

A&AE 451 Aircraft Design

Assignments

Read Everything handed out in class.

Read the "Guidelines for Ethical Behavior in this Class" and other material on ethics. Be prepared to discuss this material in class on Thursday.

Sign the ethics statement on the second page of the "Guidelines" and hand it in to Professor Andrisani on Thursday.

Fill in the interest survey and hand it in on Thursday. I will form the teams based on this survey and by balancing teams across disciplines and by GPA.

Ethics Homework 1

Write a concise (no more than one page) description of your personal beliefs as regarding ethical behavior and personal integrity.

Due Thursday, 8/28/08

Public
Responsibility

Ethics

Laws

Organizational
statements of
ethical behavior

AIAA
Purdue
Company
Club
Military

Religion

Personal
Beliefs

Culture

Statement of Integrity

Purdue University
West Lafayette

PREAMBLE

Purdue University has a tradition of ethical conduct spanning its history. As a land-grant institution, we demonstrate our responsiveness to our constituencies and extend to them access to our knowledge resources. We nurture relationships with other partners in education who support our vision or join us to foster common interests. We integrate our mission with our responsibilities. We contribute our knowledge resources impartially in serving our public purposes. As faculty, students, staff, and administrators, we are a community of dedicated learners, scholars, professionals, and practitioners -- all contributing our talents to uphold our standards, and improve ourselves and the broader community in which we live and work. Our responsibilities and obligations toward the advancement of learning, discovery, and engagement in the University and in Indiana extend to our nation and the world. This statement of integrity is meant to provide an overarching declaration that informs specific policies and procedures regarding conduct, enforcement, and accountability. Such policies and procedures either exist in official University documents or will be developed as necessary.

STATEMENT

At Purdue, integrity is indispensable to our mission. We act with honesty and adhere to the highest standards of moral and ethical values and principles through our personal and professional behavior. We demonstrate our understanding of these values and principles and uphold them in every action and decision. Trust and trustworthiness go hand in hand with how we conduct ourselves, as we sustain a culture that is based upon ethical conduct. We expect our actions to be consistent with our words, and our words to be consistent with our intentions. We accept our responsibilities, share leadership in a democratic spirit, and subject ourselves to the highest standards of public trust. We hold ourselves accountable for our words and our actions.

We champion freedom of expression. To ensure our integrity, we safeguard academic freedom, open inquiry, and debate in the best

interests of education, enrichment, and our personal and professional development. We embrace human and intellectual diversity and inclusiveness. We uphold the highest standards of fairness, act as responsible citizens, respect equality and the rights of others, and treat all individuals with dignity.

To fulfill our goals as a learning community, we insist that the objectives of student learning are not compromised. We treat all students equitably, and our evaluations of learning achievements are impartial based on demonstrated academic performance. As students, we understand that learning is the most important goal and we embrace ethical values and principles, and reject academic dishonesty in all our learning endeavors. In the realm of new discoveries, we place the highest value upon truth and accuracy. We acknowledge the contributions of others. We place a higher value on expanding and sharing knowledge than on recognition or ownership.

We work diligently drawing from the strong work ethic of our state of Indiana and are committed to always acting in the best interests of the University. We pledge to make wise use of our resources and to be good stewards of financial, capital, and human resources. We operate within the letter and spirit of the law and prescribed policies, and strive to avoid impropriety or conflict of interest.

As members of the Purdue community, we demonstrate unyielding and uncompromised integrity in support of the highest standards of excellence for the University. As individuals, we all contribute to this Purdue standard of integrity as an exemplary model for all universities.

PURDUE
UNIVERSITY

AIAA Code of Ethics -- A Guideline for Professional Conduct

The AIAA Board of Directors at its meeting on February 10, 1978, approved an "AIAA Code of Ethics" and an accompanying "Code Administration" procedure, subsequently approved by the AIAA membership in the fall of 1978. The Code of Ethics and Code Administration procedures are presented below.

AIAA CODE OF ETHICS

PRECEPT

The AIAA member to uphold and advance the honor and dignity of the aerospace profession and in keeping with high standards of ethical conduct:

I. Will be honest and impartial, and will serve with devotion his employer and the public;

II. Will strive to increase the competence and prestige of the aerospace profession;

III. Will use his knowledge and skill for the advancement of human welfare.

RELATIONS WITH THE PUBLIC

1.1 The AIAA member will have proper regard for the safety, health, and welfare of the public in the performance of his professional duties.

