

课程大纲 COURSE SYLLABUS

1.	课程代码/名称 Course Code/Title	风能 & 海洋能技术 Wind and Ocean Energy Technology
2.	课程性质 Compulsory/Elective	专业选修课
3.	开课单位 Offering Dept.	海洋系
4.	课程学分/学时 Course Credit/Hours	2/32
5.	授课语言 Teaching Language	中英文双语
6.	授课教师 Instructor(s)	李晔
7.	开课学期 Semester	秋季
8.	是否面向本科生开放 Open to undergraduates or not	
9.	先修要求 Pre-requisites	(如面向本科生开放, 请注明区分内容。 If the course is open to undergraduates, please indicate the difference.)
10.	教学目标 Course Objectives	
		<p>(如面向本科生开放, 请注明区分内容。 If the course is open to undergraduates, please indicate the difference.)</p> <p>本课程为风能与海洋能技术的研究生专业课程, 面向将要从事相关领域研究的研究生。较本科生的海洋能课程(OCE419)来说, 本课程给出深入的原理和理论, 以及具体的设计方法。</p> <p>This course is developed for graduate student who are studying wind and ocean energy. Comparing the undergraduate level ocean energy course(OCE419), this one provide in-depth theory and device design approach.</p>
11.	教学方法 Teaching Methods	
		<p>(如面向本科生开放, 请注明区分内容。 If the course is open to undergraduates, please indicate the difference.)</p> <p>课堂理论授课 lectures</p>
12.	教学内容 Course Contents	
		(如面向本科生开放, 请注明区分内容。 If the course is open to undergraduates, please indicate the difference.)
	Section 1	2-hr 课程总揽与概要 (overall background)
	Section 2	6-hr 水动力和低速空气动力学回顾 (hydrodynamics and low speed aerodynamics)

Section 3	4-hr 风力机原理 wind turbine working principle
Section 4	6-hr 海洋能发电装备原理 ocean energy device working principle
Section 5	2-hr 企业参观 industry visit
Section 6	6-hr 装备设计方法 Design method
Section 7	4-hr 优化与控制 Control and Optimization
Section 8	2-hr 总结 Summary
Section 9	
Section 10	
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13. 课程考核
Course Assessment

(① 考核形式 Form of examination; ②. 分数构成 grading policy; ③ 如面向本科生开放, 请注明区分内容。 If the course is open to undergraduates, please indicate the difference.)
 出勤率/Attendance 10%,
 课堂表现/In Class Activity 10%,
 课程设计中期汇报 Mid Term Report 20%,
 课程设计报告 Final Report and Presentation 60%

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

《潮流能发电及发电场设计》机械工业出版社;
 《海上风电场开发概述》中国电力出版社