

**Topic Name:** Operating Systems overview

**Relevant Course Name:** Operating Systems

**Relevant Department:** Computer Science

**Relevant Semester:**

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**IIT:** Kharagpur

**Topic Description and Outline:**

Operating system basics – Types of Computer Systems – Computer-system operation – I/O structure – Hardware Protection – System components – System calls – System programs – System structure

Process concept – Process scheduling – Operations on processes – Cooperating processes – Interprocess communication – Communication in client-server systems – Multithreading models – Threading issues – Pthreads

Process synchronization – Deadlock

Basics of memory management

**Pre- requisites:**

Basic ideas of computer architecture and organization