1.2 The member will endeavor to extend public knowledge and appreciation of aerospace science and its achievements.

1.3 The member will be dignified and modest in explaining his work and merit and will ever uphold the honor and dignity of his profession.

1.4 The member will express an opinion on a professional subject only when it is founded on adequate knowledge and honest conviction.

1.5 The member will preface any ex parte statement, criticisms, or arguments that he may issue by clearly indicating on whose behalf they are made.

RELATIONS WITH EMPLOYERS AND CLIENTS

2.1 The AIAA member will act in professional matters as a faithful agent or trustee for each employer or client.

2.2 The member will act fairly and justly toward vendors and contractors, and will not accept from vendors or contractors any commissions or allowances which represent a conflict of interest.

2.3 The member will inform his employer or client if he is financially interested in any vendor or contractor, or in any invention, machines, or apparatus, which is involved in a project or work of his employer or client. The member will not allow such interest to affect his decision regarding services which he may be called upon to perform.

2.4 The member will indicate to his employer or client the adverse consequences to be expected if his judgment is overruled.

2.5 The member will undertake only those professional assignments for which he is qualified. The member will engage or advise his employer or client to engage specialists and will cooperate with them whenever his employer's or client's interests are served best by such an arrangement.

2.6 The member will not disclose information concerning the business affairs or technical processes of any present or

former employer or client without his consent.

2.7 The member will not accept compensation, financial or otherwise, from more than one party for the same service, or for other services pertaining to the same work, without the consent of all interested parties.

2.8 The member will report to his employer or client any matters within his area of expertise which the member believes represent a contravention of public law, regulation, health or safety.

RELATIONS WITH OTHER PROFESSIONALS

3.1 The AIAA member will take care that credit for professional work is given to those to whom credit is properly due.

3.2 The member will provide a prospective employee with complete information on working conditions and his proposed status of employment, and after employment will keep him informed of any changes in them.

3.3 The member will uphold the principle of appropriate and adequate compensation

for those engaged in professional work, including those in subordinate capacities.

3.4 The member will endeavor to provide opportunity for the professional development and advancement of those in his employ or under his supervision.

3.5 The member will not injure maliciously the professional reputation, prospects, or practice of another professional.

3.6 The member will cooperate in advancing the aerospace profession by interchanging information and experience with other professionals and students, and by contributing to public communication media, to the efforts of engineering and scientific societies and schools.

CODE ADMINISTRATION

Establish a three-member Ethical Conduct Panel (ECP) reporting to the Board of Directors to:

- Review all complaints, recommendations, criticism of, and questions concerning a code of ethics for all AIAA members and insure the privacy of all inquiries.

- By unanimous vote recommend a course of action merited by the applicant.

- Where appropriate, present the ECP recommendations to the AIAA Board of Directors for approval and implementation.

- Report to each regular AIAA Board of Directors' meeting the disposition of all cases, including decisions not to act, received by the ECP in the period preceding each meeting.

The Ethical Conduct Panel (ECP) will consist of three AIAA members selected by the Board of Directors. A member will serve for three years. One member will be appointed each year to provide two-thirds member continuity. If a member of ECP disqualifies himself or herself the Board shall appoint a replacement.

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Tanker scandal: blame but no punishment

By Pamela Hess

UPI Pentagon Correspondent

Published 6/7/2005 8:39 PM

WASHINGTON, June 7 (UPI) -- The Pentagon inspector general's long-awaited report to Congress outlines who was at fault for the criminally flawed plans to lease 100 Boeing 767s to serve as refueling tankers. It focuses on several top Pentagon and Air Force officials, nearly all of whom have moved on, and none of whom will face any kind of punishment.

Acting Defense Secretary Gordon England told the Senate Armed Services Committee Tuesday the Pentagon was not looking too press charges against anyone involved in the deal.

"I believe in most cases people were trying to do what was right for America. Frankly, my emphasis will be to go forward," England said.

