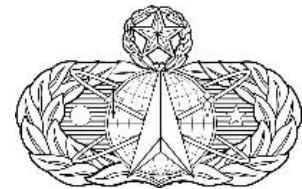




Space Working Group

Space Education and Training (SE&T) Strategic Plan



Major General Kathy Thomas
Honorary Chair, SWG
Lt Col David Swanson
Chairman, SWG

U.S. AIR FORCE

Character - Honor - Integrity - Service - Excellence



Overview

- **Airmanship vs airmanship/spacemanship**

- **Space Education and Training Strategic Plan**
 - **Vision and Mission Statements**
 - **Five Key Strategic Areas**

- **Implementation Phases**



Airman and Airmanship

Airmen

- “An airman is any person who understands and appreciates the full range of air and space capabilities and can employ or support some aspect of air and space power capabilities.”

AFDD 1-1, Leadership and Force Development, draft, 19 Sept 2003

- “The Air Force understands that not all airmen wear a blue uniform and in today’s world, non-flying space operators, maintainers, intelligence personnel, supply troops, and other “support” functions prove vital to air and space superiority.”

John F. Farquhar, 34 EDG/34 ES

- **airmanship at USAFA – education and training designed to increase a cadet’s understanding and competence in flight operations.**
- **spacemanship at USAFA – education and training designed to increase a cadet’s understanding and competence in space operations.**



Legacy of airmanship at USAFA

Air Force ACADEMY Search [PLAY INTRO](#) [ACADEMY HOME](#) [SITE INDEX](#)

This will be one of the toughest, but most rewarding, experiences of your life [MORE](#)

**“For the first time in our history, space has become an equal partner to air-breathers.”
James G. Roche, Secretary of the AF, 9 Apr 2003**

[AIRMANSHIP PROGRAMS](#) | [THUNDERBIRDS VIDEO](#)

Aviation and Airmanship

A very large part of the Commandant of Cadets' military education program involves flying. Some of the most enjoyable training you will receive is in the aviation and airmanship courses offered throughout your four years at the Academy. Your training will continue with instruction in the concepts of flight, navigation and operations. All cadets are enrolled in a soaring course, where you'll pilot a sailplane and even have the chance to solo. You'll also have the opportunity to take an elective course in free-fall parachuting – and if you complete five free-fall parachute jumps, you'll receive your basic military jump wings. You'll even have the chance to become an instructor in various aviation and airmanship programs. Cadets who desire and are qualified for

> Every cadet has the opportunity to participate in airmanship programs, and many go on to become instructors.

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Space Education & Training

The 2001 Space Commission cited a need to create a stronger military space culture leading to Secretary of Defense, Donald Rumsfeld's, direction: "**Enhance space education at all levels!**"



On 12 March 2003, Under Secretary of the Air Force, Peter Teets, proclaimed to Congress that the **development of a new space cadre is one of the Air Force's top agendas!**

On 3 June 2003, Deputy SecDef, Paul Wolfowitz, declared the **USAF the executive agent for space education and training** in the DoD.

USAFA's Strategic Plan:

Goal 3: Enhance the Academy's airmanship and space programs to prepare cadets for their role as [air and space] leaders

Objective 3B: Ensure the Academy is prepared to fully support the Air Force's integration of space into the [air and space] force

Core Initiative 3B.1: Increased Emphasis on Space Operations



Emergence of spacemanship

Search definition of terms PLAY INTRO ACADEMY HOME SITE INDEX

This will be one of the toughest, but most rewarding, experiences of your life MORE X

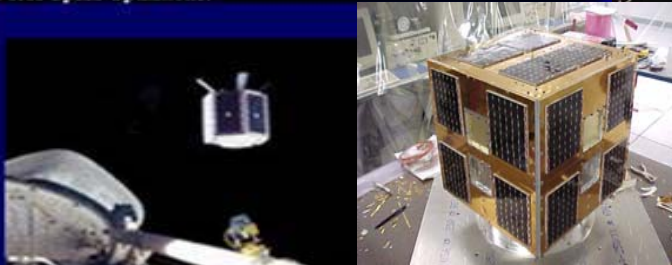
“Space is an indispensable partner in the American way of waging war.”
General Lance Lord, 12 Feb 04



Cadets have the opportunity to participate in Spacemanship Programs. Many can become leaders and go on to work in Air Force Space Operations.

