

## 课程详述

### COURSE SPECIFICATION

以下课程信息可能根据实际授课需要或在课程检讨之后产生变动。如对课程有任何疑问，请联系授课教师。

The course information as follows may be subject to change, either during the session because of unforeseen circumstances, or following review of the course at the end of the session. Queries about the course should be directed to the course instructor.

1.	<b>课程名称 Course Title</b>	飞行模拟实验 <b>Flight Simulating Experiment</b>
2.	<b>授课院系 Originating Department</b>	力学与航空航天工程系 Department of Mechanics and Aerospace Engineering
3.	<b>课程编号 Course Code</b>	MAE102
4.	<b>课程学分 Credit Value</b>	1
5.	<b>课程类别 Course Type</b>	专业选修课程 Major Elective Courses
6.	<b>授课学期 Semester</b>	春季 Spring / 秋季 Fall
7.	<b>授课语言 Teaching Language</b>	中文 Chinese
8.	<b>Instructor(s), Affiliation &amp; Contact</b> (For team teaching, please list all instructors)	甘晓华 教授 <a href="mailto:ganxh@sustech.edu.cn">ganxh@sustech.edu.cn</a> Xiaohua Gan Professor 肖思 教学实验员 <a href="mailto:xiaos@sustech.edu.cn">xiaos@sustech.edu.cn</a> Si Xiao Lab teacher 刘晓宇 教学实验员 <a href="mailto:liuxy7@sustech.edu.cn">liuxy7@sustech.edu.cn</a> Xiaoyu Liu Lab teacher 赵晓争 教学实验员 <a href="mailto:zhaoxz@sustech.edu.cn">zhaoxz@sustech.edu.cn</a> Xiaozheng zhao Lab teacher 力学与航空航天工程系 Department of Mechanics and Aerospace Engineering
9.	<b>实验员/助教、所属学系、联系方式 Tutor/TA(s), Contact</b>	无 NA (请保留相应选项 Please only keep the relevant information)
10.	<b>选课人数限额(可不填) Maximum Enrolment (Optional)</b>	

11. 授课方式 Delivery Method	讲授 Lectures	习题/辅导/讨论 Tutorials	实验/实习 Lab/Practical	其它(请具体注明) Other (Please specify)	总学时 Total
学时数 Credit Hours			32		32
12. 先修课程、其它学习要求 Pre-requisites or Other Academic Requirements	NA				
13. 后续课程、其它学习规划 Courses for which this course is a pre-requisite	NA				
14. 其它要求修读本课程的学系 Cross-listing Dept.	NA				

### 教学大纲及教学日历 SYLLABUS

#### 15. 教学目标 Course Objectives

- 让学生了解飞行器的发展历史，认识其结构并理解背后的力学原理
- 使学生了解飞行模拟器的操作，初步掌握飞机驾驶技术；
- 通过飞行模拟体验与学习，使学生感受航空魅力，激发大家对航空事业的兴趣爱好；
  
- Introduce the history of aircraft to students, and let the students know the related mechanics principle.
- To familiarize students with the operation of the Flight Simulator and the skill of aircraft driving;
- Let the students feel the charm of aviation, and inspire the students' interest and love of aviation career through the experience and study of flight simulation;

#### 16. 预达学习成果 Learning Outcomes

- 掌握飞行模拟器基本操作；
- 了解飞行器飞行基本原理；
- 了解飞行器发展历史与现状。
  
- Master the Flight Simulator operation skill;
- Understand the basic principle of aircraft;

- Know the history and present state of aircraft.

17. 课程内容及教学日历（如授课语言以英文为主，则课程内容介绍可以用英文；如团队教学或模块教学，教学日历须注明主讲人）

**Course Contents (in Parts/Chapters/Sections/Weeks. Please notify name of instructor for course section(s), if this is a team teaching or module course.)**

第一周（2学时）

飞行模拟器与飞行器发展历史简介

Week 1 (2 hours)

Introduction on Flight Simulator and history of aircraft development

第二、三周（4学时）

飞行模拟器操作演示与飞行器原理介绍

Week 2-3 (4 hours)

Demonstration on the operation of the Flight Simulator and introduction to the principle of aircraft

第四、五周（4学时）

飞行模拟器结构与功能介绍

Week 4-5 (4 hours)

Introduction to the structure and function of the Flight Simulator

第六周（2学时）

飞行模拟器操作讲解与训练--飞机起飞

Week 6 (2 hours)

Flight Simulator operation explanation and practice--Take off

第七周（2学时）

飞行模拟器操作讲解与训练--直飞

Week 7 (2 hours)

Flight Simulator operation explanation and practice--Fly-straight

第八周（2学时）

飞行模拟器操作讲解与训练--水平转弯

Week 8 (2 hours)

Flight Simulator operation explanation and practice--Level turn

第九周（2学时）

飞行模拟器操作讲解与训练--爬升与下降

Week 9 (2 hours)

Flight Simulator operation explanation and practice--Climb and descent

第十周（2学时）

飞行模拟器操作讲解与训练--低速平飞

Week 10 (2 hours)

Flight Simulator operation explanation and practice--Low speed flat flight

第十一周（2学时）

飞行模拟器操作讲解与训练--飞机着陆

Week 11 (2 hours)

Flight Simulator operation explanation and practice--Landing

第十二至十五周（8学时）

飞行模拟器操作讲解与训练--起落航线练习

Week 12-15 (8 hours)  
Flight Simulator operation explanation and practice--Take off, landing and route practice

第十六周 (2 学时)  
随堂测试

Week 16 (2 hours)  
Quiz

18. 教材及其它参考资料 Textbook and Supplementary Readings

《飞行器模拟使用教程》

课程评估 ASSESSMENT

19. 评估形式 Type of Assessment	评估时间 Time	占考试总成绩百分比 % of final score	违纪处罚 Penalty	备注 Notes
出勤 Attendance				
课堂表现 Class Performance		70		
小测验 Quiz				
课程项目 Projects				
平时作业 Assignments				
期中考试 Mid-Term Test				
期末考试 Final Exam		30		最后一周随堂测试
期末报告				

**Final Presentation**

其它（可根据需要  
改写以上评估方  
式）

**Others (The  
above may be  
modified as  
necessary)**


20. 记分方式 **GRADING SYSTEM**

- A. 十三级等级制 **Letter Grading**  
 B. 二级记分制（通过/不通过） **Pass/Fail Grading**

**课程审批 REVIEW AND APPROVAL**

21. 本课程设置已经过以下责任人/委员会审议通过  
**This Course has been approved by the following person or committee of authority**

力学与航空航天工程系教学指导委员会  
 The commission of teaching instruction in department of mechanics and aerospace engineering

