

# Industry Day January 30, 2007



CENTER FOR  
**SPACE**  
ENGINEERING

Corporate Affiliates  
Program

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# Thank You!

- Fourth annual Industry Day
- Corporate affiliates (sponsoring today)
  - The Aerospace Corporation
  - The Space Dynamics Laboratory
- Students and their faculty mentors
- Sloan Booth and Sonya Warner

# Center for Space Engineering

- The Center for Space Engineering is a multi-disciplinary group of faculty within the college of engineering
- The Center for Space Engineering promotes basic research and technology development involving faculty, students and professionals.
- <http://cse.usu.edu/>



# Affiliated Personnel

- **Dr. Charles Swenson**  
Professor  
Electrical and Computer
- **Dr. Robert Pack**  
Research Associate Professor  
Civil and Environmental
- **Dr. Brent Stucker**  
Assistant Professor  
Mechanical and Aerospace
- **Dr. Rees Fullmer**  
Associate Professor  
Mechanical and Aerospace
- **Dr. Scott Budge**  
Associate Professor  
Electrical and Computer
- **Dr. Stephen Whitmore**  
Assistant Professor  
Mechanical and Aerospace
- **Dr. David Geller**  
Assistant Professor  
Mechanical and Aerospace
- **Mr. Paul Israelson**  
Research Professor  
Electrical and Computer
- **Dr. Randy Jost**  
Research Professor  
Electrical and Computer
- **Dr. Edmund Spencer**  
Assistant Professor  
Electrical and Computer