Space and Spacemanship

A part of the Commandant of Cadets' military education program involves understanding how space operations supports warfighting. Many cadets enjoy training in the space and spacemanship courses offered throughout your four years at the Academy. Your training will continue with instruction in the concepts of satellite operations, launch, and space control. A select number of cadets enrolled in a space operations course, where you'll learn to operate a micro-satellite. You'll even have the chance to become an instructor in various space and spacemanship programs. Altogether, space and spacemanship courses will familiarize you with important activities in the Air Force – and possibly introduce you to a satisfying career in space operations





SE&T Vision, Mission, & Goals

Vision: A USAFA culture that embraces both airmanship and spacemanship where cadets are “socialized” into a truly air and space mindset.

Mission: Inspire and develop future Air Force leaders by maximizing their military space knowledge and skill; motivated to meet the challenges of tomorrow’s air and space force.

Goals to Achieve Vision (from USAFA Strategic Plan):

- **Near-term:** Provide cadets an early hands-on introduction to space operations.
- **Long-term:** Provide space simulation facilities to incorporate activities into the cadet experience, ensuring that we are at the forefront of efforts to transition our Air Force to an [Air and Space] Force.



SE&T Goals

■ Cadet Daily Life

- Goal 1: Embed the importance of space contributions to warfighting by exposing cadets to history, achievement, and future promise

■ Leadership

- Goal 2: Raise our leaders', faculty's, and staffs' knowledge of space operations so they may lead the SE&T integration

■ Academics

- Goal 3: Increase the integration of space concepts into all courses to raise a cadet's knowledge of space across the academic spectrum

■ Training

- Goal 4: Integrate operational space concepts into USAFA training to raise all cadets' understanding of space

■ External Organizations

- Goal 5: Gain broad support for the SE&T Strategic Plan



Implementation

- **SE&T Task Force**
 - Itemize tasks which meet goals
 - Organize volunteer's from faculty
- **Phased Approach**
 1. “Low-hanging Fruit”
 - First 12 months
 2. “Reaching”
 - 12 to 24 months
 3. “Proven Commitment”
 - Beyond 2 years



Backup Slides



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Key Strategic Area 1: Cadet Daily Life

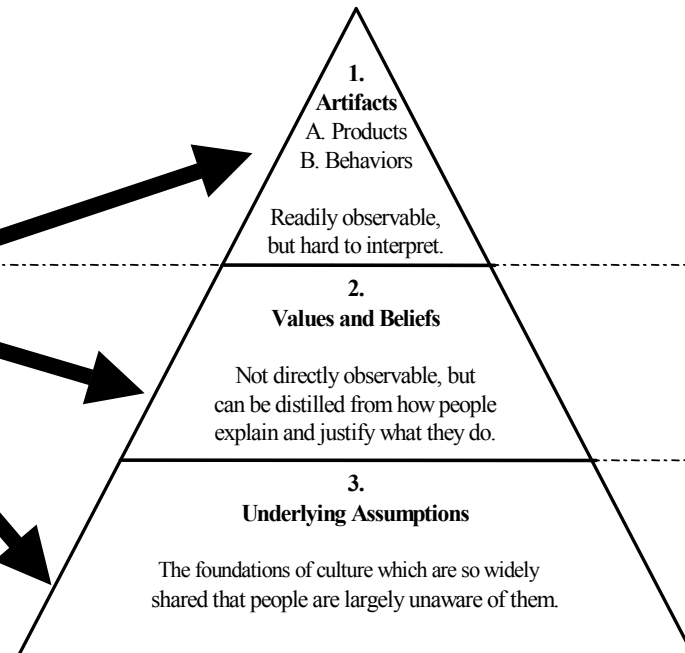
From Recruitment to Graduation

Goal: Embed the importance of space contributions to warfighting by exposing cadets to history, achievement, and future promise

