

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	整合与创新设计 Design Integration & Innovation
2.	授课院系 Originating Department	创新创业学院 College of Innovation and Entrepreneurship (ICOLLEGE)
3.	课程编号 Course Code	INO006
4.	课程学分 Credit Value	2
5.	课程类别 Course Type	通识通修选修课程 General Education (GE) Elective Courses
6.	授课学期 Semester	秋季学期 Fall semester
7.	授课语言 Teaching Language	中英双语 CHINESE & ENGLISH
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)	叶智荣，国际知名产品设计师、香港设计商会主席、红杉资本 HKX 导师、香港版权审裁处成员、曾任香港设计师协会主席、香港理工大学客席讲师等， alanyip@yipdesign.com, 13530638861 Alan Yip, is an international renown product designer, the chairman of the HK Design Trade Association, a supervisor of the Sequoia Capital HKX, a member of Copyright Tribunal (HK). He was also the chairman of the HK Designers Association and visiting lecturer of the Hong Kong Polytechnic University, etc. Please contact him via email: alanyip@yipdesign.com and Tel: 13530638861
9.	实验员/助教、所属学系、联系方式（请列出本课所有教辅人员） Tutor/TA(s), Contact (Please list all)	
10.	选课人数限额(可不填) Maximum Enrolment (Optional)	40

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	无 none
13. 后续课程、其它学习规划 Courses for which this course is a pre-requisite	无 none
14. 其它要求修读本课程的学系 Cross-listing Dept.	无 none

教学大纲及教学日历 SYLLABUS

15. 教学目标 Course Objectives	<p>向工科学生介绍下述概念：设计思维、解决问题、美学欣赏、生态化设计、外型依从功能（Form Follows Function）以及用户友好。通过讲解不同市场领域中有关设计和创新的各类产品案例，启发学生学习如何创造新概念和新产品。</p> <p>Introduce concepts to engineering students including: design thinking, problem solving, aesthetic appreciation, Eco design, form follow function, user friendliness. Inspire students to learn how to create new ideas and products through product case studies in different market segments with design and innovation theories.</p>
----------------------------	--

16. 预达学习成果 Learning Outcomes	<p>让会应用各种新技术、运用工业设计方法来转化和升级优秀解决方案并创造优质产品，以满足不同市场需要。让学生由内而外地了解如何通过一个优秀的团队，实现成品的诞生。</p> <p>The teaching outcome is to let students learn how to utilize different innovative technologies and make good use of industrial design to transform and transcend good solutions and create good products to fill in the different market needs. How to start from the basic structure to a finish product; from inside out, with a capable team structure.</p>
------------------------------	---

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.)
--

一、教学日历 Calendar

教 学 内 容	学时
第一讲：工业设计的简介 Lecture 1 Introduction to industrial design	2
第二讲：产品审美 Lecture 2 Product aesthetic appreciation	2
第三讲：外型依从功能 Lecture 3 1Form follow function	2
第四讲：形式语言 Lecture 4 Form languages	2
第五讲：设计思维 Lecture 5 Design thinking	4

第六讲：产品创新 Lecture 6 Product innovation	2
第七讲：品牌形象 Lecture 7 Brand images	2
第八讲：设计和功能的融合 Lecture 8 Design and function integrations	4
第九讲：产品经理和产品创新团队 Lecture 9 Product manager and the product innovation team	4
第十讲：工业设计中的材料应用与工艺 Lecture 10 Material applications and process in industrial design	4
第十一讲：用户友好性 Lecture 11 User friendliness	2
第十二讲：产品 CMF Lecture 12 Product CMF (colour, material, finish)	2
合 计	32

二、课程内容 Content

第一讲：工业设计的简介

Lecture 1 Introduction to industrial design

内容：介绍工业设计在工业革命前后的历史背景，工业设计的定义及其对人类的贡献。

Content: The background history of industrial design covering the pre-industrial revolution and post industrial revolution. The definition of industrial design and the contributions to human life.

