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AERO 401

Ethics 1 Assignment

- 1) Hold paramount the safety, health, and welfare of the public in the performance of their duties.
 - This guideline means that as an engineer, we need to keep the general population in mind when we are performing our work.
 - An example of this guideline being violated would be the Boeing 737 max door situation, where the safety of the passengers was not the paramount ideal, and many people were hurt over this negligence.
- 2) Promote the lawful and ethical interests of AIAA and the aerospace profession.
 - This guideline means that as an engineer, we need to act ethically, as defined by the AIAA.
 - An example of this guideline being violated would be the situation where Boeing sold the US defective gears in their "Chinook" helicopter, despite knowing what could have happened, and as a result, 5 servicemen were killed.
- 3) Reject bribery, fraud, and corruption in all their forms.
 - This guideline means that as an engineer, we need to not be swayed by money or power in our decisions.
 - An example of this guideline being violated would be the Lockheed F-104 situation, where Lockheed paid money to bribe foreign officials in the process of negotiating the sale of their aircraft.
- 4) Properly credit the contributions of others, accept and offer honest and constructive criticism of technical work; and acknowledge and correct errors.
 - This guideline means that as an engineer, we need to give credit where credit is due, and give or receive criticism, so things are not overlooked for the sake of being "nice".
 - An example of this guideline being violated would be failing to credit a colleague for their significant contribution to a research project and presenting the findings as one's own would contravene this principle. Additionally, ignoring critical feedback on a design flaw in an aircraft component and proceeding with production without addressing the issue would be a violation.
- 5) Avoid harming others, their property, their reputations or their employment through false or malicious statements or through unlawful or otherwise wrongful acts.
 - This guideline means that as an engineer, we should refrain from causing harm to others, their belongings, their reputation, or their job and instead treat them well.
 - An example of this guideline being violated would be spreading false rumors about a competitor's product safety record to gain a competitive advantage would violate this principle.
- 6) Treat all persons with respect, fairness, and dignity, and never engage in any form of harassment or inappropriate discrimination.
 - This guideline means that as an engineer, we should give respect to all people, not just people we think are worthy of our respect.

- An example of this guideline being violated would be discriminating against certain engineers based on their gender or ethnicity during team assignments or promotions within an aerospace company would be a violation of this principle.
- 7) Issue statements or present information in an objective and truthful manner, based on available data.
- This guideline means that as an engineer, we need to present information as factual and not interject our own opinions.
 - An example of this guideline being violated would be an engineer misrepresenting the results of a safety test to downplay potential issues with an aircraft component would violate this principle.
- 8) Avoid real and perceived conflicts of interest, and act as honest and fair agents in all professional interactions.
- This guideline means that as an engineer, we need to avoid putting ourselves into places where we could have personal biases to make a certain decision.
 - An example of this guideline being violated would be an engineer participating in the evaluation of bids for a government contract while also holding stock in one of the bidding companies without disclosing this conflict of interest would breach this principle.
- 9) Undertake only those technical tasks for which we are qualified by training or experience, or for which we can reasonably become qualified with proper preparation, education, and training.
- This guideline means that as an engineer, we need to only take on tasks that are in the scope of our understanding, otherwise we will be pulling stuff out of thin air.
 - An example of this guideline being violated would be an engineer without proper training or experience attempting to design critical flight control software for an aircraft would violate this principle.
- 10) Maintain and improve our technical and professional competencies throughout our careers and provide opportunities for the professional development of those engineers under our supervision.
- This guideline means that as an engineer, we need to be a part of an environment that fosters learning and teaching, meaning that we get poured into as well as pour into others.
 - An example of this guideline being violated would be a senior engineer neglecting to provide training or mentorship opportunities to junior engineers under their supervision would contravene this principle.
- 11) Treat fairly and respectfully all colleagues and co-workers, recognizing their unique contributions and capabilities.
- This guideline means that as an engineer, we need to treat everyone as a human, and see the things that they do well, not just their flaws.
 - An example of this guideline being violated would be a manager in an aerospace company consistently dismissing input and ideas from certain team members based on personal biases would violate this principle.