

List of sections

The following sections of the reader have to be studied to prepare for the exam.

NOTE: this refers to the reader AE3202, of March 2013. Earlier versions of the reader treat some subjects differently and have different chapter numbers!

Introduction

Chapter 1.1, 1.2
Slides AE3212-I-1-Introduction

Analysis of steady symmetric flight

Chapter 9.1.1 – 9.1.3
9.1.6
9.2
Slides AE3212-I-2-Static stab 1-ac
AE3212-I-3-Static stab 2-CmN Cmd

Longitudinal stability and control in steady flight

Chapter 10.1.1 – 10.1.4
10.2.1 – 10.2.4
Slides AE3212-I-4-Static stab 3-stick force np

Introduction to aircraft eigenmodes

Slides AE3212-I-5-Dynamic stab 1

Lateral stability and control derivatives

Chapter 8.1
8.2.1 – 8.2.3
8.3 – 8.6
8.8
Slides AE3212-I-6-Static stab 4-lateral stab derivativ

Reference frames

Chapter 2 entirely
Slides AE3212-I-8-Frames and Transformations
Slides AE3212-I-2-Static stab 1-ac

Derivation of EOM

Chapter 3 entirely
Appendix C as treated during the lectures
Slides AE3212-I-9-Dynamic Transformations and EOM
AE3212-I-10-EOM2
AE3212-I-17-EOMRecap

Linearized EOM

Chapter 4 entirely
Slides AE3212-I-11-Linearization

Analysis of symmetric EOM

Chapter 5 entirely
Slides AE3212-I-7-Eigenmotions
AE3212-I-12-Dynamic stab 2-Sym eigenmodes

Analysis of asymmetric EOM

Chapter 6 entirely
Slides AE3212-I-7-Eigenmotions
AE3212-I-13-Dynamic stab 3-Asym eigenmodes

Lateral control in steady flight

Chapter 11.1 – 11.5
Slides AE3212-I-14-Static stab 5-lat steady flt

Space application

Chapter 12 entirely
Slides AE3212-I-15 HORUS
AE3212-I-16 Apollo