

SA410 SEARCH AND DETECTION THEORY Fall 2010

Textbook:

NAVAL OPERATIONS ANALYSIS, THIRD EDITION, edited by Daniel H. Wagner, W. Charles Mylander and Thomas J. Sanders, Naval Institute Press, Annapolis, Maryland 1999

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Day	Date	Topic	Read (Sections)	Problems
Mon	24 Aug	Admin		
Wed	26 Aug	(1) Operations Research	101-113	Ch1: 2,3,6,9,15
Fri	28 Aug	Project 1 Assigned		
Mon	31 Aug	(A) Probability Review		App:: 4,7,8,17,20,22,23,24
Wed	2 Sep			
Fri	4 Sep	(2) Decision Criteria, Game Theory	201-206	Ch 2: 2,3,6,10,11,12,13,15
Mon	7 Sep	Labor Day		
Tues	8 Sep			
Wed	9 Sep			
Fri	10 Sep	Project 1 Due		
Mon	14 Sep	(3) Simulation	301-306	Ch 3: 3,5,7,9
Wed	16 Sep			
Fri	18 Sep	Project 2 assigned		
Mon	21 Sep	(4) Sonar Modeling	401-406	Ch 4: 2,5,6,7,11,12
Wed	23 Sep			
Fri	25 Sep			
Mon	28 Sep	TEST 1		
Wed	30 Sep	(5) Cumulative Detection Probability	501-508	Ch 5: 1,2,6,7,8,10
Fri	2 Oct	Project 2 Due		
Mon	5 Oct			
Wed	7 Oct			
Fri	9 Oct			
Mon	12 Oct	Columbus Day- No Class		
Wed	14 Oct	(6) Lateral Range Curves	601-604	Ch 6: 1,2,4,5,7
Fri	16 Oct			
Mon	19 Oct	(7) Search and Patrol	701-705	Ch 7: 1-5
Wed	21 Oct			
Fri	23 Oct			
Mon	26 Oct	TEST 2		
Wed	28 Oct	(8) Computer Aided Search	801-803	Ch 8: 1,2,5,6,7,8,9
Fri	30 Oct			
Mon	2 Nov			
Wed	4 Nov			
Fri	6 Nov			
Mon	9 Nov	(9) Barrier Patrol	901-906	Ch 9: 1,2,5,7,8a & c
Wed	11 Nov	Veteran's Day – No Class		
Fri	13 Nov			
Mon	16 Nov			
Wed	18 Nov	TEST 3		
Fri	20 Nov	(14) Reliability	1401-1406	Ch 14: 1,5, 6, 7

Mon	23 Nov	Project 3 assigned
Wed	25 Nov	
Fri	21 Nov	Thanksgiving Holiday – No Class
Mon	30 Nov	
Wed	2 Dec	Project 3 Due
Fri	4 Dec	
Mon	7 Dec	
Wed	9 Dec	
Fri	11 Dec	Last Day

Notes:

- (1) Project 1 is to find an article on Naval Operations Research in a professional journal. Summarize the article and discuss what you learned from the article. This paper should be between 2-3 pages. Double spaced, font Times New Roman 12. Margins should be 1 inch all around.
- (2) Project 2 will be a simulation.
- (3) Project 3 will be a search and detection for an object or person. It may require simulation. Expect to present this project to the class. Presentations should be 15 minutes in length.
- (4) Homework will be collected be collect one week after it is assigned. Assume homework will be assigned on the day listed in the syllabus.