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| **ELEMENT** | **CONTENT** |
| DEPARTMENT | CIS |
| AUTHOR (S) | Jean Hakim, CJ Wang |
| COURSE NUMBER | **CIS 4150** |
| COURSE TITLE | **Software Engineering** |
| SHORT TITLE | Software Engnrng |
| COURSE LEVEL | 4000 |
| DATE CREATED |  |
| CHECKED/CHANGED | 2/9/2017 |
| PREREQUISITES |  |
| COREQUISITES |  |
| RESTRICTIONS | Junior standing in a computer major |
| SPECIAL FEES | No |
| CREDITS | 3 |
| HOURS | 3 hours of lecture per week |
| SEMESTER | Fall |
| COURSE DESCRIPTION | This course covers the product life cycle for a software product. Material covered includes both common current practices in a variety of industrial settings as well as more recent leading-edge advances. |
| SUGGESTED TEXTS | *Software Engineering*; Ian Sommerville |
| OPTIONAL TEXTS |  |
| COURSE OUTCOMES | The successful student will be able to:   1. Understand the functions of a software engineer 2. Appreciate the differences in development practices for small vs. large projects 3. Understand the differences in approaches used for in-house vs. outsourced development 4. Identify and understand practices used in all phases of a development project including systems architecture, software architecture, and system test 5. Understand and appreciate the role of a project manager 6. Articulate the various aspects of product integration and testing strategies, performance testing, and the significance of capacity planning 7. Appreciate the importance of quality, and metrics, as built-in practices that are key to a successful product realization 8. Communicate technical information effectively, orally, and in writing 9. Participate meaningfully in the assigned project that would not only serve to cement the concepts being taught in the course but to teach effective teamwork in product realization, as well as presentation skills |
| COURSE CONTENT | 1. Software processes 2. Agile software development 3. Requirements engineering 4. Architecture design 5. Design and implementation 6. Software testing 7. Project management 8. Project planning |
| LAB/STUDIO OUTCOMES |  |
| LAB/STUDIO CONTENT |  |
| LECTURE CAPACITY | 32 |
| LAB CAPACITY |  |
| GRADED OR P/NP | Graded |
| EVALUATION | Attendance, participation, exams, quizzes, homework |
| DELIVERY METHOD | LEC |
| ROOM REQUIREMENTS |  |
| AUTHOR’S NOTES |  |