SYSTEMS ENGINEERING

Prof. Cecilia Haskins

Learning Objectives: Students receive an overview of the foundations and practices of Systems Engineering and how systems approaches are applied to technology solutions in product design and production.

Textbook: Kossiakoff, A., Sweet, W. N., Seymour, S. J. and Biemer, S. M. (2011), Systems Engineering Principles and Practice, Second Edition, John Wiley & Sons, Inc., Hoboken, NJ, USA. (KSSB)
http://www.psconsultech.com/yahoo_site_admin/assets/docs/di-0967.132122129.pdf

No.	Date	Lecture / Reading	Description Lecture; Lab
1	8.10.2014	Introduction to systems thinking and systems engineering KSSB: chapters 1, 2	Introduction to the systems thinking / systems engineering portion of the course; T-puzzle lab
2.1	9.10.2014	Foundations of systems engineering KSSB: chapters 3 – 5	Structure of complex systems System development process Systems engineering management Spaghetti tower lab
2.2	9.10.2014	Needs Analysis KSSB: chapter 6	Introduce the mini-project Lego-man lab
3.1	10.10.2014	Concept Exploration KSSB: chapter 7; Young reading	Requirements engineering
3.2	10.10.2014	Concept Definition and life cycle costing KSSB: chapter 8	Architecture; Modeling; MBSE
4.1	15.10.2014	Decision Analysis and Support KSSB: chapter 9	Trade-off studies Student reading reports in Lab
4.2	15.10.2014	Engineering Design KSSB: chapter 12	Configuration management, concurrent engineering Student reading reports in Lab
5.1	16.10.2014	Integration and evaluation KSSB: chapter 13	V&V, testing, transition
5.2	16.10.2014	Operations and Support KSSB: chapter 15 Advanced systems thinking	Post-development systems engineering Archetypes
5.3	16.10.2014	ILS	Integrated logistic support
6.1	17.10.2014	Integrated SE-ILS-PM	Terje Fossnes – FLO/I
6.2	17.10.2014	Course wrap-up and summary	Student presentations

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