Had the leasing contract been signed with Boeing, five laws would have been violated by top executives at the Pentagon, England said. But that contract was not signed and therefore the laws were not broken.

For that the Pentagon should thank Sen. John McCain, R-Ariz., whose close scrutiny of the deal brought an end to a program that would have cost the taxpayers tens of billions of dollars without meeting military needs.

Despite the Pentagon's official blessing of the tanker lease deal -- it requested funding for it in two successive budgets -- the inspector general's report carefully sidesteps apportioning any blame to Defense Secretary Donald Rumsfeld, his deputy Paul Wolfowitz, or to the White House, without whose consent the program could not have gone forward to Congress. Rumsfeld put the program on hold in December 2003 only after Boeing fired two central players in the scheme.

Inspector general Joseph Schmitz admitted to Michigan Democrat Sen. Carl Levin he had interviewed no one at the White House's Office of Management and Budget -- which had allowed the leasing proposal to be included in the Pentagon budget request despite "grave" concern about the cost. Schmitz also said neither Rumsfeld nor Wolfowitz had anything of value to add to the report, although they were interviewed.

Schmitz agreed to White House requests to redact 45 e-mails or partial emails that appeared in the report.

"In the absence of this material, it is not possible for us to assess whether the responsibility of the officials named in the report is mitigated by the actions of other unnamed officials who are their superiors," Levin said. "You are required to issue a thorough and independent report. It appears to me that you have done neither."

The Boeing tanker program is a now benchmark in Pentagon bad acquisition lore: "the most significant defense procurement mismanagement in contemporary history," according to Senate Armed Services Committee chairman John Warner, R-Va., who called a hearing Monday to hear from Schmitz on the results of his probe into culpability. The tanker program itself has long since been abandoned.

What happened is this: the U.S. Air Force saw its fleet of KC-135 refueling aircraft aging and corroding through the 1990s, and took steps to inhibit the corrosion. In 1996 it pushed back the expected date of retirement of the aircraft from 2007 to 2013. The Boeing Co. was the original builder of those aircraft, and told the Air Force they could fly safely - absent the corrosion - well beyond the turn of the century.

In 1999 the Air Force began looking closely at the KC-135 and determined that maintaining the fleet would cost an additional \$320 million in 2001 and rise steadily each year through 2040 to reach a high of \$1.1

commercial financing techniques moving."

In the meantime, the Air Force launched what is called an "analysis of alternatives" to begin considering all the possible ways the service might fulfill its future refueling tanker requirement.

The Sept. 11 attacks changed that, according to the report. The Air Force saw immediately it had a war on its hands and knew the requirement to refuel large numbers of aircraft would tax the fleet.

By September 25, Boeing executives met with Darleen Druyun, the Air Force's powerful principal deputy assistant secretary for acquisition and management to discuss Boeings leasing proposal. The Pentagon could lease 100 Boeing 767s, beginning almost immediately, to "jump start" the KC-135 replacement.

What happened next was where the most serious violation of long-standing acquisition practices and U.S. law begins: the manipulation of laws and regulations to conform to terms dictated by a defense contractor, rather than forcing the defense contractor to conform to the laws and regulations.

In October 2001 an operational requirements document was written up in the Air Force that specifically described the Boeing 767, obviating the consideration of any other aircraft or approach to meet the refueling need.

The Office of the Secretary of Defense came out nearly concurrently with a memorandum saying the military services needed to consider using multi-year leases from major defense companies, rather than outright purchases.

The Boeing deal was put on a fast track, with Druyun working closely with senators and representatives on Capitol Hill to write language into the annual appropriations and authorization bills setting up the deal. Negotiations with Boeing for the price of the contract began in April 2002.

But the Office of Management and Budget was already balking.

In a December 2001 letter to an unnamed member of congress who asked the White House to include the leasing language in the Pentagon budget submission for 2003, the office wrote: "We have grave reservations about leasing these aircraft. Our analysis shows that over the long-term a lease-purchase program would be much more expensive than direct purchase of the same aircraft... (In the budget submission) programs are evaluated in terms of their cost and potential military benefit."

