

工业设计

Industrial Design

专业代码：080205

学 制：4 年

Program Code: 080205

Duration: 4 years

培养目标：

本专业培养具有社会主义核心价值观、中国文化底蕴和国际视野，系统掌握工业设计知识、现代设计方法以及形态、结构、材质与信息等设计手段，能运用工业设计专业知识与工具从事各类产品开发设计，具有较强实践动手能力和创新意识的设计、开发、研究人员。

Objectives:

The Industrial Design Major intends to cultivate design, development, research and teaching professionals with strong practical ability and innovative thinking who have deep understanding of Chinese culture and international vision as well as knowledge on the history and modern design methods through form, structure, material and information of industrial design, able to apply professional knowledge and tools of industrial design to the development and design of various products.

毕业要求：

№1.专业基础知识：掌握扎实的基础知识、专业基本原理、方法和手段，能够将数学、自然科学、本专业基础知识和专业知识用于解决复杂设计问题，并接触和掌握设计行业部分营运知识，为解决企业复杂问题打下知识基础。

№2.问题分析：能够应用本专业基本原理、方法和手段和设计行业营运知识，识别、表达、并通过文献研究分析设计中的复杂问题，以获得有效结论。

№3.设计/开发解决方案：能够设计针对设计的复杂问题的解决方案，设计满足特定人群和用户需求的产品、系统、服务，并能够在设计环节中体现创新意识，考虑社会、健康、安全、法律、文化以及环境等因素。

№4.研究：能够基于科学和人文研究并用，进行研究，并通过信息综合得到合理有效的结论。

№5.使用现代工具：能够针对不同的设计对象，开发、选择与使用恰当的技术、资源、。

№6.工程与社会：能够基于设计社会文化背景知识进行合理分析，评价解决方案对社会、健康、安全、法律以及文化的影响，并理解应承担的责任。

№7.环境和可持续发展：能够理解和评价设计实践对环境、社会可持续发展的影响。

№8.职业规范：具有人文社会科学素养、社会责任感，能够在设计实践中理解并遵守职业道德和规范，履行责任。

№9.个人和团队：能够在多学科背景下的团队中承担个体、团队成员以及负责人的角色。

№10.沟通：能够就设计问题与业界同行及社会公众进行有效沟通和交流，包括撰写报告和设计

文稿、陈述发言、清晰表达或回应指令。并具备一定的国际视野，能够在跨文化背景下进行沟通和交流。

№11.项目管理：理解并掌握基本管理原理与经济决策方法，并能在多学科环境中应用。

№12.终身学习：具有自主学习和终身学习的意识，有不断学习和适应发展的能力。

Student Outcomes:

№1. knowledge: master the basic knowledge, professional basic principles, methods and means to be able to apply mathematics, natural science, basic knowledge and expertise of this major to solve complicatedly designed problems, and contact and master part of operational knowledge in design industry to lay knowledge foundation for solving complex enterprise problems.

№2. Problems analysis: be able to identify, express, and analyze the complex problems based on the literature research by the methods and means of the professional knowledge of the design industry learning from this major to obtain effective conclusions.

№3. **Design/Development Solution:** an ability to design solutions to complex design problems, design products, systems and service for specific groups and users, and display innovation awareness in the design link while taking into consideration society, health, safety, law, culture, environment, etc.

№4. **Research:** an ability to conduct researches based on science and human studies and obtain rational and effective conclusions by integrating information.

№5. **Use Modern Tools:** an ability to develop, select and use appropriate technology and resources targeting different design objects.

№6. **Project and Society:** an ability to conduct reasonable analysis based on social and cultural background knowledge of design, evaluate the influence of solutions on society, health, safety, laws and culture, and understand responsibilities.

№7. **Environment and Sustainable Development:** an ability to understand and evaluate the influence of design practice on the environment and suitable development.

№8. **Professional Norms:** an ability to understand and obey professional ethics and norms and perform duties in design practice, with good cultural, social and scientific attainments.

№9. **Individual and Team:** an ability to bear his/her own role as individual, team member or team leader in a multidisciplinary.

№10. **Communication:** an ability to effectively communicate with industry counterparts and the social public on design issues, including writing reports and design documents, presentation speech, and clearly expressing and responding to instructions. With a certain international vision to communicate understand the background of cross-culture.

