

CS452/CS552 - Real time Operating Systems

Course Syllabus

Spring 2016

Instructor: Bob Rinker JEB 235 (208)885-7378 rinker@cs.uidaho.edu

Class website: www2.cs.uidaho.edu/~rinker/cs452

Text: *An Embedded Software Primer*, by David E Simon, Addison-Wesley, 1999.

No	Day			Topic	Text/Ref
1	Jan	14	Th	Introduction, RTOS Characteristics	Chap 1
2		19	T	Embedded processor development environment	Notes, Chap 9
3		21	Th	C Language review - for embedded systems	Notes
4		26	T	Processor architectures	Notes
5		28	Th	The ATMEL AVR Processor	Notes
6	Feb	2	T	The ATMEL AVR Processor	Notes
7		4	Th	I/O Devices	Chap 4
8		9	T	I/O Devices	Chap 4
9		11	Th	Interrupts	Chap 4
10		16	T	Interrupts and clocks	Notes
11		18	Th	**** Test 1 ****	
12		23	T	Clocks	Chap 4
		25	Th	Clocks	Chap 4
13	Mar	1	T	Hardware fundamentals	Chap 2,3
14		3	Th	Hardware fundamentals	Chap 2,3
15		8	T	Tasks, task states	Chap 6
16		10	Th	Tasks, task states	Chap 6
	Mar	14 - 18		****Spring Break - NO Classes****	
17		22	T	Task Scheduling	Chap 5
18		24	Th	Task Scheduling	Chap 5
19		29	T	RTOS Specification and Design	Notes, Chap 8
20		31	Th	RTOS Specification and Design	Notes, Chap 8
21	Apr	5	T	The Shared data problem	Chap 6
		7	Th	**** Test 2 ****	
22		12	T	The Shared data problem, semaphores	Chap 6
23		14	Th	The Shared data problem, semaphores	Chap 6
24		19	T	Interprocess structures - queues, pipes, mailboxes	Chap 7
25		21	Th	Interprocess structures - queues, pipes, mailboxes	Chap 7
26		26	T	Timers, events	Chap 7
27		28	Th	Timers, events	Chap 7
28	May	3	T	Real-time scheduling	Chap 5
29		5	Th	Real-time scheduling, Final Exam Review	Chap 5

Final: Thursday, May 12, 10:00-Noon

Grading:

	CS452	CS552
Two Midterm Tests	30%	30%
Final Exam	20%	15%
Homework/Programming Projects	50%	40%
Grad Project		15%
Total	100%	100%

The letter grade you receive from the course will be determined as follows:

90%	-	100%	A
89.9%	-	80%	B
79.9%	-	70%	C
69.9%	-	60%	D
59.9%	-	0%	F

The instructor reserves the right to adjust these percentages slightly if deemed necessary.

Disability Support Services Reasonable Accommodations Statement:

Reasonable accommodations are available for students who have documented temporary or permanent disabilities. All accommodations must be approved through Disability Support Services located in the Idaho Commons Building, Room 306 in order to notify your instructor(s) as soon as possible regarding accommodation(s) needed for the course.

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