

E-LEARNING MODULE

This module is included in paper PHSACOR02T in Semester-II syllabus under West Bengal State University. Students may go to these following links to get their necessary requirements for understanding the topic very easily. In this way, I open up the opportunity of e-learning for my students through my profile in the college website. I believe they will be surely benefited through this teaching-learning process.

MODULE: ELASTICITY

Lecture-1: Introduction to Elasticity

- ❖ Study material: <https://www.slideshare.net/KUNTALBISWAS16/lecture-1-141449440>
- ❖ Lecture video: <https://youtu.be/zXSK3yhryv0>
- ❖ PowerPoint presentation: <https://www.slideshare.net/KUNTALBISWAS16/lecture-1-introduction-of-elasticity>
- ❖ Assignment: <https://www.slideshare.net/KUNTALBISWAS16/assignment-1-introduction-to-elasticity>

Lecture-2: Poisson's ratio and relations between different elastic modulus

- ❖ Study material: <https://www.slideshare.net/KUNTALBISWAS16/lecture-2-on-poissons-ratio-and-relations-between-elastic-modulus>
- ❖ Lecture video: <https://youtu.be/zXSK3yhryv0>
- ❖ PowerPoint presentation: <https://www.slideshare.net/KUNTALBISWAS16/lecture-2-poissons-ratio-and-relation-between-elastic-modulus>
- ❖ Assignment: <https://www.slideshare.net/KUNTALBISWAS16/assignment-2-on-poissons-ratio-and-relations-between-elastic-modulus>

Lecture-3: Twisting of Cylinder or a wire

- ❖ Study material: <https://www.slideshare.net/KUNTALBISWAS16/lecture-3-twisting-of-cylinder-or-a-wire>
- ❖ Lecture video : <https://youtu.be/hDIJYisBi10>
- ❖ PowerPoint presentation: <https://www.slideshare.net/KUNTALBISWAS16/lecture-3-twisting-of-cylinder-or-a-wire-141452050>
- ❖ Assignment : <https://www.slideshare.net/KUNTALBISWAS16/assignment-3-twisting-of-cylinder-or-a-wire>

Lecture-4: Poisson's ratio and relations between different elastic modulus

- ❖ Study material: <https://www.slideshare.net/KUNTALBISWAS16/lecture-4-bending-of-beam-cantilever>
- ❖ Lecture video : https://youtu.be/b8lxjco_0x4
- ❖ PowerPoint presentation: <https://www.slideshare.net/KUNTALBISWAS16/lecture-4-bending-of-beam-cantilever-141452249>
- ❖ Assignment :
For Bending of beam: <https://www.slideshare.net/KUNTALBISWAS16/assignment-4-a-bending-of-beam>
For Cantilever: <https://www.slideshare.net/KUNTALBISWAS16/assignment-4-b-cantilever>

CURRICULUM VITAE

DR. KUNTAL BISWAS

Date of Birth: 22.02.1975

E-mail ID: kbis_75@yahoo.co.in

DESIGNATION

Assistant Professor of Physics, Dum Dum Motijheel College, Kolkata-700074.

ACADEMIC BACKGROUND

- Ph.D. (Physics), Jadavpur University, West Bengal, 2008.
- M.Sc. (Physics: Specialization in Electronics), University of Calcutta, West Bengal, 1998.
- B.Sc. (Physics), University of Calcutta, West Bengal, 1996.

POSITIONS HELD/ HOLDING

- 2010–Present : Assistant Professor, Dum Dum Motijheel College
- 2008–2010 : Assistant Professor, Sikkim Manipal Institute of Technology, Sikkim
- 2001–2008 : Assistant Teacher, The Scottish Church Collegiate School
- 1999–2001 : DST-Junior Research Fellow, Department of Electronics and Telecommunication Engineering, Jadavpur University

TEACHING INTEREST

- Microstrip lines and antenna, Gas sensors, genetic diodes and non-degenerate DNA transistor, neural signal transduction, The Einstein relation in non-parabolic semiconductors and semiconductor super lattices, Fermi-Dirac distribution function in degenerate semiconductors, Density of states (DOS) function in semiconductors, Radiation effect on microbes, Solid state physics.

Software Skills: C, UNIX, FORTRAN 77, Mathematica, MATLAB, Python.

RESEARCH PROFILE

Ph.D. Thesis:

Investigation on the Transmission Characteristics of Microstrip Lines and Its Variants.

PUBLICATIONS:

Journal Paper:

1. **Biswas, K.**, Nayek, A.K., Basu, J., Ghosh, A. and Giri, P. (2017): Are mobile radiations harmful for bacteria? A case study. *International Journal of Advanced Research*, 5(7): 2320-5407. [DOI:10.21474/IJAR01/4877](https://doi.org/10.21474/IJAR01/4877)
2. **Biswas, K.**, Basu, J., Ghosh, A. and Giri, P. (2016): Study of rhizospheric bacterial population of Azadirachta Indica (Neem) of North 24 Parganas district of West Bengal for bioprospective consideration. *International Journal of Experimental Research and Review*, 6: 62-66.
3. **Biswas, K.** (2016): Dispersion characteristics of trapped Inverted Microstrip Lines. *International Journal of Advanced Research*, 4(11): 1818-1824. [DOI:10.21474/IJAR01/2279](https://doi.org/10.21474/IJAR01/2279)

NUMBER OF SEMINAR PRESENTATIONS:

- International: 4; National: 5

NUMBER OF WORKSHOP/ CAPACITY BUILDING COURSE PARTICIPATIONS:

- International: 1; National: 6; State level: 7

AWARDS

- Qualified for Lectureship (NET) in the subject of *Physical Sciences* in the Joint CSIR-UGC Test for *Junior Research Fellowship* and *Eligibility for Lectureship (NET)* held in 2003.