Objectives of the Course

Fundamental knowledge of Electrodynamics is essential for engineers and scientists working in the field of electronics, telecommunication, photonics, and material science. The course aims to introduce concepts of electromagnetism followed by several topics on electromagnetic waves and radiations along with laboratory demonstration of the core concepts. In general, the following areas will be covered:

- Electrostatics and magnetostatics
- Maxwell’s equations
- Electromagnetic waves in different media
- EM waves in wave guides
- Fields and radiation due to a moving charge
- Antennas and antenna arrays
- Interaction of electromagnetic radiation with matter

Course Contents

The following aspects of Electrodynamics will be covered in detail:

- Introduction to electrostatics and magnetostatics
- Maxwell’s equations for time varying fields
- Propagation of electromagnetic waves in conducting and non-conducting medium;
- Wave guides and resonant cavity
- Radiation and radiating systems
- Fields and radiation from an accelerated charge
- Dispersion theory
- Interaction of electromagnetic radiation with matter
- Scattering and diffraction
**General Information**

Indian Institute of Technology Bhubaneswar is organizing a short-term course on “**Electrodynamics for Engineers**”. Limited seats are available, availability of seats and merit will be taken into consideration while selecting candidates. The candidate will be informed of his/her selection in advance.

**Important Dates**

- **Last date** for receiving the filled-up application form along with sponsorship certificate: **20/04/2020**.
- The selected candidates will be informed through email latest by: **24/04/2020**.
- **Course date:** **11/05/2020 TO 15/05/2020**

**Venue for Course**

Course will be held at School of Basic Sciences, IIT Bhubaneswar.

**Registration**

All participants should send their filled-up registration form along with DD to the course coordinator by post. Application without the endorsement of the Head of the Institution/Department and DD of amount 1000/- will not be entertained.

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**Mail your Registration forms to:**

Dr. Abhishek Chowdhury  
Assistant Professor in Physics,  
School of Basic Sciences  
Indian Institute of Technology Bhubaneswar,  
Argul, Khordha-752050, Odisha.  
Ph: 06747135174 (O), 9559449901 (M)  
E-mail: achowdhury@iitbbs.ac.in

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**Registration Form**

**Electrodynamics for Engineers**  
11/05/2020 TO 15/05/2020

<table>
<thead>
<tr>
<th>Field</th>
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| **Name:** | ………………………………………………………….
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| **Department:** | ……………………………………………………... |
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| **Tel (off):** | …………………………….….**Mob:** | ……………………………. |
| **E-mail:** | ……………………………………………………………. |
| **Educational Qualification:** | ………………………………………. |
| **Area of Research:** | ……………………………………………….
| **Accommodation required:** | Yes [ ] NO [ ] |
| **Do you want to join as** | 1) QIP participant [ ]
| | 2) Sponsored [ ] |
| **Payment details:** | DD No……………………………………..
| | Date:……………………….Amount:……………………….. |
| **Signature of the Applicant** | ……………………………………...
| **Date:** | …………………………………………………………….. |

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**Travel**

- TA will be reimbursed (On production of tickets) from station to station plus incidental charges of Rs. 800/- (i.e. for to and fro fare) subject to limit of three tier AC train/bus fare by the shortest route from their workplace to IIT Bhubaneswar and back or Rs. 4000/- whichever is lower.
- Shared accommodation at Institute Guest House @ Rs. 225/- per day & NISER Guest House @ Rs. 600/- per day subject to the availability of rooms.

**Accommodation**

- Free accommodation at Institute Guest House/Student Hostel/NISER Guest House depending on availability.
- On payment basis

**Course Fees**

- 1) No Course fees
- 2) They need to deposit DD of Rs. 1000/- in favor of CEP, IIT Bhubaneswar (Which will only be refunded on joining the course)
- 3) They need to deposit DD of Rs. 5000.00 in favor of CEP, IIT Bhubaneswar (Which will only be refunded on joining the course)
- 4) On payment basis

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**Participants Category**

- Faculty of AICTE approved Engineering College (Within 30)
- Faculty of AICTE approved Engineering College (Exceeding 30)
- Non – AICTE approved Engineering College/Scientist Research/Scholar/Engineer/Offer

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**Bank details for payment**

- A/C Name: CEP, IIT Bhubaneswar
- A/C No.: 24282010001960
- IFSC Code: SYNB0007282
- Bank Name: Syndicate Bank, IIT Bhubaneswar

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*Shared accommodation at Institute Guest House @ Rs. 600/- per day & NISER Guest House @ Rs. 225/- per day subject to the availability of rooms.

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