Welcome
Dr. Peter Golding, Chair

Welcome to the inaugural edition of our SED-Newsletter. The goal of the newsletter is to encourage collaboration/communication within SED and also to reach out to other divisions that share an affinity and focus with SED. We hope that all of you will consider contributing and sharing SE news from your campus and from your perspective. Please let us know if we should publish our newsletter on a quarterly basis or bi-annually, or some other cycle. At least initially, I am hoping that the Secretary/Treasurer will act as editor and compile submissions for our newsletter. We hope to publish at least two editions of our newsletter before the next conference in Seattle. Please submit newsletter items to: Oscar H. Salcedo – salcedo@utep.edu

Systems Engineers take flight at UTEP

- Contributed by Oscar Salcedo
SED Secretary/Treasurer 2014-2015

On February 16th - 18th many systems engineering students at the University of Texas at El Paso had an exceptional opportunity to get in the cockpit of the F-35 Joint Strike Fighter simulations stations. Lockheed Martin delivered and set up the simulators which gave UTEP students and many area High School students the chance to experience first hand what F-35 pilots see and do in many different scenarios programmed into the simulators. More than 300 students had an opportunity to try their eye-hand coordination taking off, flying, engaging targets, and landing the newest jet fighter in the US arsenal. In its seventh year, this event has served to fire the imagination of student about Science, Technology, Engineering, and Mathematics.

IT SYSTEMS ENGINEERING INTO ENGINEERING EDU
JUNE 14, 2015, U448, 1PM - 4PM, WSCC ROOM 603

This workshop reports on and extends work from the May International Council on Systems Engineering (INCOSE) Spring Academic Forum that considers:
• How can we better describe the value of systems knowledge in engineering education, for students, employers and educators?
• What is the best way to build on existing successes to create useful materials, products and recommendations to help deliver this value?
• Is the Systems Engineering knowledge base sufficient to support these outputs?
• Recommendations, curriculum artifacts, best practices, lessons learned, and ongoing work will be presented and built upon during this workshop.

Seating limited, tickets required, please register early*
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.