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| **ELEMENT** | **CONTENT** |
| DEPARTMENT | CIS |
| AUTHOR (S) | Jeremy Ouellette |
| COURSE NUMBER | **CIS 2320** |
| COURSE TITLE | **Software Quality Assurance & Testing** |
| SHORT TITLE | Software QA |
| COURSE LEVEL | 2000 |
| DATE CREATED | 8/31/2006 |
| CHECKED/CHANGED | 2/27/2017 |
| PREREQUISITES | C- or better in CIS 2025 or 2262 or 2271 |
| COREQUISITES |  |
| RESTRICTIONS |  |
| SPECIAL FEES | No |
| CREDITS | 3 |
| HOURS | 3 hours of lecture per week |
| SEMESTER | Fall |
| COURSE DESCRIPTION | This course introduces the student to the concepts, techniques, and tools used for evaluating and ensuring the quality of computer software. Topics include dimensions and implications of quality, code reviews, test construction, test coverage metrics, partition testing, website testing, and current test support tools, including issue tracking systems. |
| SUGGESTED TEXTS |  |
| OPTIONAL TEXTS |  |
| COURSE OUTCOMES | The successful student will be able to:   1. Develop an appropriate strategy for testing a broad range of software products 2. Participate in a code review of a software product 3. Implement a suite of tests to evaluate the quality of a software product 4. Use current tools to test a website 5. Use current tools to evaluate the completeness of a suite of tests 6. Use current tools to track the results of a test suite 7. Use current tools to track versions of source code 8. Use issue tracking systems to organize outstanding issues 9. Use current tools to build software for release |
| COURSE CONTENT | 1. Concepts of quality 2. Verification strategies 3. Test plans 4. Code reviews 5. Unit testing 6. Unit testing tools, including junit 7. Integration testing 8. Test harnesses 9. Test coverage metrics 10. System testing 11. Partition testing 12. Stress testing 13. Test databases 14. Website testing 15. Source code control 16. Issue tracking systems 17. Build tools: make and ant |
| LAB/STUDIO OUTCOMES |  |
| LAB/STUDIO CONTENT |  |
| LECTURE CAPACITY | 32 |
| LAB CAPACITY |  |
| GRADED OR P/NP | Graded |
| EVALUATION | Exams, assignments |
| DELIVERY METHOD | LEC |
| ROOM REQUIREMENTS |  |
| AUTHOR’S NOTES |  |