№11. **Project Management:** to understand and master basic management principles and economic decision-making methods and apply in multidisciplinary.

№12.**Lifelong Learning:** A recognition of the need for, and an ability to engage in independent and

life-long learning with the ability to learn continuously and adapt to new developments.

专业简介：

工业设计专业是学院重点建设的专业之一，专业正式创办于 2002 年，也是设计学院中专业历史最长的专业。依托设计学一级学科，通过多年建设，在师资队伍、学生培养、实验室和实习基地建设方面取得了显著的成果。师生先后获得了包括红点、IF 在内的国际知名设计大奖和国内专业设计奖项。同时围绕国家产业升级的战略，积极探索符合应用创新型人才的培养模式和与之相适应的师资队伍建设。以科研项目带动教学的创新，推动实创，形成了产学研结合的人才培养模式。培养学生们在具有传统文化底蕴和国际视野的基础上，创新实践和团队协作的综合能力，学生就业率达 100%。

Program Profile:

The industrial design is one of the two key majors in school of design, and also the longest history of design in the school of design. Through years of construction, the profession has made remarkable achievements in the teaching and construction, laboratory and practice base construction. Teachers and students repeatedly obtain international and domestic professional awards. At present, the profession focus on objectives of cultivating applied innovative talents, and actively explore the application of innovative talents training programs and teaching team construction model, implement combination model of teaching and research teaching, cultivate students to have practical ability, innovation awareness, teamwork and comprehensive professional skills, thus improve students' employment competitiveness.

专业特色：

本专业注重科学技术与文化艺术的渗透和交融，对各类产品进行综合设计，培养计划中充分体现系统、创新、应用的思想，强化先进设计思想和综合素质的教育，强化创造能力、实践操作能力、个性发挥能力、先进技能表现能力的全面培养。

Program Features:

This major focuses on the interaction and integration between scientific technology and arts and culture with a comprehensive design of various products. Fully embodying thinking of system, innovation and application, the program highlights the cultivation of advanced design thought and overall quality as well as creative ability, practical ability, ability to play to personal strength, and ability to show advanced skills.

授予学位：工学学士学位

Degree Conferred: Bachelor of Engineering

主干课程：

设计素描、色彩学、工业设计概论、工业设计史、表现技法、产品设计方法学、计算机辅助工

业设计、工业设计工程基础、人机工程学、产品创新设计专题、设计心理学。

Bilingual Courses:

product design methodology, design management, computer aided industrial design

Research Courses: Product Innovation Design Project 1, 2, 3

Research courses: Introduction to design, industrial design history, product innovation design project 1,2,3

Innovative practice courses: product design methodology, product innovation project 1,2,3 (including interface design, corporate image design, etc.)

Baccalaureate-Master's Integrated Courses: Graduation Design

SCooperative Courses with Enterprises: Elite Course, Graduation Design

Workshop: professional practice, graduation design, art casting

Innovation Practice:mode on creative product development and current market promotion

特色课程:

双语教学课程: 产品设计方法学、设计管理、计算机辅助工业设计

专题研讨课: 产品创新设计专题 1、2、3

研究型课程: 设计概论, 工业设计史、产品创新设计专题 1、2、3

创新实践课程: 产品设计方法学, 产品创新专题 1、2、3 (含界面设计、企业形象设计等)

竞教结合课程: 产品创新设计专题 1、2

校企合作课: 精英课程、毕业设计

工作坊: 专业实习、毕业设计、艺术铸造

创业教育课程: 设计创新与创业

Featured Courses:

Bilingual Courses: product design methodology, design management, computer aided industrial design

Research Courses: Product Innovation Design Project 1, 2, 3

Research courses: Introduction to design, industrial design history, product innovation design project 1,2,3

Innovative practice courses: product design methodology, product innovation project 1,2,3 (including interface design, corporate image design, etc.)

