CSE 112: Computer Organization (Section A & B)

Instructor: Sujay Deb

Class Room: C102 & Zoom

Meeting: Tue & Thr 9:30 AM

Lecture 1

INDRAPRASTHA INSTITUTE *of*
INFORMATION TECHNOLOGY
DELHI

AMS Lab @IIITD

Scan to join the class online- Zoom link
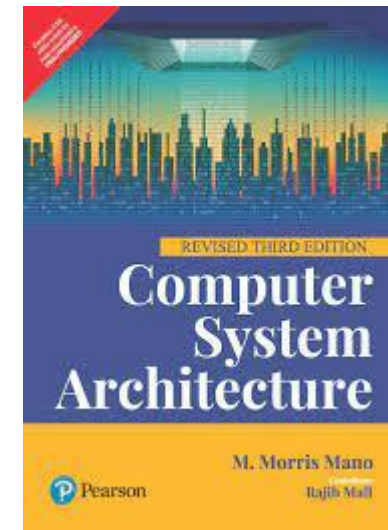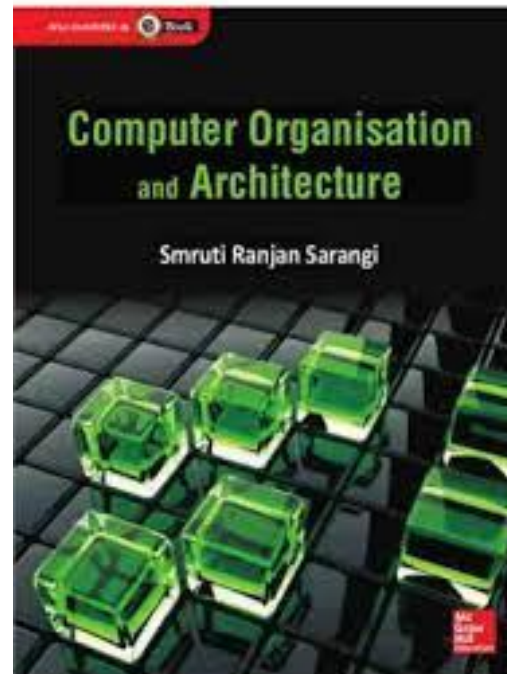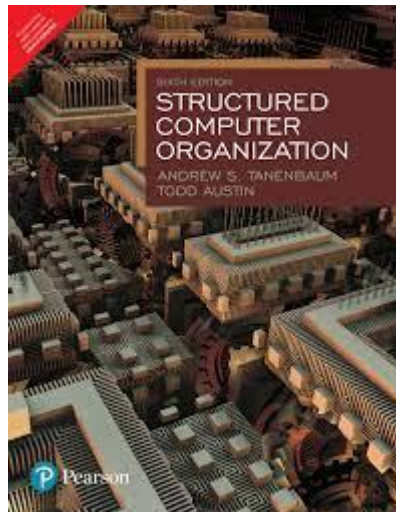
Course Information

- Instructor:
  - Sujay Deb (sdeb@iiitd.ac.in)
  - Office A- 607 (Office Hours: Tuesday 4:30 - 6:00 PM)

- TA Support:

- Mentor TA:
  - Each student will have a mentor TA for
  - Tutorials
  - Dedicated Office hours
  - ..

Course Information

- Course web page: We will use Google Classroom for almost everything!
- **Class Code: 2w5gg6o**
- Link: https://classroom.google.com/c/NzQzMDI4MjM1Mzkx?cjc=2w5gg6o
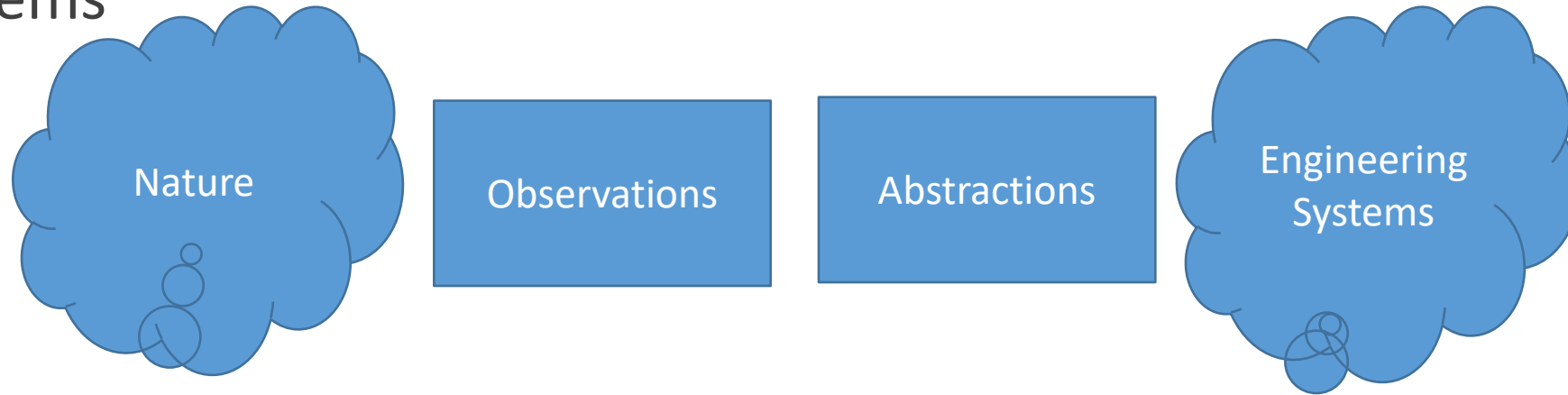- Textbook:

