





Spring 2015



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**INTEGRATING SYSTEMS COMPETENCIES  
INTO THE CURRICULUM OF ANY  
ENGINEERING DISCIPLINE -JUNE 14, 2015  
U213C, 9AM-NOON, WSCC ROOM 602**

This is a hands-on workshop to review how we expose engineering students to systems competencies such as these to enable them to achieve a higher level of technical competence within their discipline:

- Describing the target of innovation as an interconnection of subsystems but also in terms of the target's interaction with the larger system that surrounds it;
- Applying a system stakeholder view of value, trade-offs, and optimization;
- Understanding system's interactions and states (modes);
- Specifying system technical requirements;
- Creating and analyzing high level design;
- Assessing solution feasibility, consistency, and completeness; and
- Performing system failure mode and risk analysis.

**\* Register for both ½ day workshops as part of ASEE 2015 conference registration. Free ticket with registration: <http://www.asee.org/conferences-and-events/conferences/annual-conference>**

**Master of Science in Systems Engineering  
Required Course Work at the University of Texas at  
El Paso.**

**Submitted by Dr. Eric Smith**

Each student is expected to have core knowledge in key areas of Systems Engineering. All students are required to complete the following five core courses:

**Core Knowledge**

- SE5341 Systems Engineering Fundamentals
- SE5342 Program and Systems Engineering Management
- SE5343 Requirements Engineering
- SE5344 Integration, Validation & Testing of Complex Systems
- SE5345 Special Project "Practicum" (400 hours of experiential education)

**Systems Engineering Prescribed Electives**

Students in the Systems Engineering concentration must take 3 courses from the list of following courses:

- SE5346 Systems Architecture and Design
- EE4364 Systems and Controls
- SE5347 Systems Engineering Processes
- IE5377 Advanced Ergonomics & Process Design
- SE5348 Systems Modeling & Simulation
- EE5390 Special Topics in SE

**Systems Engineering Electives**

Three Systems Engineering Electives approved by advisor and department. Can be taken in another department if it is deemed necessary for the student to meet his/her objectives.