

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

EE 210

Microelectronics-I

2018-19-II

Schedule: Lectures: 10:00 AM – 11:00 AM MWF (L1)
Tutorials: 10:00 AM – 11:00 AM Tue (?)

References:

- Semiconductor Devices and Circuits, Alok Dutta, Oxford University Press, 2008
- Analysis and Design of Analog Integrated Circuits; P.R. Gray, P.J. Hurst, S.H. Lewis, and R.G. Meyer; John Wiley & Sons, 4th Edition, 2001
- Microelectronic Circuits; A.S. Sedra and K.C. Smith; Oxford University Press, 5th Edition, 2004
- Microelectronics; J. Millman and A. Grabel; McGraw-Hill, 2nd Edition, 1987
- Design of Analog CMOS Integrated Circuits,” B. Razavi, Tata McGraw Hill, 2002

Instructor: Yogesh Chauhan, WL 125, 7244, chauhan@

Tutors: S.S.K. Iyer (WL 122, 7820, sskiyer), S. Qureshi (WL 211, 7133, qureshi), A. Verma (WL 132, 6432, amitkver), and Yogesh Chauhan

Topics:

1. I-V Characteristics and small-signal models of basic semiconductor devices (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 amplifiers

Grading (tentative):

Tutorial Assessment (Mini-Quizzes) - 10%
2 Quizzes - 20%
Mid-Sem - 30%
End-Sem - 40%

Note:

- All course related announcements and material will be sent by email.
- No make-up for any mini-quiz under any circumstances.
- For main quizzes and exams, make-up may be allowed only under medical emergency approved by SUGC.