CENTERS OF GRAVITY

- RECRUITMENT
- BCT
- CADET SQUADRONS
- DAILY RITUALS
- INFORMATION
- CADET AREA ARTIFACTS
- BASE WIDE ARTIFACTS
- FACILITIES
- CLUBS
- MAJOR EVENTS
- CST, GE, Ops Air Force
- SQUADRON SPONSORS
- EXTERNAL SUPPORT
- INCENTIVES/AWARDS

EMBED



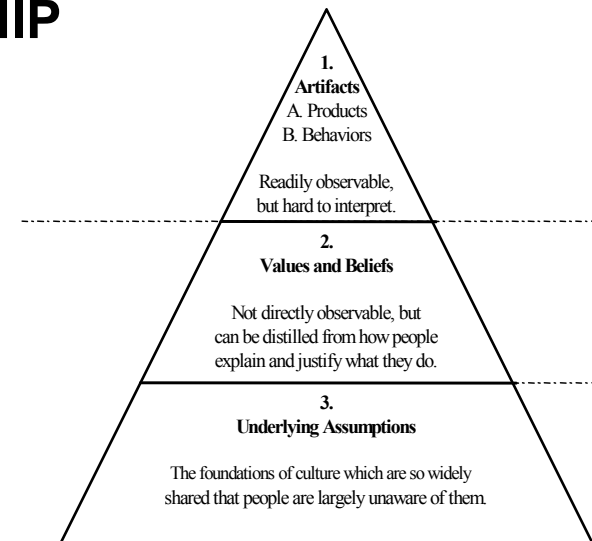


Key Strategic Area 2: Leadership

Over-arching all areas

Goal: Raise our leaders', faculty's, and staffs' knowledge of space operations so they may lead the SE&T integration

- SENIOR LEADERSHIP
- STAFF LEADERSHIP
- CLASS ROOM LEADERSHIP
- CADET LEADERSHIP





Key Strategic Area 3: **Academics**

“...powered by his knowledge.”

Goal: Increase the integration of space concepts into all courses to raise a cadet’s knowledge of space across the academic spectrum

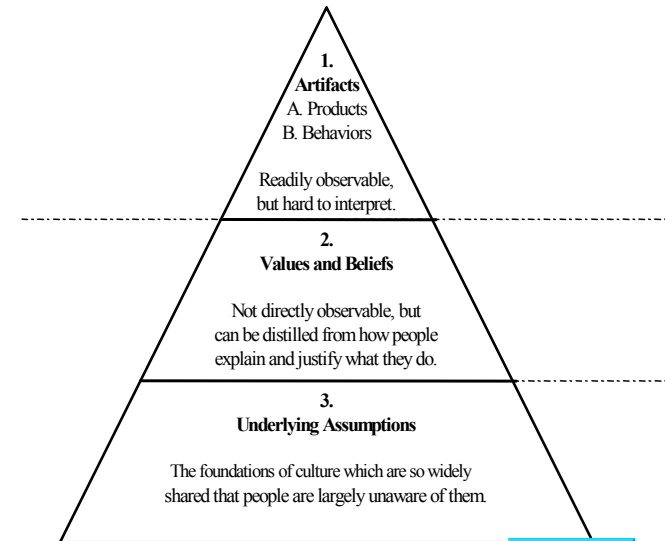
- MAJORS COURSES

- Majors individually estimated at < 1% of cadets

- OTHER OPPORTUNITIES

- Labs**
- Research**
- Internships**
- Conferences**
- Faculty**
- Advisors**

- CORE COURSES





Key Strategic Area 3: Academics

- **Core Courses (100% of Cadet population)**
 - **ENGR 100**
 - Main project is a Boost - glide design project
 - **MSS 100**
 - Examines Air & Space power theory, doctrine, and strategy
 - Includes 3 lessons on space operations
 - **ASTRO 410/320**
 - Introduction to Astronautics
 - A technical course aimed at teaching fundamentals of astrodynamics and spacecraft design
 - Courses under revision for Fall 2004 – Astro 310 and 201





Key Strategic Area 4: Training Skills and Experience

Goal: Integrate operational space concepts into USAFA training to raise all cadets' understanding of space

