

**CS 624/724 FORMAL SPECIFICATION OF SOFTWARE SYSTEMS  
SYLLABUS  
Spring 2009**

<http://www.cis.uab.edu/cs624>

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Classroom: TBA

Time: 9:30-10:45 A.M. Tuesday and Thursday

Office: CH 121 (934-2213)

Textbook: *Validating Designs for Object-oriented Systems*, by J. Fitzgerald, P. G. Larsen, P. Mukherjee, N. Plat, and M. Verhoef, Springer-Verlag, 2005.

Time Table:	<u>Topic</u>	<u>Chapter</u>	<u>Lecture</u>
	<a href="#">Introduction</a>	1	1, 3
	<a href="#">Building a Model in VDM++</a>	2	6
	<a href="#">VDM++ Tool Support</a>	3	7
	<a href="#">Unified Modeling Language (UML)</a>		8
	<a href="#">Defining Data</a>	4	9
	<a href="#">Defining Functionality</a>	5	10
	<a href="#">Modeling Unordered Collections</a>	6	11-12
	<a href="#">Modeling Ordered Collections</a>	7	13-14
	<a href="#">Modeling Relationships</a>	8	15
	<a href="#">Model Structuring</a>	9	16-17
	<a href="#">Combining Views</a>	10	20
	<a href="#">From Enterprise Architecture to Business Application</a>	11	21
	<a href="#">Concurrency in VDM++</a>	12	22-23
	<a href="#">Model Quality</a>	13	26
	<a href="#">Implementing in Java</a>	14	27
	<a href="#">Modeling Real-Time Systems</a>		28-29

Grading: Final Exam 50%  
Exercises 50%

Grading Policy: There will be no class meetings on Tuesday, January 13, Tuesday-Thursday, January 20-22, Tuesday, March 17, Thursday, March 19, Thursday, April 9, and Tuesday, April 14. The Final Examination is on Tuesday, May 5, 8:00-10:30 A. M. Besides the exam, there will also be several specification and design exercises which will emphasize the theory covered by the lectures and text. Some of these exercises will build on each other in the form of a complete design of a software system.