

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 Course Title	机械工程导论 Introduction to Mechanical Engineering
2.	授课院系 Originating Department	机械与能源工程系 Department of Mechanical and Energy Engineering
3.	课程编号 Course Code	ME101
4.	课程学分 Credit Value	1
5.	课程类别 Course Type	专业选修课 Major Elective Courses
6.	授课学期 Semester	春季 Spring
7.	授课语言 Teaching Language	中英双语 English & Chinese
8.	授课教师、所属学系、联系方式（如属团队授课，请列明其他授课教师） Instructor(s), Affiliation & Contact (For team teaching, please list all instructors)	融亦鸣 机械与能源工程系 88018166 Yiming Rong Department of Mechanical and Energy Engineering 88018166
9.	实验员/助教、所属学系、联系方式 Tutor/TA(s), Contact	待公布 To be announced
10.	选课人数限额(可不填) Maximum Enrolment (Optional)	50

11. 授课方式 Delivery Method	讲授	习题/辅导/讨论	实验/实习	其它(请具体注明)	总学时
	Lectures	Tutorials	Lab/Practical	Other (Please specify)	Total
学时数 Credit Hours	10	6			16
12. 先修课程、其它学习要求 Pre-requisites or Other Academic Requirements	无 No.				
13. 后续课程、其它学习规划 Courses for which this course is a pre-requisite	机械工程专业其它课程及实践 Other mechanical engineering courses and practice.				
14. 其它要求修读本课程的学系 Cross-listing Dept.	对工程类专业感兴趣的同学 Students who are interested in Mechanical Engineering.				

教学大纲及教学日历 SYLLABUS

15. 教学目标 Course Objectives

了解机械工程专业以及工程教育的内涵，学习团队合作，培养跨学科解决实际问题的能力。
After learning this course, students will understand the meaning of mechanical engineering as well as engineering education. This course will provide opportunities for student collaborating with each other, and developing interdisciplinary ability to solve practical problems.

16. 预达学习成果 Learning Outcomes

机械工程学导论是针对大一学生的工程专业入门课。主要介绍工程化的思维方式以及机械工程前沿课题。帮助学生了解机械工程的特点和研究前沿。课程还将探讨工程教育的内涵，以及现代社会对新型工程技术人员能力素质的要求。
This course is for freshman. It mainly focuses on engineering-thinking and research frontiers in mechanical engineering field. It aims to help the student to understand the main characterises and frontier topics of mechanical engineering. Besides, this course also introduces the meaning of engineering education and the requirement for a qualified engineer in the modern society.

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.)

课程内容	教学要求	学时分配
机械工程简介 Introduction	课程安排, 学生分组 Course arrangement and student grouping	2
设计、CAD 与工程表达 Design, CAD and Engineering Expression	了解基本工程表达方法 Understand basic engineering expressions	2
3D 打印与创新制造方法 3D Printing and Innovative Manufacturing Method	了解 3D 打印前沿技术 Understand the frontier technologies of 3D Printing	2
数控技术与设计制造一体化 Integration of NC Technology and Design and Manufacture	了解设计制造一体化技术 Understand design and manufacturing integration technologies	2
制造科学与工业创新: 项目与团队合作 Manufacturing Science and Industrial Innovation: Project and Team Cooperation	培养团队合作精神 Cultivate team cooperation spirit	2
机器人讲座 Robot Technology	了解机器人前沿技术 Understand robot frontier technologies	2
机械工程专业培养计划 Training Scheme of Mechanical Engineering Major	了解南科大机械工程专业培养方案 Understand the training scheme of Mechanical Engineering major in SUSTech	2
精密加工技术 Precision Machining Technology	了解精密加工前沿技术 Understand frontier technologies of precision machining	2
结业报告会 Final Report	项目结题汇报 Final presentation	
其他安排: 项目报告、公司参观等。		

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

无。 None.

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		10%		
课堂表现 Class Performance				
小测验 Quiz				
课程项目 Projects		(10%)		
平时作业 Assignments		60%		
期中考试				

Mid-Term Test			
期末考试			
Final Exam			
期末报告	30%		
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**

<input checked="" type="checkbox"/> A. 十三级等级制 Letter Grading <input type="checkbox"/> 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

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