Scan to join the Google Classroom

Grading structure

- Assignment: 10%
- Quizzes: 20%
  - 12%:-3 announced Quizzes, best 2 will be considered
  - 8%:- In class activities
- Midterm: 30%
- Final: 40%
- Passing Threshold: 30%

- Lectures and discussions in class will cover basics of the course
- Tutorials, assignments and practice problems will help you gain a deep understanding of the subject
- Keep yourself in sync with the class, plan to spend at least 10-12 hrs per week on the course
- **Zero tolerance towards violation of Academic Integrity**

Engineering Approach

- What is Engineering?
  - the purposeful use of science

- We are here to employ the facts of nature to build very interesting systems

Nature → Observations → Abstractions → Engineering Systems
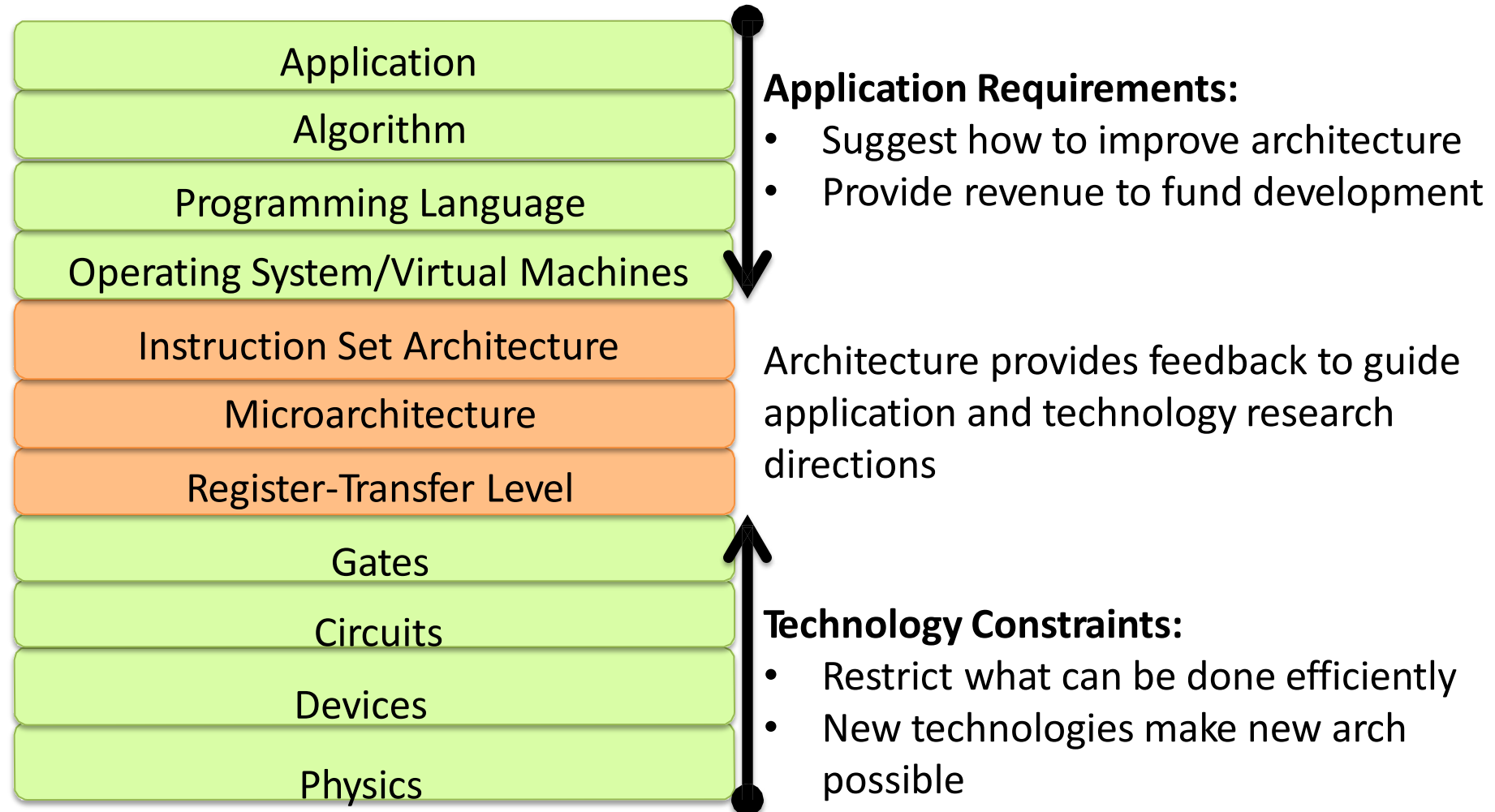
- Take complicated things, build layers of abstraction, and simplify things so that we can build useful systems.

Abstractions in Modern Computing Systems

Application

Application Requirements:
- Suggest how to improve architecture
- Provide revenue to fund development

Technology Constraints:
- Restrict what can be done efficiently
- New technologies make new arch possible

Abstractions in Modern Computing Systems

Application
Algorithm
Programming Language
Operating System/Virtual Machines
Instruction Set Architecture
Microarchitecture
Register-Transfer Level
Gates
Circuits
Devices
Physics

Application Requirements:
- Suggest how to improve architecture
- Provide revenue to fund development

Architecture provides feedback to guide application and technology research directions

Technology Constraints:
- Restrict what can be done efficiently
- New technologies make new arch possible

Class Interaction #1

- Link: https://forms.gle/XofQndfobC1Su24R7