- Existing Opportunities

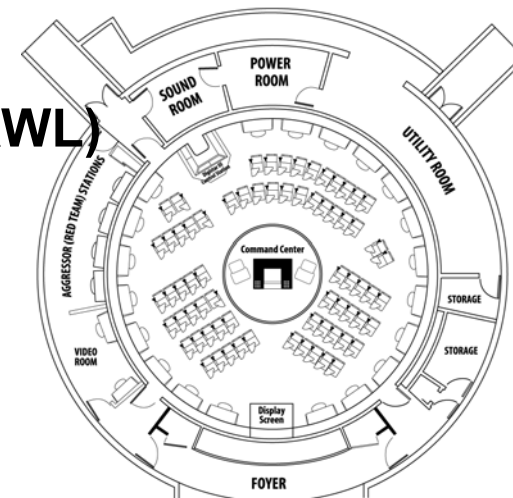
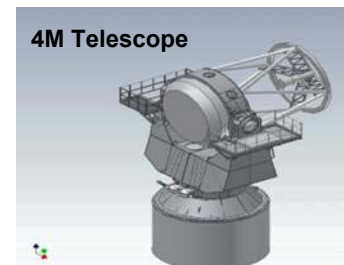
- BCT, CST, GE
- Ops Air Force
- Small Satellite Research Center (SSRC)
 - Falcon's Nest Space Operations



USAFA BATTLESPACE AWARENESS WARFIGHTING LABORATORY

- Emerging Opportunities

- Battlespace Awareness Warfighting Lab (BAWL)
- Space Operations Education Lab (SOEL)
- 4-Meter Telescope
- Basic Space Awareness Day





Key Strategic Area 4: Training Project “Aim Higher”

- **Cadet Run Squadron (i.e. 34th Space Operations Squadron)**
 - **Year-round program modeled after airmanship program**
 - **Graduated System**
 - Implemented and managed by cadet cadre
 - **Housed in the SOEL**
 - Manage, maintain, operate the SOEL
 - **Tactical through Operational Missions**
 - **Execute space integration with summer programs**
 - BCT, GE, CST, Basic Space Awareness Day
 - **Responsible for space integration into BAWL operations**
 - **Deploy to Falcon’s Nest, BCT, CST, GE, 4-Meter Telescope, Space Day**
 - **“Space” Ops Air Force**
 - **Provides leadership experience (leadership credit)**
 - **Conduct DV tours and briefings (showcase for AFA space integration)**

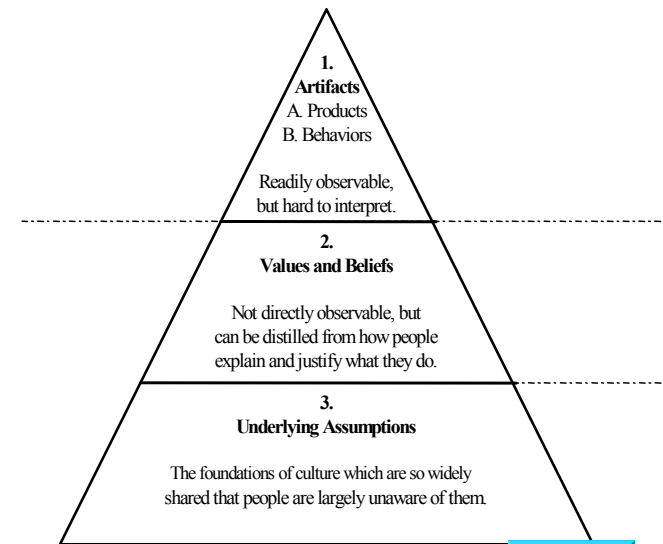




Key Strategic Area 5: External Support

Goal: Gain broad support for the SE&T Strategic Plan

- **AFSPC**
 - Local Area Cadet Squadron Sponsorship, Internships
- **SWC/SOPSC**
 - Leadership, Staff, Cadet Training
- **CORONA**
- **BOARD OF VISITORS**
- **AOG Space Group**
- **SPACE ADVOCACY GROUPS**
- **SPACE INDUSTRY**
- **ARSPACE/NAVSPACE**





Phase I Initiatives

(next 12 months)

