CE 417              | DESIGN OF HYDRAULIC STRUCTURES                | All Qs – All Positive       | Consistent    | S                      |
| CE 302              | WATER RESOURCE ENGINEERING                    | Q1–Q8 Negative              | Inconsistent  | N                      |
| CE 210              | EARTHQUAKE ENGINEERING AND DISASTER MANGEMENT | All Qs – All Positive       | Consistent    | S                      |

| Subject Code | Subject Name                                  | Consistent Deviation          | Nature     | Action Category |
|--------------|-----------------------------------------------|-------------------------------|------------|-----------------|
| PE 309       | PROJECT MANAGEMENT                            | Q1-Q8 Negative                | Consistent | N               |
| CE 308       | STRUCTURAL DESIGN II                          | Most questions are Negative   | Consistent | N               |
| CE 210       | EARTHQUAKE ENGINEERING AND DISASTER MANGEMENT | Q1-Negative<br>Q2-Q8-Positive | Consistent | S               |
| CE 438       | TRAFFIC ENGINEERING AND MANAGEMENT            | Most are negative             | Consistent | N               |
| CE 414       | PRE STRESSED CONCRETE                         | All Positive                  | Consistent | S               |
| CE 435       | ADVANCED CONCRETE STRUCTURE DESIGN            | Positive                      | Consistent | S               |

#### **Batch-wise Performance (Clause 2.5)**

1. IV Sem (2022-26): Avg ~4.08- No Batch-level Issue
2. VI Sem (2021-25): Avg ~4.09 - No Batch-level Issue

#### **Student Comment Analysis (Clause 2.6)**

No comments were found.

#### **Corrective Actions**

Negative Deviations:

- 1) Batch: 2022-2026 (IV Semester)
  - a) Subject: CE303 – Geotechnical Engineering  
Deviation: Consistently negative across Q1-Q8 (Max: -11-15%)  
Clause Referenced: 3.1 – For Negative Deviations

**Actions:** Faculty has been advised to include real-life applications of geotechnical concepts using visual aids and case studies to improve student understanding and asked to conduct mid-semester feedback from students and make necessary course corrections.

b) Subject: CE420 – Air Pollution Control

Deviation: Consistently negative across Q1–Q8 (Max: –9.23%)

Clause Referenced: 3.1 – For Negative Deviations

**Actions:** Faculty has been advised to revise the course delivery plan to include: More real-world applications (e.g., industrial case studies, pollution control technologies in use), Visual content (animations/diagrams of control equipment) and simplify complex equations and processes using step-wise breakdown and real-world analogies.

c) Subject: CE101 – Environmental Science

Deviation: Consistently negative across Q1–Q8 (Max: –14.43%)

Clause Referenced: 3.1 – For Negative Deviations

**Actions:** Faculty has been advised to improve voice modulation, pace of delivery, and clarity of concepts and make lectures more visually rich and application-oriented. Engage students by asking questions, using examples from daily life, and facilitating short activities. Be more approachable during and after class for doubt resolution.

2) Batch: 2021–2025 (VI Semester)

a) Subject: CE302 – Water Resource Engineering

Deviation: Highly Negative (up to –26.1%) – *Corrective Action Needed (CAN)* status

Clause Referenced: 3.1, 3.4 – *Subject with Highest Deviation*

**Actions:** Faculty has been advised to strengthen topic introduction and concept motivation — explain why a topic matters; prepare concise, well-structured slides with key takeaways; Actively encourage student participation — questions, discussions, short activities; Maintain a two-way communication culture — prompt responses to doubts and feedback.

b) Subject: PE 309 – Project Management

Deviation: Consistently negative across Q1–Q8 (–6.99% max)

Clause Referenced: 3.1 – For Negative Deviations

**Actions:** Faculty has been advised to use more interactive elements, such as group activities, discussion prompts, and student-led presentations; Emphasize practical tools like work breakdown structure (WBS) and risk registers; Avoid excessive theoretical slides; instead, integrate more visual and tool-based content.

c) Subject: CE 308 – Structural Design II

Deviation: Mostly negative across Q1–Q8 (–3.08% max)

Clause Referenced: 3.1 – For Negative Deviations

**Actions:** Faculty has been advised to focus more on conceptual clarity before jumping into calculations; Repeat complex steps during numerical problem-solving and give reasoning behind code clauses; Collect mid-course feedback informally to get early insights into student expectations.

