



Course Weekly Outline

Course Instructor	Osama Younus Fadhil					
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Title	Secure software design					
Course Coordinator						
Course Objective	After studying this course: the student will understand some requirements for building secure software, and some procedures that are followed in the field of software security.					
Course Description	This course presents an introduction to software security and puts the student on the way of building secure software. Also, it considers some recipes for secure programming in the C++ programming language.					
Textbook						
References	<ul style="list-style-type: none"> J. Viega, G. McGraw, "Building Secure Software", Addison Wesley, 2002. J. Viega, M. Messier, "Secure Programming Cookbook", O'Reilly, 2003. S. Sodiya, S. A. Onashoga, and O. B. Ajayi, "Towards Building Secure Software Systems", University of Agriculture, Nigeria, 2006. Silberschats A., Galvin P. and Gagne G., "Operating System Concepts", 7th Edition, 2005. 					
Course Assessment	Term Tests		Laboratory	Quizzes	Project	Final Exam
	1st	2nd				
	20	10	–	10%	----	60%
General Notes						



Course weekly Outline

week	Date	Topics Covered	Lab. Experiment Assignments	Notes
1	24-9-2014	Introduction to software security 1	-	
2	1-10-2014	Introduction to software security 2	-	
3	8-10-2014	Secure software development model	-	
4	15-10-2014	Selecting technologies	-	
5	22-10-2014	The ten best practices for secure software development	-	
6	29-10-2014	The three pillars of software security	-	
7	5-11-2014	Software security touch points	-	
8	12-11-2014	Open source and closed source	-	
9	19-11-2014	Buffer overflows 1	-	
10	26-11-2014	Buffer overflows 2	-	
11	3-12-2014	Random numbers 1	-	
12	10-12-2014	Random numbers 2	-	
13	17-12-2014	Race conditions	-	
14	24-12-2014	Input data validation 1	-	
15	31-12-2015	Input data validation 2	-	
			-	
Half-year Break				
16	18-2-2015	Password authentication 1	-	
17	25-2-2015	Password authentication 2	-	
18	4-3-2015	Access control 1	-	
19	11-3-2015	Access control 2	-	
20	18-3-2015	Database security 1	-	
21	25-3-2015	Database security 2	-	
22	1-4-2015	Copyright and copy protection 1	-	
23	8-4-2015	Copyright and copy protection 2	-	
24	15-4-2015	Secure session management	-	
25	22-4-2015	Threat modeling	-	
26	29-4-2015	Attack tree	-	
27	6-5-2015	Anti-Tampering	-	
28	13-5-2015	Symmetric Cryptography Fundamentals	-	
29	20-5-2015	Public key cryptography	-	

30	27-5-2015	Discussion	-	

Instructor Signature:

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