

# ME143 - Unmanned Aircraft Systems

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# Chapter 1

## Course Information

This is the course lecture material for UC Merced ME143. All course assignments, exams, quizzes and the syllabus can be found in Catcourses.

This page was published using **bookdown**(Xie, 2020) using RStudio in R Markdown and **knitr** (Xie, 2015). The raw files can be found in the corresponding github page here: For information on how to compile or edit the course material, please visit the github repository.



## Chapter 2

# Introduction

Introduction to UAS

**2.1 Language and Terminology**

**2.2 History**

**2.3 Pop-Culture**





## Chapter 3

# Regulations

### 3.1 US Regulations

### 3.2 Airspace Charts

### 3.3 Issues and Controversies



## Part I

# UAS Modeling and Control



## Chapter 4

# UAS Dynamics

### 4.1 Fixed-Wing Models

### 4.2 Rotary-Wing Models

We describe our methods in this chapter.



## References





## Appendix A

# Digital Systems



## Appendix B

# Vector Notation



## Appendix C

# Vector Calculus



# Bibliography

Xie, Y. (2015). *Dynamic Documents with R and knitr*. Chapman and Hall/CRC, Boca Raton, Florida, 2nd edition. ISBN 978-1498716963.

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