

**Department of Electrical Engineering
Indian Institute of Technology, Kanpur**

EE 210

Microelectronics-I

2020-21-II

Instructor: Alope Dutta (aloke)

Tutors: Imon Mondal (imon), Yogesh Chauhan (chauhan), Safi Qureshi (qureshi), Amol Gaidhane (amold), Shubham Sahay (ssahay), Raghavendra Dangi (dangi)

Schedule: Lectures will be uploaded on mookIT at regular intervals

Live Discussion Hour on Wednesdays from 10 AM to 11 AM (via Zoom)

Meeting URL:

<https://zoom.us/j/98064652546?pwd=eHFuVGV2YzJaemZ3UnF3TGMxZ0tOZz09>

Live Tutorial on Tuesdays from 10 AM to 11 AM (via Zoom)

Tutors of the respective sections will send the Meeting Link

Text: Semiconductor Devices and Circuits, Alope Dutta, Oxford University Press, 2008

Reference: Microelectronic Circuits; A.S. Sedra and K.C. Smith; Oxford University Press, 5th Edition, 2004

Topics:

1. I-V Characteristics and small-signal models of Diodes, BJTs, and MOSFETs
2. Biasing
3. Amplifiers
4. Output stages
5. Low- and high-frequency responses of amplifiers
6. Stability and compensation of amplifiers
7. Operational amplifier

Grading: Mini-Quizzes – 25%
2 Major Quizzes (10th February and 14th April) – 15%
Mid-Sem – 25%
End-Sem – 35%

Note: Brihaspati will also be used on need basis (contact person: ynsingh)