

Welcome to ASEN 3728

Aircraft Dynamics!



ASEN 3728 Aircraft Dynamics
UNIVERSITY OF COLORADO BOULDER



Outline

What is A/C Dynamics About?

Course Logistics

Nomenclature

My Background



Aircraft Dynamics and Controls

Aeronautical Engineering

- 1) Aerodynamics
- 2) Structures and Materials
- 3) Propulsion
- 4) Dynamics and Controls

- Keep the pointy end in front
- Get the aircraft to where we want to go

In this class, we will

- Develop a mathematical model of aircraft (A/C) behavior
- Learn how to create an aircraft computer simulation model
- Design control systems to effect desirable dynamics



Aircraft Dynamics

Newton's Laws (ASEN 2703)

*Inertial
Reference Frame*

+ Aerodynamics (ASEN 2702,
ASEN 3711)

*Body
Reference Frame*


Aircraft Dynamics (ASEN 3728)




Nonlinear Equations of Motion




Course Hub: Canvas




Boulder




Account




Dashboard




Courses




Calendar




Inbox




History



Commons




My Course Materials



ASEN 3728-001

2025 Spring Term

Home

Announcements 


Gradescope


Grades


People


NameCoach


Lecture Videos


Files 

Discussions 

Outcomes 


Rubrics 


Quizzes 


Modules 


Recent Announcements

ASEN 3728-001: Aircraft Dynamics


 Assign To


 Edit





Welcome to Aircraft Dynamics! Links to all course materials will be added below:

[Syllabus](#) 

[Schedule](#) 

[Materials](#)



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My Assumptions

- The material is challenging, and can take multiple engagements to understand fully
- A student who comes to my office or asks a question wants to learn
- It may take multiple ways of explaining a concept before a student understands
- We must work together to help you find the way to understand
- Taking notes in class and doing the homework yourselves are critical steps to understanding
- I am trying to bring you to the point of understanding, not just give you the answer
- We will have fun this semester





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Break