- d) Subject: CE438 – Traffic Engineering and Management  
Deviation: Consistently negative across Q1–Q8 (–4.52% max)  
Clause Referenced: 3.1 – For Negative Deviations.

**Actions:** Faculty has been advised to emphasize practical relevance of each topic: connect theory to real-world road/traffic situations; Strengthen explanation of methodologies with worked-out examples; Use urban transport issues, government policies, and case laws as teaching tools for student engagement.

Clause Referenced: 3.2 – For Positive Deviations

**Faculty acknowledged for excellent teaching practices in Department Meeting**

- a) Subject: CE421 – Solid Management (IV Sem)  
Deviation: Highly Positive (Max +14.99%)  
**Actions:** Faculty was appreciated in the faculty meetings for the commendable performance. The faculty was encouraged to share their teaching approach and strategies with peers during departmental meetings.
- b) Subject: CE417 – Design of Hydraulic Structures (VI Sem)  
Deviation: Highly Positive (Approaching HS)  
**Actions:** Faculty was appreciated in the faculty meetings for effective teaching methodology, clear understanding of subject matter, and the ability to translate complex hydraulic design concepts into accessible, real-world learning.

B 17/5/24  
Dr. Bindhu Lal-Chairman  
(Chairman)

Bh 17/5/24  
Dr. R Naresh  
(Member)

17/05/24  
Dr. Mani Mohan  
(Member)

17/05/24  
Dr. Ashish Kr. Patnaik  
(Member)

17/5/24  
Dr. Puja Rajhans  
(Member)

## DECLARATION

I, Prof. Bindhu Lal, Head of the Department of Civ'l & Envir.al eng. hereby declare that:

1. Course feedback for the SP24 semester of the academic year 2023-24 has been collected.
2. The feedback has been thoroughly analysed according to the institutional Standard Operating Procedure for Course Feedback Analysis.
3. Appropriate measures for reward and appreciation have been taken for courses/faculty showing significant positive deviation from average.
4. Appropriate corrective actions have been identified and implemented for courses showing significant negative deviations from averages.
5. Where applicable, meetings with student batches have been conducted to address overall satisfaction issues.
6. All findings and actions have been documented in this Feedback Analysis and Action Taken Report.
7. The report has been presented to the department faculty, published on the department webpage, and submitted to the IQAC.

Date:

17/5/24

Place:

BIT Mesra

Signature:

B. Lal 17/5/24

Name:

Prof. Bindhu Lal

Name of the Department:

Civ'l & Envir.al eng.

## Annexure I: Analysis

| SP-24 - IV Semester |                                         |          |      |      |      |      |      |      |      | BATCH: 2022-2026 |        |        |        |        |        |        |        |
|---------------------|-----------------------------------------|----------|------|------|------|------|------|------|------|------------------|--------|--------|--------|--------|--------|--------|--------|
| Subject Code        | Subject Name                            | FEEDBACK |      |      |      |      |      |      |      | % Deviation      |        |        |        |        |        |        |        |
|                     |                                         | Q1       | Q2   | Q3   | Q4   | Q5   | Q6   | Q7   | Q8   | Q1               | Q2     | Q3     | Q4     | Q5     | Q6     | Q7     | Q8     |
| CE303               | GEOTECHNICAL ENGINEERING                | 3.81     | 3.81 | 3.76 | 3.74 | 3.66 | 3.65 | 3.65 | 3.62 | -7.36            | -6.78  | -8.00  | -8.72  | -9.34  | -9.20  | -10.85 | -11.15 |
| CE209               | CONSTRUCTION ENGINEERING AND MANAGEMENT | 4.35     | 4.34 | 4.32 | 4.31 | 4.28 | 4.28 | 4.31 | 4.24 | 5.77             | 6.19   | 5.70   | 5.20   | 6.02   | 6.47   | 5.27   | 4.07   |
| CE421               | SOLID WASTE MANAGEMENT                  | 4.67     | 4.61 | 4.7  | 4.67 | 4.61 | 4.58 | 4.67 | 4.7  | 13.55            | 12.79  | 14.99  | 13.98  | 14.19  | 13.93  | 14.06  | 15.36  |
| CE420               | AIR POLLUTION AND CONTROL               | 3.74     | 3.71 | 3.8  | 3.8  | 3.74 | 3.74 | 3.77 | 3.77 | -9.07            | -9.23  | -7.03  | -7.25  | -7.36  | -6.97  | -7.92  | -7.47  |
| CE208               | SURVEYING                               | 4.18     | 4.1  | 4.16 | 4.12 | 4.12 | 4.13 | 4.16 | 4.1  | 1.63             | 0.31   | 1.78   | 0.56   | 2.05   | 2.74   | 1.61   | 0.63   |
| CE207               | STRUCTURAL ANALYSIS II                  | 4.37     | 4.37 | 4.31 | 4.37 | 4.29 | 4.32 | 4.32 | 4.31 | 6.25             | 6.92   | 5.45   | 6.66   | 6.26   | 7.46   | 5.51   | 5.79   |
| CE101               | ENVIRONMENTAL SCIENCE                   | 3.67     | 3.67 | 3.56 | 3.67 | 3.56 | 3.44 | 3.78 | 3.78 | -10.77           | -10.21 | -12.90 | -10.43 | -11.82 | -14.43 | -7.68  | -7.22  |
| Average             |                                         | 4.11     | 4.09 | 4.09 | 4.10 | 4.04 | 4.02 | 4.09 | 4.07 | 4.08             |        |        |        |        |        |        |        |

