

## 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.  | 课程名称<br><b>Course Title</b>  | 综合工程训练 <b>Senior Project</b>                                    |                              |                               |  |                     |
| 2.  | 授课院系<br><b>Originating Department</b>  | 机械与能源工程系<br>Department of Mechanical and Energy Engineering     |                              |                               |  |                     |
| 3.  | 课程编号<br><b>Course Code</b>   | ME493   |                              |                               |  |                     |
| 4.  | 课程学分<br><b>Credit Value</b>  | 8   |                              |                               |  |                     |
| 5.  | 课程类别<br><b>Course Type</b>   | 专业必修课 <b>Major Required Courses</b>                             |                              |                               |  |                     |
| 6.  | 授课学期<br><b>Semester</b>  | 春季 <b>Spring</b>  |                              |                               |  |                     |
| 7.  | 授课语言<br><b>Teaching Language</b>   | 中、英双语 <b>Chinese-English bilingual</b>                          |                              |                               |  |                     |
| 8.  | 授课教师、所属学系、联系方式<br>(如属团队授课, 请列明其他授课教师)<br><b>Instructor(s), Affiliation &amp; Contact</b><br>(For team teaching, please list all instructors) | 机械系全体教师<br>机械与能源工程系<br>Dept. Mechanical and Energy Engineering, |                              |                               |  |                     |
| 9.  | 实验员/助教、所属学系、联系方式<br><b>Tutor/TA(s), Contact</b>  |   |                              |                               |  |                     |
| 10. | 选课人数限额(可不填)<br><b>Maximum Enrolment (Optional)</b>   |   |                              |                               |  |                     |
| 11. | 授课方式<br><b>Delivery Method</b>   | 讲授<br><b>Lectures</b>   | 习题/辅导/讨论<br><b>Tutorials</b> | 实验/实习<br><b>Lab/Practical</b> | 其它(请具体注明)<br><b>Other (Please specify)</b> | 总学时<br><b>Total</b> |
|     | 学时数  |   |                              | 256                           |  | 256                 |

**Credit Hours**

|  |  |  |  |  |
|--|--|--|--|--|
|  |  |  |  |  |
|--|--|--|--|--|

12. 先修课程、其它学习要求  
**Pre-requisites or Other Academic Requirements**

无 NA

13. 后续课程、其它学习规划  
**Courses for which this course is a pre-requisite**

14. 其它要求修读本课程的学系  
**Cross-listing Dept.**

**教学大纲及教学日历 SYLLABUS**

15. **教学目标 Course Objectives**

综合工程训练目标是通过毕业论文（设计）等各种形式，综合培养学生所学知识，使学生获得从事实际工作所必需的基本训练和进行科学研究工作的初步能力，为学生毕业后发展或进一步深造做准备。

The goal of Senior Project is to comprehensively train students' knowledge through various forms such as Thesis, and senior design project, so that students can obtain the basic training necessary for practical applications and scientific research.

16. **预达学习成果 Learning Outcomes**

培养学生具备综合运用基础理论、专业知识和基本技能，分析与解决问题，理论联系实际的能力；同时培养学生的创新精神、实践能力和写作表达能力等。

Train students to comprehensively apply basic theories, professional knowledge and basic skills, analyze and solve problems, and combine theory with practice. At the same time, cultivate students' innovative spirit, practical ability and writing skills.

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.)**

此课程学生开展综合工程训练，形式多样，例如毕业论文、毕业设计等等，具体的项目由指导老师确定，遵循学校毕业设计和毕业论文每2周计1学分，一周约等于16学时的计算方法。

Students of this course carry out comprehensive project-based training in mechanical engineering. Students should work with a faculty member to determine the project topic.

学生需要在春季开学两周内确定研究题目并提交开题报告。学期中（第8周结束前）需要提交中期报告。学期结束前提交期末报告并完成项目答辩。答辩需要由不少于2位老师（导师除外）进行评审。

The student should determine the project topic and submit a proposal by the end of 2<sup>nd</sup> week. A progress report should be submitted by the end of 8<sup>th</sup> week. By the end of the semester, the student should submit a complete project report and attend a defense exam with at least two faculty examiners (excluding the advisor).

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

无。NA

### 课程评估 ASSESSMENT

| 19. 评估形式<br>Type of<br>Assessment   | 评估时间<br>Time | 占考试总成绩百分比<br>% of final<br>score | 违纪处罚<br>Penalty | 备注<br>Notes |
|---|--------------|----------------------------------|-----------------|-------------|
| 出勤 Attendance   |              |                                  |                 |             |
| 课堂表现<br>Class<br>Performance  |              |                                  |                 |             |
| 小测验<br>Quiz   |              |                                  |                 |             |
| 课程项目 Projects   |              |                                  |                 |             |
| 平时作业<br>Assignments   |              |                                  |                 |             |
| 期中考试<br>Mid-Term Test   |              | 10%                              |                 | 项目中期进度报告    |
| 期末考试<br>Final Exam  |              | 25%                              |                 | 项目整体报告      |
| 期末报告<br>Final<br>Presentation   |              | 65%                              |                 | 答辩          |
| 其它（可根据需要<br>改写以上评估方<br>式）<br>Others (The<br>above may be<br>modified as<br>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

机械与能源工程系教学委员会