BSE3202 Distributed Systems Development (4CU)

Course Objectives; At the end of the course students should be able to: (i) Present a conceptual model of distributed systems; (ii) Describe key components of a distributed system and evaluate the trade offs of alternative architectural models; (iii) Suggest algorithm suitable for application in distributed systems; (iv) Build prototype implementations of distributed systems; and (v) Demonstrate an understanding of the challenges faced by future distributed systems

Course Content; Topics covered include event-driven of software architectures, distributed object computing, and developing, documenting, and testing applications using object-oriented frameworks and design patterns. Techniques that enable the construction of reusable, extensible, efficient, and maintainable concurrent and distributed software systems are emphasized. Abstraction based on patterns and object-oriented techniques will be crucial throughout the course, and their application studied in several in depth case studies.

References

•S. Tanenbaum and M. V. Steen, Distributed Systems: Principles and Paradigms,Second

Edition,PrenticeHall,2006,ISBN:0132392275.ReferenceBooks:

•G. Coulouris, J. Dollimore, and T. Kindberg, Distributed Systems: Concepts and Design, 3rd

Edition, Addison-Wesley, 2000, ISBN:0201619180.

•R. Anderson, SecurityEngineering: AGuide to Building Dependable Distributed Systems, JohnWiley&Sons, 2001, ISBN: 0471389226.