

Distributed and Parallel systems

- **Course number and name:**
CC 529 – Distributed and Parallel systems
- **Credits and contact hours**
Credits Hours: 3Hrs
Contact Hours: In Lecture 2Hrs, and In Tutorial 2Hrs
- **Instructor’s or course coordinator’s name**
Coordinator Name: Prof. Dr. Attala Hashad
- **Text book, title, author, and year**
 - Andrew S. Tanenbaum and Maarten van Steen, “Distributed Systems: Principles and Paradigms”, Prentice Hall, latest edition.
- **Specific course information**
 - a. **Catalog description**
Distributed systems and applications - Recent developments in distributed systems - Client-server and peer-to-peer application designs - Sockets - Reliability - Replication - Group membership protocols - Clock synchronization - logical timestamps.
 - b. **prerequisites or co-requisites**
Prerequisites: CC431
 - c. **Types of Course (required, elective, or selected elective course) in the program**
Elective Course
- **Specific goals for the course**
 - a. **Specific outcomes of instruction**

After the completion of this course the students will be able to:

	Course Learning Outcomes	SO
1	Understand the fundamental aspects of distributed systems and applications.	C
2	Master client-server and peer-to-peer application designs.	C,K
3	Cope with state of the art technologies in distributed systems.	I,J

Topics to be covered

- Introduction to distributed architectures
- Communication among systems
- Naming
- Synchronization
- Consistency
- Replication
- Fault tolerance
- Distributed systems: object based, file
- Distributed systems: file, web-based, coordination-based
- Distributed and parallel systems