Course Title	Systems Analysis and Design				
Course Code	CSE230				
Course Type	Compulsory				
Level	Bachelor (1st cycle)				
Year / Semester	2nd year / 4th semester				
Teacher's Name	TBA				
ECTS	6	Lectures / week	3 hours/14 weeks	Laboratories / week	None
Course Purpose and Objectives	The objective of this course is to introduce students to the principles of Information Systems (IS) development. The lifecycle stages are explained in detail. Traditional and novel systems' development methodologies are described and their basic characteristics are compared. Students learn how to apply the modeling tools of systems' development methodologies in realistic development cases.				
Learning Outcomes	Upon succesful completion of this course students should be able to: • Describe the concept of Information Systems and analyze the differences between Information Systems and other types of software systems • Describe the basic stages of the systems' lifecycle development process and discuss their interrelationship and its importance • Describe various systems' development methodologies and evaluate their relative merits • Explain project management in support of system analysis projects • Articulate the responsibilities and key skillsets of an effective systems analyst • Develop and analyse a business case and system requirements • Describe the operation of modeling tools in systems' development methodologies and apply them in realistic development cases				
Prerequisites	CSE120	Co-requisites	None		
Course Content	Phase I: Systems Planning Introduction to Systems Analysis and Design: introduction, what is information technology, information systems components, business today, modelling business operations, business information systems, what information do users need, systems development tools, systems development methods, the information technology department. Analyzing the Business Case: a framework for IT Systems development, what is a business case, information systems projects, evelauation of systems requirements, overview of feasibility, evaluating feasibility, setting priorities, preliminary investigation overview				

	Managing Systems Projects: overview of project management, creating a work breakdown structure, identifying task patterns, calculating the critical path, project monitoring and control, reporting, project management examples, project management software, risk management, managing for success Phase II: Systems analysis Requirements Modeling: systems analysis phase overview, joint application development, rapid application development, agile methods, modelling tools and techniques, system requirements checklist, future growth, costs, and benefits, fact-finding, interviews, other fact-finding techniques, documentation, information management software, preview of logical modeling Data and Process Modeling: overview of data and process modelling tools, data flow diagrams, creating a set of DFDs, guidelines for drawings DFDs, data dictionary, process description tools, logical versus physical models. Object Modeling: overview of object oriented analysis, relationships among objects and classes, object modelling with the UML, organising the object model Development Strategies: development strategies overview, the impact of the internet, outsourcing, in-house software development options, the system analyst's role, analysing cost and benefits, the software acquisition process, completion of systems analysis tasks, transition to systems design Part III: Systems design User Interface Design: systems design phase overview, what is a user interface, seven habits of successful interface designers, guidelines for user interface design, source document and form design, printed output, technology issues, security and control issues, prototyping. Data Design: data design concepts, DBMS components, web-based design, data design terms, entity-relationship diagrams, data normalisation, using codes, data storage and access, data control System Architecture: architecture checklist, system architecture: then and now, client/ server designs, the impact of the internet, e-commerce architecture, processing methods, network models, wireless networks Phase IV: Systems implementation Managing Systems Implementation: software quality assurance, overview of application development, structured application development, object-oriented application development, agile application development, coding, testing the system, documentation, management approval. Managing Systems Support and Security
Teaching Methodology	Face- to- face
Bibliography	Scott Tilley and Harry J. Rosenblatt, Systems Analysis and Design, Cengage Kenneth E. Kendall and Julie E. Kendall, Systems Analysis and Design Alan Dennis , Barbara Haley Wixom, Systems Analysis and Design: An Object-Oriented Approach with UML

	John W. Satzinger , Robert B. Jackson, Systems Analysis and Design in a Changing World
Assessment	Midterm Examination 30% Final Examination 40% Assignments/Lab 20% Class Participation and attendance 10% 100%
Language	English