

## 5-day Short Term Course

On

### Winter School on Fundamentals of Vibrations

(WinVibFundae-2023)

23<sup>rd</sup> February 2024 – 27<sup>th</sup> February 2024



Organized by  
Department of Civil Engineering,  
National Institute of Technology-  
Rourkela.

#### Coordinator-and-Faculty Instructor:

Dr. Mahendra Gattu,  
Assistant Professor, Civil Engineering,  
9894275445, [gattum@nitrkl.ac.in](mailto:gattum@nitrkl.ac.in)

ॐ असतो मा सद्गमय।  
तमसो मा ज्योतिर्गमय।  
मृत्योर्मा मृतं गमय ॥  
ॐ शान्ति शान्ति शान्तिः ॥

#### Course Description:

The course is a refresher on the theory of vibrations taught at the undergraduate level. Structural and mechanical engineers can attend this course to revise their basics and engage in classroom discussions in this exciting area. Students preparing for written tests and viva voce will also find this course helpful.

#### Course Modules:

Module	Topics
1.	Free Vibration of Single-Degree-of-Freedom Systems
2.	Harmonically Forced Vibration of Single-Degree-of-Freedom Systems
3.	Transient Vibration of Single-Degree-of-Freedom Systems
4.	Multiple-Degree-of-Freedom System Vibrations
5.	Energy-Based Approaches
6.	Vibration of Continuous Systems
7.	Mode-Summation Procedures for Continuous Systems (Beams)
8.	Classical Methods
9.	Introduction to the Finite Element Method
10.	Random Vibrations

#### Course Timings:

23<sup>rd</sup> Feb 2024 – 27<sup>th</sup> Feb 2024:

10 am – 12 pm, 3 pm – 5 pm

**Venue:** NIT-Rourkela.

#### Program Fees:

**Industry Professionals: Rs. 4700/- (includes 18% GST)**

**Students: Rs. 2300/- (includes 18% GST)**

#### Payment Details:

A/C Name: CONTINUING EDUCATION NIT ROURKELA

A/C No.: 10138951784

IFS Code: SBIN0002109

Bank Name: State Bank of India

Branch Name: NIT Campus, Rourkela

#### Registration: Google Form Link:

<https://forms.gle/Jdak25G5ojvuuHyj8>

**Last Date of Registration: 21-02-2024**

#### Terms and Conditions:

1. Program fees once paid cannot not be refunded.
2. Program fees does not include accommodation and food.
3. Limited accommodation is available in Institute.