第二讲：产品审美

Lecture 2 Product aesthetic appreciation

内容：简单介绍各时代不同产品风格，包括新艺术运动、装饰艺术、生化风格型、几何型、流线型设计，以及“外型依从功能”工业设计运动。还会介绍审美欣赏的基本规范。

Content: Simple introduction of time line of different product styles including Art-Nuevo, Art-Deco, Organic, Geometric, Stream-line, Form Following Function movements. The basic guild lines of aesthetic appreciation.

第三讲：外型依从功能

Lecture 3 Form follow function

内容：介绍“外型依从功能”工业设计运动及相关历史，通过不同案例进行详述。

Content: Introduction of the Form Following Function movement and history, explanation of the say movement through various examples.

第四讲：形式语言

Lecture 4 Form languages

内容：介绍不同的产品风格及案例，包括新艺术运动、装饰艺术、生化风格型、几何型、流线型设计，以及“外型依从功能”工业设计运动。

Content: Introduction of different product styles including Art-Nuevo, Art-Deco, Organic, Geometric, steam-line, Form following Function movements and the examples.

第五讲：设计思维

Lecture 5 Design thinking

内容：介绍设计思维在商业、日常生活、人类改进中的重要意义。

Content: Introduction of how design thinking articulate in business, daily live and betterment of human being.

第六讲：产品创新

Lecture 6 Product innovation

内容：介绍产品创新是如何创造新市场、带来新商机、赢得竞争并实现获利的。

Content: How product innovation help to create new market and bring in new business, bypass competitions and revenue.

第七讲：品牌形象

Lecture 7 Brand images

内容：介绍原始设备制造商（OEM）、原始设计制造商（ODM）和原始品牌制造商（OBM），以及如何通过产品品牌塑造提升产品和业务。

Content: Introduction of OEM, ODM and OBM. How to transcend product and business through product branding.

第八讲：设计和功能的融合

Lecture 8 Design and function integrations

内容：介绍优秀的设计是如何融合功能、为产品赋值的。提供较好的人因工程学产品指引，甚至可创造一套全新的产品指引。

Content: Introduction of how good designs integrate with functions; add value to the product; provide good human ergonomic and even create a new product direction.

第九讲：产品经理和产品创新团队

Lecture 9 Product manager and the product innovation team

内容：介绍产品管理在整个产品开发过程中的重要性，并详述产品经理和设计师、工程师以及制造人员之间的关联。

Content: Introduction of the importance of product management within the whole product development process. Explain the structure and relationship of product manager with designer, engineer and manufacturer.

第十讲：工业设计中的材料应用与工艺

Lecture 10 Material applications and process in industrial design

内容：对比经典材料和新兴材料，包括具有不同属性和应用范围各类软硬质材料，详述环保材料和非环保材料对于世界产生的影响。

Content: Introduction of classic materials VS up-to-date materials including soft and hard material with different applications and properties. Explain the impact to the world environment of Eco friendly and non-Eco friendly materials.

第十一讲：用户友好性

Lecture 11 User friendliness

内容：介绍如何在设计中体现出用户友好。随着用户体验重要性的不断提高，用户友好将得到越来越多的重视。

Content: Introduction of how to express user friendliness in design. User friendliness will be got more attention as the growing importance of user experience.

第十二讲：产品 CMF（颜色、材质、表面处理）

Lecture 12 Product CMF (colour, material & finish)

内容：介绍当今工业设计中重要元素之一的产品的 CMF（颜色、材质、表面处理）。产品的 CMF 的组合如艺术品般增强产品的质量。

Content: Introduction of Product CMF (colour, material & finish) as one of the key element of industrial design of modern days. The combination of CMF is like a work of art to enhance to quality of the product.

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

A John Heskett Reader, Design, History Economics, by John Heskett

Design History, Theory and practice of product Design, by Bernhard E. Burdek

《整合与创新设计》陈纯、应放天著，华中科技大学出版社

《Creating Breakthrough Products》Jonathan·Cagan 著，机械工业出版社，2003

教学评估 ASSESSMENT				
19. 评估形式 Type of Assessment	评估所需时间 Duration	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		20%		
小测验				

Quiz				
课程项目 Projects				
平时作业 Assignments		20%		
期中考试 Mid-Term Test				
期末考试 Final Exam				
期末报告 Final Presentation		30%		
整体认知 Overall knowledge		20%		
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

--