## Research Centers and Labs



CENTER FOR  
ADVANCED  
IMAGING  
**LADAR**

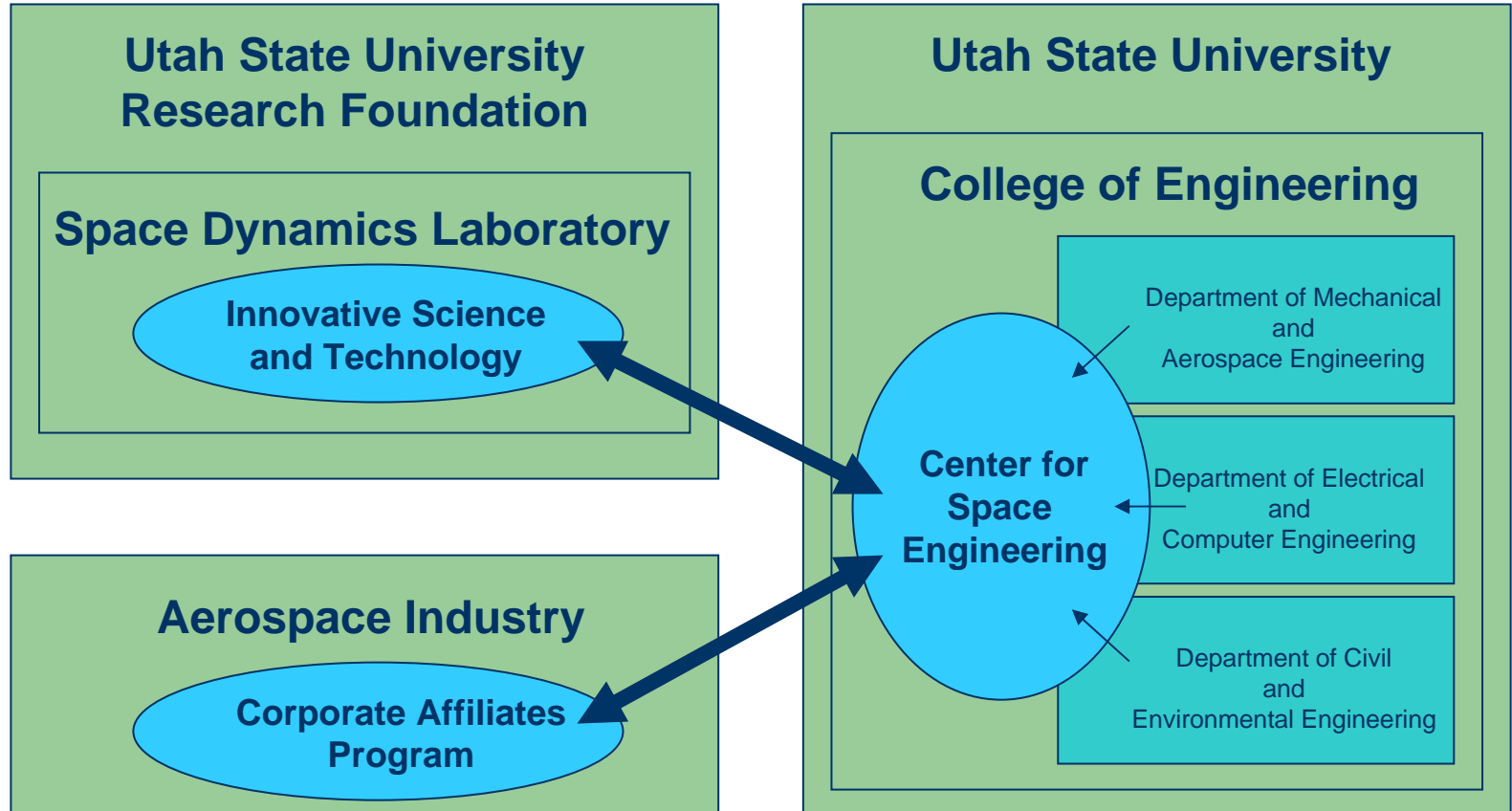


CENTER FOR  
ADVANCED  
SATELLITE  
MANUFACTURING



**SPACE**  
INSTRUMENTATION  
LAB

# Relationships



# Corporate Affiliates Program

- Actively facilitate access to students
  - Resume collection
  - Industry give technical presentations in specific classes.
  - Support Interviews for full-time positions or co-op and internship opportunities.
- Invitation to Industry Day
  - Graduating Students
  - Current Research
- A Faculty liaison expert in field of interest to affiliate
  - Opportunities for sponsored-research
  - Other collaborations may evolve.

## Agenda

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# Industry Day 2007



## Pre-Lunch Schedule

- 8:45 AM *History of Space Engineering in Utah, Dr. Doran Baker*
- 9:25 AM *Ground Station for TOROID, Karl Burk*
- 9:45 AM *TOROID Hardware & Real-time Software Architecture, Jared Crace & Paul Rodriguez*
- 10:05 AM *USUSat Attitude Control, Scott Jensen*
- 10:25 AM Break
- 10:45 AM *Spacecraft Charging, Aroh Barjatya*
- 11:05 AM *Design of a Flap System for Reentry Trim Control for CEV, Ben Andersen*
- 11:25 AM *Propulsion Systems Integration into an Aero-assist Orbital Transfer Vehicle, Patrick Jolley*

## After Lunch Schedule

- 1:15 PM *Reentry Air Data System for a Sub-Orbital Spacecraft Based on X-34 Design, **Joel Ellsworth***
- 1:35 PM *Hand Held Texel Camera Development, **Brandon Boldt***
- 1:55 PM *Advance Aerospace Structures and Rapid Manufacturing, **Chris Robinson***
- 2:15 PM *Calibration Targets, **Denton Johnson***
- 2:35 PM Break
- 2:55 PM *Power Self Test on Modular Spacecraft Panels, **Anand Madhusoodanan***
- 3:15 PM *Navigation and Guidance Analysis for Lunar Powered Descent, **Travis Moesser***
- 3:35 PM *Comparison of Two Navigation and Guidance Techniques for Orbital Rendezvous, **Scott Jenkins***
- 3:55 PM Closing Remarks, **Dr. Charles Swenson**
- 4:10 PM Reception



CENTER FOR  
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ENGINEERING

**UtahState**  
UNIVERSITY

## Introduction

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# Questions?