- **SE&T Task Force**
 - Publish goals, objectives, initiatives, and tasks onto a webpage
 - Go for low-hanging fruit
 - SWG team members volunteer to complete tasks
- **Cadet Life**
 - Recruitment – Website, Orientation, Liaison officers, “Grassroots” program
 - Knowledge Bowls, Contrails, Cadet Clubs, Checkpoints, Cadet Area Artifacts
- **Leadership Training**
 - Increase emphasis on space integration across all AFA programs
 - Staff - AOC'S, MTL'S, DF, TRG, AH, & Airfield instructors
- **Academics**
 - Increase Space Operational Concepts in MSS 100 (from 3 to 7 lessons)
 - Increase emphasis on space related internships, conferences, research, and labs
- **Training**
 - Integrate Space Concepts into BCT, CST, GE
 - Implement Basic ‘Space’ Awareness Day
 - Establish Falcon’s Nest Space Operations Squadron (34th SOPS)
 - Add Space Bases to Operation Air Force Experience
- **External Organizations**
 - Approve MOA between AFSPC and USAFA
 - Brief the Strategic Plan, gain support and resources





Phase II Initiatives

(In 1-3 yrs)

■ SE&T Task Force

- More formally organize to accomplish grander concepts

■ Cadet Life

- Acquire static displays and artifacts for Air Garden and Terrazzo
- Match cadet squadrons with local area space ops squadrons
- Integrate space into Prep School

■ Leadership

- Incorporate into new-faculty training

■ Academics

- Direct departments to explore integrating space into curricula

■ Training

- Implement Project “AIM HIGHER”
- Standup the SOEL
- Integrate space into the BAWL and 4-Meter Telescope

■ External Organizations

- Integrate space into Public Affairs internal and external communications
- Garner positive media attention to SE&T initiative





Phase III Initiatives

(In 3-5 years)

- **SE&T Task Force**
 - Must have formalized organization and processes
- **Cadet Life**
 - Major investment in static displays and artifacts
- **Leadership**
 - Focused recruitment of staff with space background
 - Dedicated space operations billets in each department
- **Academics**
 - Direct departments to explore integrating space into curricula
- **Training**
 - Rapid implement of Project "AIM HIGHER"
 - Develop a space surveillance adjunct to Cheyenne Mountain
- **External Organizations**
 - Aggressive campaign for high level support and investment





Key Strategic Area 1: Cadet Daily Life

RECRUITMENT

- **ALL RECRUITING MATERIAL AND PERSONNEL INCORPORATE SPACE INTO RECRUITMENT**
 - **CATELOGUES**
 - **WEBSITE**
 - **ACADEMY LIAISON' OFFICERS - RECEIVE SPACE EDUCATION AWARENESS TRAINING FROM SOPSC AT ANNUAL GET TOGETHER. PROMOTE SPACE AS APPEALING ASPECT OF AFA AND USAF**
 - **GRASSROOTS**
 - **ORIENTATION FOR CADET CANDIDATES**
- **PREP SCHOOL**
 - **PARELLEL INTEGRATION WITH AFA**
 - **1C6 ENLISTED FORCE RECRUITED TO PREP SCHOOL**





Key Strategic Area 1: Cadet Daily Life

BASIC CADET TRAINING

- **INSTILL INSTITUTIONAL VALUES AND BELIEFS, AND SHARED ASSUMPTIONS**
 - **INSTILL SPACE MINDEDNESS FROM DAY 1**
- **CONTRAILS**
- **CHECKPOINTS**
- **KNOWLEDGE BOWLS**
- **BCT SQUADRON NAMES**
- **LOCAL AREA TOURS**
- **FIELD DEMO'S IN JACKS VALLEY**
- **"FLY BYS"**





Key Strategic Area 1: Cadet Daily Life

FOUR DEGREE YEAR

- **INSTILL INSTITUTIONAL VALUES AND BELIEFS, AND SHARED ASSUMPTION**
 - **INSTILL SPACE MINDEDNESS FROM DAY 1**
- **CONTRAILS**
- **CHECKPOINTS**
- **KNOWLEDGE BOWLS**
- **LOCAL AREA TOURS**
- **MEALTIME**
- **SPACE FLY- BYS**





