

Syllabus

ASEN 4128 Human Factors in Engineering and Design

Human Factors in Engineering and Design Course Description:

In this course we investigate the relationship between human operators and the complex systems they interact with.

Our focus will be: how do we account for human's cognitive and physical limitations when designing a complex system.

We will start with learning some of the basic limitations that we as human possess, as we do this we will review the large variety of accidents that can be attributed to human limitations. The focus is primarily on aviation design and aviation accidents as this field of study highlights the truly tragic ramifications of poor design. That said, the principles addressed in this course are relevant to all CU engineering disciplines.

Students will begin with lectures pertaining to the many HF disciplines and issues involved in designing with human limitations considered. HF issues will be highlighted by reviewing aircraft accidents and focusing on the latent conditions that existed in the design long before the aircraft ever flew.

Students will be able to conduct some basic labs where they conduct task analyses, complete ergonomic, usability and workplace assessments and work towards a group project of designing and assessing a cockpit for a specific aircraft role.

The field of human factors is growing rapidly, across 3f110.6 (fD 13 B.l(r)11i (p)2. (.)J.B (g)2.6d(u)13.1 s)-1.3 (ab)2.(r)11r

Honor Code

All students enrolled in a University of Colorado Boulder course are responsible for knowing and adhering to the [Honor Code](#). Violations of the Honor Code may include, but are not limited to: plagiarism, cheating, fabrication, lying, bribery, threat, unauthorized access to academic materials, clicker fraud, submitting the same or similar work in more than one course without permission from all course instructors involved, and aiding academic dishonesty. All incidents of academic misconduct will be reported to Student Conduct & Conflict Resolution (honor@colorado.edu); 303-492-5550). Students found responsible for violating the