It would not be the last time the Office of Management and Budget challenged the Air Force and the Pentagon on the tanker program. Within the office, there appeared to be conflicting positions, according to e-mails reproduced in the report. Office of Management and Budget was aggressively pushing privately financed leases, but it was concerned the Air Force was not getting a fair price for the Boeing aircraft.

One internal Pentagon message from August 2002 said "the political leadership at (Office of Management and Budget) feels very strongly about the lease and has decided to take a public posture knowing the effect this might have... talk directly to Robin Cleveland (the office's national security chief) if you want more information on the politics of the lease."

The Office of Management and Budget was also not initially buying the Air Force's case for new tankers. It pointed out in meetings with Air Force officials that the service had been operating in Afghanistan for a year with the current fleet of tankers without a problem. It also pointed out that the Air Force was planning to retire KC-135s to save \$1 billion at the same time it was claiming an urgent need for them, and the tanker deal would cost \$1.7 billion.

A series of e-mails dealing with Office of Management and Budget were redacted, again at the White House's request. One is included however -- a note from Air Force Secretary James Roche to Druyun from Oct. 28, 2002 saying "once (Office of Management and Budget) and the White House take the lead, they own the responsibility!"

A week later, Druyun recused herself from further dealings with Boeing, and she retired mid-month -- to take a job with the company for about \$250,000 a year.

She is now in jail, completing a nine-month sentence for contract fraud. She was negotiating her job with the company while also negotiating the Air Force leasing contract -- in a way that compromised taxpayer interests and was illegal.

On May 23, 2003, Defense Department acquisition chief Pete Aldridge gave the Pentagon's blessing to the Air Force to go ahead with the leasing deal with Boeing. Then he retired.

Aldridge -- now on Lockheed Martin's Board of Directors -- did not make himself available to the inspector general's investigation, and McCain said Tuesday the committee might subpoena him to force his testimony.

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Guidelines for Ethical Behavior in this Class

The following guidelines (JoyLynn H. Read and Daniel E. Hallock, "Encouraging Ethical Behavior in the Class," *The Teaching Professor*, Vol. 10, No. 1, January, 1996) set the standards for students' ethical behavior in this class. They are adapted from a set of guidelines for *faculty* prepared by the American Association of University Professors in 1987. As your professor, I pledge to uphold these high faculty ethics. Please read and study the guidelines below. I'd like you to make a similar pledge to your classmates and me. Please do so by signing the statement which says you've read the guidelines and agree to abide by them.

As a student in this class, your ethical obligations are to:

1. Engage in the free pursuit of learning by:
 - Seeking help and clarification when needed.
 - Respecting fellow students', professor's, and guests' opinions without disparaging and dismissing them.
 - Seeing beyond "personality issues" with others to appreciate their contributions to the learning environment.
2. Model ethical scholarly standards by:
 - Avoiding plagiarizing and all other breaches of academic honesty.
 - Avoiding any seeming approval, acceptance, or encouragement of fellow students' academic dishonesty and bringing any such instances to the attention of the professor and/or university officials.
 - Engaging in discussions with other students and professors about ethical issues in academics.
3. Acknowledge, accept, and expect just assessment of your learning by:
 - Understanding the professor's methods and rationale for your assessment and asking for clarification if you don't understand.
 - Engaging in accurate, just, objective self-assessments of your own work.
 - Engaging in constructive, value-neutral discussion with the professor about discrepancies between your self-assessment and the professor's assessment of your work.
 - Refraining from comparing assessments and grades with classmates' so as not to diminish classmates' self-esteem.
4. Avoid harassment, discrimination, and exploitation by:
 - Getting to know classmates and the professor as individuals rather than applying prejudices and stereotypes.
 - Contributing your full effort in team and collaborative projects.
 - Respectfully voicing your expectations of full participation in team and collaborative projects to fellow students.
 - Not discouraging, in any way, a member's full participation in a collaborative project.
 - Being careful not to make racist, sexist, and other types of discriminatory remarks during class.
 - Being careful not to monopolize class discussion time so that others do not have a chance to participate or are intimidated about participating.

Keep this page for your daily use..



I have read the Guidelines for Ethical Behavior in this Class and agree to abide by them. (Hand this page in to Professor Andrisani.)

Signed: _____

Dated: _____

Course: _____

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