Key Strategic Area 1: Cadet Daily Life

CADET SQUADRONS

- **SQUADRON NAMES**
- **SQUADRON SPONSORS (Traditional)**
 - **FIELD TRIPS OUT OF LOCAL AREA**
- **LOCAL AREA AFSPC SQUADRON SPONSOR INITIATIVE**
 - **Cadet Sqdr matched to local AFSPC Sqdr - (Pete, CMC, Shriever, Buckley, 20th AF)**
 - **Tours, “internships”, mutual support for functions, incentive “rides”.**
- **ARTIFACTS: DÉCOR, MURALS, SILHOUETTES (LVs, SATS)**





Key Strategic Area 1: Cadet Daily Life

DAILY RITUALS

- **CALLING MINUTES**
- **DAILY CHECKPOINTS**
- **NOON MEAL FORMATION**
- **COMMANDANT'S TIME**
- **SQUADRON TRAINING TIME**





Key Strategic Area 1: Cadet Daily Life INFORMATION

- **Public Affairs – integrate space mindedness at every opportunity**
 - **Internal Communication**
 - Base newspaper, intra-web, homepage, K-drive (checkpoints), V-brick, Blue-tube, Operation Aim Higher webpage
 - **External Communication**
 - News releases, interview topics, scripted answers/responses, any media contact – highlight air and space in media/community relations
 - Academy Homepage
- **Daily E-mail to cadets and staff (Space launches for the day, Space over-flights for the day (red/grey/blue))**
- **Guest Speakers**
- **Arnold Hall Programs**
- **AOG – Checkpoints**





Key Strategic Area 1: Cadet Daily Life

CADET AREA ARTIFACTS

- TERRAZZO STATIC DISPLAYS – GPS, SLV
- AIR GARDENS – SV5J
- ABOVE HONOR WALL - SPACECRAFT STATUE
- NAMING CEREMONY OPPORTUNITIES:
 - SOEL
 - BRIDGES TO FAIRCHILD
 - RAMPS
 - FALCONSAT OPS CENTER
 - SPACE MUSEUM





Key Strategic Area 1: Cadet Daily Life FACILITIES

- **INCREASE NUMBER OF SPACE ARTIFACTS THROUGHOUT:**
 - **DORMS**
 - **FAIRCHILD HALL**
 - **MITCHELL HALL (VIDEO VIEWING OPPORTUNITY)**
 - **ARNOLD HALL**
 - **VISITOR CENTER (SV5J?)**
- **UNNAMED FACILITIES AND STRUCTURES**





Key Strategic Area 1: Cadet Daily Life

CADET SPACE FORUM/CLUB

- **National Space Society Chapter Cadet Club**
- **Space Warfighter Forum**





Key Strategic Area 1: Cadet Daily Life

BASE WIDE ARTIFACTS

- **OPPORTUNITIES FOR SPACE RELATED ARTIFACTS**
 - **STATIC DISPLAY AREAS (T-BIRD , B-52)**
 - **VISITOR CENTER – SPACE PROMO VIDEO, DISPLAYS, ADD/INTEGRATE INTO AFA MEMORIBILIA**
 - **ROADS/BRIDGES – NAME**
 - **STADIUM – ON-FIELD,**
 - **Move the Astronaut Display in Arnold Hall to a more prominent location**





Key Strategic Area 1: Cadet Daily Life

MAJOR EVENTS

- **INTEGRATE SPACE MINDENESS INTO MARKETING/PROMO MATERIALS**
 - **MAJOR SPORTING EVENTS (PROGRAMS, INTERVIEWS)**
 - **PARENTS WEEKEND**
 - **GRADUATION**
 - **PROMINENT POSITION IN CC A-HALL BRIEFINGS**
 - **TOURS OF SOEL**
 - **TOURS OF FALCON'S NEST**
 - **DV VISITS**
 - **PROMINENT POSITION IN CC A-HALL BRIEFINGS**
 - **TOURS OF SOEL**
 - **TOURS OF FALCON'S NEST**
 - **BRIEFINGS ON OPERATION Aim Higher and S.E.T.**

