BSE2204 Modellingin Information Systems (4CU)

Course objectives: Upon successful completion of the course, the student should: (i) Be able to demonstrate sufficient understanding of the various modeling tools and techniques; (ii)Be able to model an information system using the Universal Modeling Language (UML); (iii) Be able to model business processes; (iv) Select a suitable modeling language based on the context; and (v) Be able to evaluate the quality of models using model checking tools and formal methods

Course content: This course deals with methods and techniques used insystems analysis and design. This includes modeling the enterprise, application domains, business processes and activities, and information systems components. Main topics to be covered are: Modelling the enterprise: Object oriented concepts, object oriented enterprise modelling. Modelling the business process: process and work flow modelling, IDEF0, and SAPR/3 process models, modelling the dynamics: Data flow diagram (DFD), structured English, decision table, decision tree, and state-transition diagram. Modelling the structures: Entity-relationship (ER) models. Putting the designs together: Unified Modeling Language (UML) Evaluation of methods: Evaluation criteria.

References

•Conceptual Modeling of Information Systems, by Antoni Oliv, Springer, 1stedition (October

12007)ISBN-10:3540393897

•Information Systems Development and Data Modeling: Conceptual and Philosophical Foundations, by Rudy A. Hirschheim, Heinz K. Klein and Kalle Lyytinen, Cambridge University Press(1995), ISBN0521373697