1. **Course number and name**  
   CptS 484: Software Requirements

2. **Credits and contact hours**  
   3 credits, 3 lecture hours

3. **Instructor’s or course coordinator’s name**  
   Bolong Zeng

4. **Textbook, title, author, and year**  

5. **Specific course information**  
   a. **Catalog description:** Elicitation, analysis, specification, and validation of software requirements as well as the management of requirements during the software life cycle.  
   b. **Prerequisites or corequisites:** CptS 322 with a C or better; certified major in CptS, CE, EE, or SE.

6. **Specific goals for the course**  
   By the end of the course, students will be able to  
   • Explain the role of requirements engineering and its process. (1c, 7b)  
   • Determine stakeholder requirements using multiple standard techniques. (1a, 1b, 1d, 1e, 3b, 3c, 7a, 7b, 7d)  
   • Produce specifications with functional and non-functional requirements based on the elicited requirements (1a, 1b, 2c, 2d, 2e, 3a, 3b, 3e, 3f, 7a, 7b).  
   • Decide scope and priorities by negotiating with the client and other stakeholders. (1c, 1d, 2b, 2c, 2d, 2e, 7a, 7b, 7c, 7d, 7f, 7g)  
   • Manage requirements. (1a, 1b, 1d, 1e)  
   • Apply standard quality assurance techniques to ensure that requirements are: verifiable, traceable, measurable, testable, accurate, unambiguous, consistent, and complete. (1a, 1b, 1d, 1e, 7b, 7g)  
   • Produce test cases, plans, and procedures that can be used to verify that they have defined, designed and implemented a system that meets the needs of the intended users. (6b, 6c, 6d, 7b, 7g)

7. **Brief list of topics to be covered**  
   • Fundamentals of software requirements and requirements process  
   • Requirements elicitation, analysis, specification, and validation.  
   • Requirements management and traceability.
- Formal verification, model checking, temporal logic.