CSC/CPE 402 Software Requirements

1. CSC/CPE 402 Software Requirements

2. credit units 4 contact hours 6

3. Course Coordinator: David Janzen


5. a. Course Description: Software requirements elicitation, analysis and documentation. Team process infrastructure and resource estimation to support appropriate levels of quality. Software architectural design. 3 lectures, 1 laboratory. Crosslisted as CPE/CSC 402.
   b. Prerequisite: Prerequisite: CSC/CPE 307 or CSC/CPE 309; CSC/CPE 305
   c. Required/Elective/Selective Elective for CPE, CSC, EE, SE

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6. a. Course Goals/Outcomes
   - To learn skills required to produce and maintain a high-quality software product on time and in budget.
   - To know and execute principles of software requirements engineering.
   - To know and execute principles of software architecture.
   - To work effectively as a team member to meet project milestones.
   - To understand and apply a software process.
   - To effectively write and speak about software engineering.
   b. How Student Outcomes addressed
      (“B” = Basic level, “I” = Intermediate level, “A” = Advanced level)

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7. Major Topics Covered: (number of lecture hours each)

- Introduction: challenges and limitations of solving human problems using software (2)
- Discovering customer requirements: precisely what is this customer's problem (2)
- Specifying requirements (3)
- Semi-Formal specification of requirements (4)
- Resource estimation and process planning (4)
- Analyzing requirements (2)
- Requirements quality assurance: test planning and user manual issues (1)
- Software architectural design (5)
- Design quality issues and traceability to requirements (1)
- Presentations and reviews of a software requirements document (4)