# USU Space Curriculum

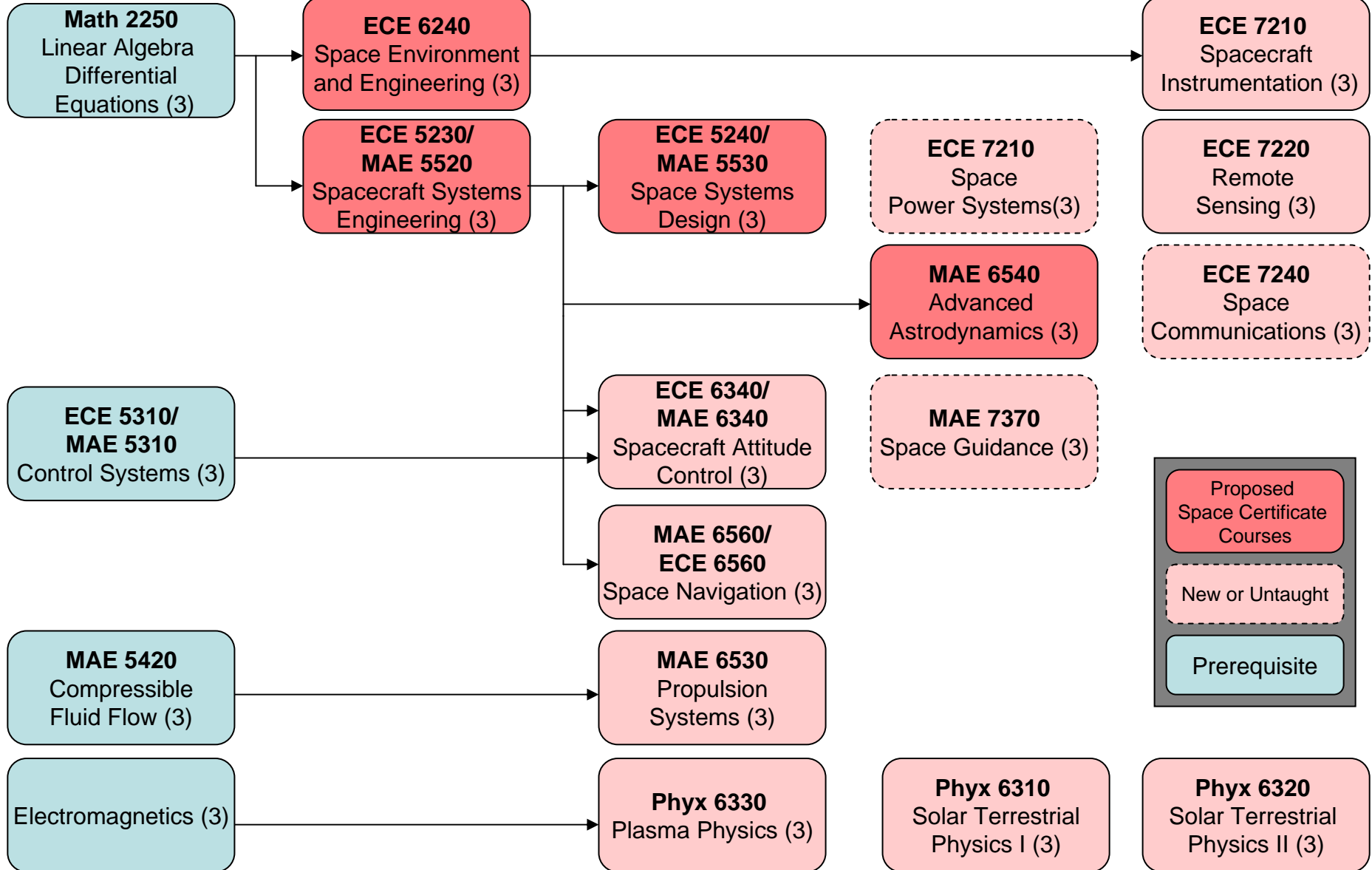
Prereq

Fall

Spring

Fall

Spring



Proposed  
Space Certificate  
Courses

New or Untaught

Prerequisite