SYST 520 ECE 550 System Engineering Design (3.0:3) Fall 2016
Prerequisites: Graduate standing or SYST 505
Description: System engineering design methods are studied and practiced, including object-oriented and structured analysis based techniques. Design description languages such as UML, IDEF0 and IDEF1x are introduced and used in carrying out complete system designs. Teams make presentations of their designs.

Instructor: Prof. Alexander H. Levis Nguyen Eng. Room 3245 Tel 703 993 1619

Best way to contact: alevis@gmu.edu Class Location: Nguyen Engineering 2608
Class time: Monday 4:30 – 7:10 pm ENG 2608

SYST 520 ECE 550	**F16**	**A H Levis**	
Date	**L#**	**Subject**	
8/29/2016	L 1	Introduction to Systems Engineering; Design and Integration	Buede
9/12/2016	L2	Operational Concepts and Use Cases; Requirements	Notes + S
9/19/2016	L3	Structured Analysis: Activity Modeling (IDEF0 and DFD)	Buede
9/26/2016	L4	Structured Analysis: Data Modeling (IDEF1x and E-RD)	Notes + S
10/3/2016	L5	Behavior Modeling: Rule Modeling and Dynamics Modeling (STD)	Notes + S
10/11/2016	L6	Model Concordance, Functional Architecture	
10/17/2016	L7	Physical (System) Design	Buede
10/24/2016	L8	Architecture Frameworks	Notes +S
10/31/2016		**Midterm: Team Design Presentations**	
11/7/2016	L9	Object Orientation and UML, Part I	Notes + S
11/14/2016	L10	Object Orientation and UML, Part II	Notes
11/21/2016	L11	OO Architecture Design: Functional Viewpoint	Notes
11/28/2016	L12	OO Architecture Design: System Viewpoint	Notes
12/5/2016	L13	Integration and Qualification; Closure	Buede
12/19/2016		Final Exam	
		+ S: Plus Supplementary Readings on Blackboard	

Required Textbook:
Dennis M. Buede, *The Engineering Design of Systems*, Wiley, 2009, NY (3rd Edition).

Also available as grayscale loose leaf (omits Chapters 4 and 5) at the GMU Bookstore (lower cost) and as an e-book at even lower cost: http://store.vitalsource.com/show/9781119097365
Extensive lecture notes and supplementary readings will be available through Blackboard.

The Blackboard system will be used for most course activities.

Homework: There are weekly reading assignments and homework assignments

Grading: Homework sets will count for 50% of the final grade. The midterm presentation will count for 20% of the grade, and the in-class final examination for 30%.

The George Mason University Honor Code can be found at
http://oai.gmu.edu/the-mason-honor-code-2/