Baccalaureate-Master's Integrated Courses: Graduation Design

SCooperative Courses with Enterprises: Elite Course, Graduation Design

Workshop: professional practice, graduation design, art casting

Innovation Practice:mode on creative product development and current market promotion

一、教学计划总体安排表 (General Teaching Schedule)

学 年	学 期	教 学 进 度 安 排 (周)																		理 论 教 学	考 试	入 学 教 育	军 训	课 程 设 计	大 作 业	工 程 训 练	电 子 实 习	综 合 实 验	社 会 实 践	生 产 实 习	毕 业 实 习	其 它 实 习	中 外 合 作 项 目	毕 业 设 计	就 业 安 排	机 动	假 期	小 计		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18																				19	20
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R																					
一	1		C	A	A	A	A	A	A	A	A	A	A	A	A	B	D	D	D	14	1	1	3													19				
	2	A	A	A	A	A	A	A	A	A	A	A	A	A	A	Q	Q	B	B	16	2												2		20					
二	3	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	F	B	18	1			1											20					
	4	A	A	A	A	A	A	A	A	A	A	A	A	G	G	B	J	J	J	J	13	1			1	2			4							20				
三	5	A	A	A	A	A	A	A	A	A	A	A	A	A	A	Q	Q	F	B	16	1			1									2		20					
	6	A	A	A	A	A	A	A	A	A	A	A	A	A	A	M	M	M	M	16	0							4								20				
四	7	A	A	A	A	A	A	A	A	A	A	A	A	A	B	M	M	M	M	15	1							4								20				
	8	O	O	O	O	O	O	O	O	O	O	O	O	O	P	P	P	Q	Q											15	2	2			20					
合 计 (周)																		10	7	1	3		3	2			4			8		15	2	6					15	9

二、各类课程学分登记表 (Registration Form of Curriculum Credits)

1. 学分统计表 (Credits Registration Form)

课程类别 Course Category	课程要求 Requirement	学分 Credits	学时 Academic Hours	备注 Remarks
公共基础课 General Basic Courses	必修 Compulsory	38.0	540	
	通识 General Education	10.0	160	
学科基础课 Disciplinary Basic Courses	必修 Compulsory	43.0	704	
	选修 Elective	0	0	
专业领域课 Specialty-related Courses	必修 Compulsory	8.0	160	
	选修 Elective	38.0	608	
合 计 Total		137.0	2172	
集中实践教学环节 (周) Practice Training (Weeks)	必修 Compulsory	40.0	40 周	
毕业学分要求 Credits Required for Graduation	137.0 + 40.0 = 177.0			

备注：学生在取得专业教学计划规定学分的同时，还必须取得第二课堂 2 个人文素质教育学分和 4 个创新能力培养学分。

2.类别统计表 (Category Registration Form)

学时 Academic Hours					学分 Credits						
总学时数 Total	其中 Include		其中 Include		总学分数 Total	其中 Include		其中 Include			其中 Include
	必修学时 Compulsory	选修学时 Elective	理论教学学时 Theory Course	实验教学学时 Lab		必修学分 Compulsory	选修学分 Elective	集中实践教学环节学分 Practice-concentrated Training	理论教学学分 Theory Course Credits	实验教学学分 Lab	创新创业教育学分 Innovation and Entrepreneurship Education
2172	1404	768	1948	224	177	129	48	40	130	7	45

三、专业教学计划表 (Teaching Schedule)

类别 Course Category	课程 代码 Course No.	课程名称 Course Title	是否 必修 C/E	学时数 Total Curriculum Hours				学分 数 Credits	开课 学期 Semester	毕业 要求 Student Outcomes	
				总学 时 Class Hours	上机 Computer-ai ded Class Hours	实验 Lab Hours	实践 Practice Hours				
公共基础课 General Basic Courses	143093	思想道德修养与法律基础 Cultivation of Thought and Morals & Fundamental of Law	必修课 C	(40) (36)				2.5	2	No8	
	143091	中国近现代史纲要 Skeleton of Chinese Modern History		(32) 24				2.0	1	No8	
	143106	毛泽东思想和中国特色社会主义理论体系概论 Thought of Mao ZeDong and Theory of Socialism with Chinese Characteristics		(80) 48				5.0	4	No8	
	143090	马克思主义基本原理 Fundamentals of Marxism Principle		(40) 36				2.5	3	No8	
	143094	形势与政策 Analysis of the Situation & Policy		(128)				2.0	1-8	No8	
	144001	大学英语(一) College English(1)		64				4.0	1	No10	
	144002	大学英语(二) College English(2)		64				4.0	2	No10	
	145223	大学计算机基础 Foundations of Computer		32				2.0	1	No5	
	152001	体育(一) Physical Education (1)		32			32	1.0	1	No12	
	152002	体育(二) Physical Education (2)		32			32	1.0	2	No12	
	152003	体育(三) Physical Education (3)		32			32	1.0	3	No12	
	152004	体育(四) Physical Education (4)		32			32	1.0	4	No12	
	106001	军事理论 Military Principle		(16)				1.0	2	No9	
	130139	工程制图(一) Engineering Drawing(1)		48				3.0	1	No5	
	130140	工程制图(二) Engineering Drawing(2)		32				2.0	2	No5	
	140194	微积分基础 Calculus Basis		64				4.0	1	No2	
		人文科学领域 Humanities		96	通识课 E				6.0		No8
		社会科学领域 Social Science		64					4.0		No8
	合计 Total				700			128	48.0		

