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| **ELEMENT** | **CONTENT** |
| DEPARTMENT | CIS |
| AUTHOR (S) | Craig Damon |
| COURSE NUMBER | **CIS 5140** |
| COURSE TITLE | **Software Architecture** |
| SHORT TITLE | SW Architecture |
| COURSE LEVEL | 5000 |
| DATE CREATED | 11/28/2012 |
| CHECKED/CHANGED | 2/6/2017 |
| PREREQUISITES | CIS 4120, 4150 |
| COREQUISITES |  |
| RESTRICTIONS | Graduate standing |
| SPECIAL FEES | No |
| CREDITS | 3 |
| HOURS | 3 hours of lecture per week |
| SEMESTER | Spring |
| COURSE DESCRIPTION | This course is a detailed consideration of software design from the high-level perspective and will examine a range of distinct architectural styles and consider their appropriateness for a range of problems. |
| SUGGESTED TEXTS |  |
| OPTIONAL TEXTS |  |
| COURSE OUTCOMES | The successful student will be able to:   1. Identify and describe a range of architectural styles 2. Choose appropriate architectural designs for a wide range of projects 3. Consider the corporate and cultural impact of changing architecture and its implementation path |
| COURSE CONTENT | 1. Overview of architecture 2. Monolithic architectures 3. Microkernel and plugin architectures 4. Web application architectures 5. Restful services 6. 12 factors apps and single page apps 7. Cloud and containers 8. Micro service architectures 9. Serverless applications 10. Event-based architectures 11. Logging and monitoring 12. Scaling across services 13. Scaling within services 14. Availability |
| LAB/STUDIO OUTCOMES |  |
| LAB/STUDIO CONTENT |  |
| LECTURE CAPACITY | 32 |
| LAB CAPACITY |  |
| GRADED OR P/NP | Graded |
| EVALUATION | Homework |
| DELIVERY METHOD | LEC |
| ROOM REQUIREMENTS |  |
| AUTHOR’S NOTES |  |