| SP 24 - VI Semester |                                                |          |      |      |      |      |      |      |      | BATCH: 2019-2023 |       |        |       |        |       |       |       |
|---------------------|------------------------------------------------|----------|------|------|------|------|------|------|------|------------------|-------|--------|-------|--------|-------|-------|-------|
| Subject Code        | Subject Name                                   | FEEDBACK |      |      |      |      |      |      |      | % Deviation      |       |        |       |        |       |       |       |
|                     |                                                | Q1       | Q2   | Q3   | Q4   | Q5   | Q6   | Q7   | Q8   | Q1               | Q2    | Q3     | Q4    | Q5     | Q6    | Q7    | Q8    |
| CE417               | DESIGN OF HYDRAULIC STRUCTURES                 | 4.44     | 4.33 | 4.33 | 4.31 | 4.39 | 4.31 | 4.31 | 4.39 | 6.78             | 5.46  | 7.50   | 4.97  | 9.23   | 5.64  | 4.66  | 6.94  |
| CE302               | WATER RESOURCES ENGINEERING                    | 4        | 3.9  | 2.98 | 3.98 | 2.97 | 3.88 | 3.88 | 3.91 | -3.80            | -5.02 | -26.02 | -3.07 | -26.10 | -4.90 | -5.78 | -4.75 |
| CE210               | EARTHQUAKE ENGINEERING AND DISASTER MANAGEMENT | 4.43     | 4.45 | 4.52 | 4.47 | 4.45 | 4.41 | 4.47 | 4.45 | 6.54             | 8.38  | 12.21  | 8.87  | 10.72  | 8.09  | 8.55  | 8.40  |
| PE309               | PROJECT MANAGEMENT                             | 3.98     | 3.89 | 3.94 | 3.85 | 3.96 | 3.89 | 3.83 | 3.94 | -4.28            | -5.26 | -2.18  | -6.23 | -1.47  | -4.66 | -6.99 | -4.02 |
| CE308               | STRUCTURAL DESIGN II                           | 4.03     | 4    | 4.11 | 4.03 | 4.06 | 3.94 | 4.06 | 4    | -3.08            | -2.58 | 2.04   | -1.85 | 1.02   | -3.43 | -1.41 | -2.56 |
| CE438               | TRAFFIC ENGINEERING AND MANAGEMENT             | 3.97     | 4    | 4    | 4    | 4.03 | 4    | 4.06 | 4.03 | -4.52            | -2.58 | -0.70  | -2.58 | 0.27   | -1.96 | -1.41 | -1.83 |
| CE414               | PRE STRESSED CONCRETE                          | 4.32     | 4.23 | 4.23 | 4.23 | 4.18 | 4.18 | 4.27 | 4.23 | 3.90             | 3.02  | 5.01   | 3.02  | 4.01   | 2.45  | 3.69  | 3.05  |
| CE435               | ADVANCED CONCRETE STRUCTURE DESIGN             | 4.27     | 4.18 | 4.18 | 4.14 | 4.18 | 4.18 | 4.18 | 4.09 | 2.69             | 1.80  | 3.77   | 0.83  | 4.01   | 2.45  | 1.51  | -0.37 |
| Average             |                                                | 4.16     | 4.11 | 4.03 | 4.11 | 4.02 | 4.08 | 4.12 | 4.11 | 4.09             |       |        |       |        |       |       |       |