三、专业教学计划表 (续) (Teaching Schedule)

类别 Course Category	课程 代码 Course No.	课程名称 Course Title	是否 必修 C/E	学时数 Total Curriculum Hours				学分 数 Credits	开课 学期 Semester	毕业 要求 Student Outcomes
				总学 时 Class Hours	上机 Computer-ai ded Class Hours	实验 Lab Hours	实践 Practice Hours			
Disciplinary Basic 课	174190	设计素描 Design Sketch	必 C	64				4.0	1	No1
	130181	工业设计概论 Overview of industrial design	必 C	32				2.0	1	No1,7,8,9,10

类别 Course Category	课程 代码 Course No.	课程名称 Course Title	是否 必修 C/E	学时数 Total Curriculum Hours				学分 数 Credits	开课 学期 Semester	毕业 要求 Student Outcomes
				总学时 Class Hours	上机 Computer-ai ded Class Hours	实验 Lab Hours	实践 Practice			
	130166	色彩学 Chromatology	必 C	64				4.0	2	№1,5
	174321	基础造型（一） basic courses of preliminary design I	必 C	64				4.0	2	№1,4,12
	174322	基础造型（二） basic courses of preliminary design I	必 C	32				2.0	2	№2,4,5
	172135	工业设计史 Industrial design history	必 C	32				2.0	3	№1,6,10
	130272	表现技法 Expressional methodology	必 C	64				4.0	3	№1,5
	133092	工程力学 Engineering mechanics	必 C	48				3.0	4	№1,5
	130125	计算机辅助工业设计 Computer-aided industrial design (bilingual)	必 C	64	32			3.0	3	№1,2,3,4,5
	130029	工业设计工程基础 Industrial design engineering foundation	必 C	48				3.0	4	№1,5
	130194	产品设计方法学 Product design methodology (bilingual)	必 C	32				2.0	4	№2,3,4
	130083	机械设计基础 Mechanical design basis	必 C	48				3.0	5	№1,5
	171260	设计心理学 Design psychology	必 C	32				2.0	5	№1,2,10
	130024	人机工程学 Ergonomics	必 C	48				3.0	5	№1,2,5
	130183	材料与面饰工艺 Materials and surface processing technology (bilingual)	必 C	32				2.0	6	№1,2,3,4,5
	合计 Total			必 C	704	32			43.0	
专业领域课 Specialty- related Courses	174228	产品创新设计专题（一） Product innovation design project 1	必 C	80		32		4.0	4	№2,3,4,5,6,7,9,10,11
	174229	产品创新设计专题（二） Product innovation design project 1	必 C	80		32		4.0	5	№2,3,4,5,6,7,9,10,11
	130206	摄影 photography	选 E	32				2.0	3	№1,2,3,4,5
	130136	产品形态学 Product Morphology	选 E	64				4.0	3	№3,5,6,9,10
	130151	设计管理 Design management (bilingual)	选 E	32				2.0	5	№4,6,7,8,9,10
	174323	硬件基础 Hardware foundation	选 E	48				3.0	5	№3,5

