Course Title:	**CS-810 Advanced Requirements Engineering**
Credit Hours:	3+0
Pre-requisites:	▪ Software Engineering
Course Description:	This course provides details about the analysis, modeling and specification of software engineering requirements. This course explains how requirements engineering fits into systems development process. It also provides an understanding of the main challenges in requirements engineering and the current research in this area.
Tools and Technologies:	▪ Based on instructor preferences
Learning Outcomes:	On successful completion of this course students will be able to: 1. Analyze client needs based on identifying stakeholders. 2. Specify functional requirements using different modeling methods. 3. Prepare software requirements specifications using an industry standard. 4. Document and trace requirements using computer-based tools.
Tentative MS Thesis:	▪ Development of Enterprise or Web Scale Software
Text Books:	▪ Gerald Kontonya and Ian Sommerville: Requirements Engineering: Processes and Techniques, John Wiley & Sons, 2002
Reference Books:	▪ Ian Sommerville, Pete Sawyer (1997): Requirements Engineering: A Good Practice Guide (Wiley). ▪ Gerald Kotonya, Ian Sommerville (1998): Requirements Engineering: Processes and Techniques (Wiley)
Course Contents:	▪ Requirements engineering process

	▪ Methods, tools and techniques for eliciting, organizing and documenting software requirements ▪ Analysis and validation techniques, including need, goal, and use case analysis ▪ Requirements documentation standards ▪ Traceability ▪ Requirements management ▪ Handling requirements changes