

SWE 760 - Software Analysis and Design of Real-Time Systems
Fall 2016
Approximate Course Schedule

| Week # | Date | Topic | Related Readings | Assignments |
|---------------|--------------|---|-------------------------|------------------------------|
| 1 | August 30 | Introduction to Real-Time Embedded Systems | Chapter 1 | |
| 2 | September 6 | Structural modeling for Real-Time Systems | Chapter 5 | |
| 3 | September 13 | Use Case Modeling/ State Machines for RTE systems | Chapter 6,7 | |
| 4 | September 20 | Object Structuring / Dynamic Interaction Modeling for RTE systems | Chapter 8, 9 | |
| 5 | September 27 | Real-Time Software Architectural Design | Chapter 10 | Due date for Project Phase 1 |
| 6 | October 4 | Software Architectural Patterns for RTE systems | Chapter 11 | |
| 7 | October 11 | Mid-semester break | | |
| 8 | October 18 | Distributed Component-based Software Design | Chapter 12 | Due date for Project Phase 2 |
| 9 | October 25 | Concurrent Real-Time Software Task Design | Chapter 13 | |
| 10 | November 1 | Detailed Real-Time Software Design | Chapter 14 | |
| 11 | November 8 | Performance Analysis of RT Software Designs | Chapter 17, 18 | |
| 12 | November 15 | Term Project Tutorials and Term paper review | | |
| 13 | November 22 | Work on term papers and project | Research Papers | |
| 14 | November 29 | Project presentations | | Due date for Project Phase 3 |
| 15 | December 6 | System and Software Quality Attributes | Chapter 16 | |
| 16 | December 13 | Paper presentations | | Due date for term papers |

References:

H. Gomaa, *Real-Time Software Design for Embedded Systems*, Cambridge University Press, 2016

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8/29/16