类别 Course Category	课程 代码 Course No.	课程名称 Course Title	是否 必修 C/E	学时数 Total Curriculum Hours				学分 数 Credits	开课 学期 Semester	毕业 要求 Student Outcomes
				总学时 Class Hours	上机 Computer-ai ded Class Hours	实验 Lab Hours	实践 Practice			
	174244	交互设计（一） Interaction design 1	选 E	64				4.0	6	№2,3,4,5 ,9,10
	174225	视觉传达（广告及包装设计、企业形象） visual communication	选 E	80				5.0	6	№2,3,4,5 ,6,7,9,10, 11
	130126	交通工具设计 Design on Means of Transportation	选 E	80		32		4.0	6	№2,3,4,5 ,6,7,9,10, 11
	130313	CAD/CAE/CAM技术 CAD/CAE/CAM Technology	选 E	32				2.0	6	№2,3,4,5 ,7,8,9
	174245	交互设计（二） interaction design 2	选 E	64				4.0	7	№2,3,4,5 ,9,10
	130314	艺术铸造 Workshop - Art Foundry	选 E	32				2.0	7	№2,3,4,5 ,7,8,9
	174230	产品创新设计专题（三） Product innovation design project 3	选 E	80		32		4.0	7	№2,3,4,5 ,6,7,9,10, 11
	174288	设计创新与创业 Design Innovation and Entrepreneurship	选 E	32				2.0	7	№9,10,1 1
	174286	产品研发管理 Product R&D management	选	16				1.0	7	№8,9,10, 11
	174287	设计研究方法 with 学术写作 Design research method and academic writing	选	16				1.0	7	№4,6,11
	120003	创新研究训练 Innovation Research Training	选 E	32				2.0		№4,12
	120004	创新研究实践 I Innovation Research Practice I	选 E	32				2.0		№4,12
	120005	创新研究实践 II Innovation Research Practice II	选 E	32				2.0		№4,12
	120006	创业实践 Entrepreneurial Practice	选 E	32				2.0		№4,12
	合计 Total			必 C	160		64		8.0	
				选 E	选修课修读最低要求 38.0 学分 minimum elective course credits required:38					

备注：1.基础造型（一~二）分别为：平面与立体、设计初步；产品创新设计专题（1~3）分别为：发现与探索、系统与服务、真实的产品；交互设计（一~二）分别为：交互原理、界面与交互；2. 学生根据自己开展科研训练项目、学科竞赛、发表论文、获得专利和自主创业等情况申请折算为一定的专业选修课学分（创新研究训练、创新研究实践 I、创新研究实践 II、创业实践等创新创业课程）。每个学生累计申请为专业选修课总学分不超过 4 个学分。经学校批准认定为选修课学分的项目、竞赛等不再获得对应第二课堂的创新学分。

四、集中实践教学环节(Practice-concentrated Training)

课程 代码 Course No	课程名称 Course Title	是否 必修 C/E	学时数 Total Curriculum Hours		学分 数 Credits	开课 学期 Semester	毕业要求 Student Outcomes
			实践 weeks Practice	授课 Hours Lecture			
106002	军训 Military Training	必 C	3周		3.0	1	№9
143197	马克思主义理论与实践 Marxism Theory and Practice	必 C	2周		2.0	假期	№8
172186	专业调研 Specialty Survey	必 C	4周		4.0	7	№4
130356	工程训练 Engineering Training I	必 C	2周		2.0	4	№1,2,3
130133	速写 Sketch	必 C	2周		2.0	3	№1,5
130243	模型 Model	必 C	4周		4.0	4	№1,5
174222	专业文化考察 Professional culture inspection	必 C	4周		4.0	4	№1,5
130242	专业实习 Specialty Practice	必 C	4周		4.0	6	№2,3,4,5
130036	毕业设计（论文） Graduation Design (Thesis)	必 C	15周		15.0	8	№1,2,3,4,5,6,7,8,9,10,11
合计 Total		必 C	40周		40.0		

五、第二课堂

第二课堂由人文素质教育和创新能力培养两部分组成。

1.人文素质教育基本要求

学生在取得专业教学计划规定学分的同时，还应结合自己的兴趣适当参加课外人文素质教育活动，参加活动的学分累计不少于2个学分。

2.创新能力培养基本要求

学生在取得本专业教学计划规定学分的同时，还必须参加国家创新创业训练计划或广东省创新创业训练计划或SRP（学生研究计划）或百步梯攀登计划或一定时间的各类课外创新能力培养活动（如学科竞赛、展览、工作坊、学术讲座等），参加活动的学分累计不少于4个学分。