



Module 8 Practical Training



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Module designation	<i>Military Training</i>
Semester(s) in which the module is taught	<i>2nd semester</i>
Person responsible for the module	<i>Yunlou Yan</i>
Language	<i>Chinese</i>
Relation to curriculum	<p><i>Compulsory</i></p> <p><i>Military Skills Training (Military Training) is a introductory courses of quality compulsory for all students. Military training is an important measure to strengthen the ideological and political education of university students and improve their quality; it is also the basic form for university students to fulfil their military service obligations and receive national defense education during their studies.</i></p>
Teaching methods	<i>Practice</i>
Workload (incl. contact hours, self-study hours)	<p><i>(Estimated) Total workload: 90 hours</i></p> <p><i>Contact hours (please specify whether lecture, exercise, laboratory session, etc.): 60 hours (Practice)</i></p> <p><i>Private study including examination preparation, specified in hours: 30 hours</i></p>
Credit points	<i>3.0</i>
Required and recommended prerequisites for joining the module	
Module objectives/intended learning outcomes	<p>Knowledge:</p> <p><i>Enable students to understand the basic content of relevant regulations; to understand the combat performance of light weapons, to understand the tactics of a single soldier, and to recognize and use topographic maps; to understand the basic knowledge of first aid, fire escape and other crisis management.</i></p> <p>Skill:</p> <p><i>Military skills training is organized to enhance the concept of national defense and national security awareness, strengthen the concept of patriotism and collectivism, strengthen organization and discipline, and promote the improvement of comprehensive quality.</i></p> <p>Competences:</p> <p><i>Military training is organized to stimulate students' patriotic enthusiasm, enhance the concept of national defense and national security awareness, establish the spirit of patriotism and revolutionary heroism, and enhance the sense of organization and discipline. The course also trains students the will of defending the motherland and</i></p>



	<p><i>sacrifice and dedication and the fine style of hard work and endurance. Students can master basic military knowledge and skills and improve their overall quality as qualified reservists for the Chinese People's Liberation Army, so as to lay a solid foundation for becoming the builders and successors of the cause of socialism with Chinese characteristics.</i></p>
Content	<p>1. PLA Regulations Education and Training (12 contact hours; 6 self-study hours)</p> <p><i>Enhance the concept of organization and discipline, cultivate the spirit of hard work and collectivism, and develop a fine style as a serviceman.</i></p> <p><i>Education on the Interior Service Regulations;</i></p> <p><i>Education on the Disciplinary Regulations;</i></p> <p><i>Education and training on the Formation Regulations;</i></p> <p><i>Individual military formation movement training;</i></p> <p><i>Unit formation movement training.</i></p> <p>2. Light Weapons Shooting (12 contact hours; 6 self-study hours)</p> <p><i>Understand the combat performance of light weapons and basic shooting theory, and master the action of shooting.</i></p> <p><i>General knowledge of weapons;</i></p> <p><i>Scientific principle of simple shooting;</i></p> <p><i>Shooting actions and methods;</i></p> <p>3. Tactics (12 contact hours; 6 self-study hours)</p> <p><i>Understand the basic types of combat and basic combat styles, master the basic principles of tactics, and learn the basic movements of individual tactics.</i></p> <p><i>Types of combat and combat styles;</i></p> <p><i>Tactical fundamentals;</i></p> <p><i>Warfighter tactical movements.</i></p> <p>4. Military Topography (5 contact hours; 6 self-study hours)</p> <p><i>Understand the role and impact of terrain in combat, master the basics of topographic maps, and learn to read and use maps.</i></p> <p><i>The effect of terrain on the combat operations of the army;</i></p> <p><i>Basic knowledge of topographic maps;</i></p> <p><i>Use the map in situ.</i></p> <p>5. Comprehensive Training (12 contact hours; 6 self-study hours)</p> <p><i>First aid training;</i></p> <p><i>Escape training.</i></p>
Examination forms	<p><i>In-class performance (20%): Class participation, discussion ;</i></p> <p><i>Assignments(30%):Homework ;</i></p> <p><i>Final assessment (50%): Exam</i></p>
Study and examination requirements	<p><i>Only students with class attendance rate over 2/3, assignment the completion rate over 2/3 and performing required experiments are allowed to take the exam.</i></p> <p><i>Achieve a score of 60 points or above.</i></p>



Reading list	<p><i>1.Required books</i></p> <p><i>[1] Xu Yang, Yan Yunlou. A Coursebook of Military Theory. Beijing: China Human Resources and Social Security Publishing Group, 2015.</i></p> <p><i>2.Reference books</i></p> <p><i>[1] Li Xiande. A New Coursebook for Colleges and Universities on Military Theory and Skills. Beijing: National Defense University Press, 2012.</i></p> <p><i>[2] Shen Ying. Military Skills Training for University Students. Tianjin: Nankai University Press, 2012.</i></p> <p><i>[3] Sun Peilei, Huang Tiegang, Zhang Guoqing. Military Theory and Military Skills. Shanghai: Tongji University Press, 2006.</i></p>
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Module designation	<i>Engineering Basic Training A (I)</i>
Semester(s) in which the module is taught	<i>1st semester</i>
Person responsible for the module	<i>Ting Ding</i>
Language	<i>Chinese</i>
Relation to curriculum	<p><i>Compulsory</i></p> <p><i>This course is a technical practice course, focusing on quality education, is an indispensable prerequisite course for learning "Fundamentals of Mechanical Manufacturing Technology", "Modern Manufacturing Technology Experiment" and mechanical professional courses, and is also a foundation course for obtaining basic knowledge of mechanical manufacturing and mastering certain operational skills, laying a practical foundation for students to engage in engineering and technical work. This course is mainly based on practical teaching, which not only teaches the basic theoretical knowledge of the process, but also has the experimental teaching of operation skills, organically combines theory and practice in the experimental process, guides students to carry out independent practical operations, and masters the basic operation skills.</i></p>
Teaching methods	<i>Practice</i>
Workload (incl. contact hours, self-study hours)	<p><i>(Estimated) Total workload: 120 hours</i></p> <p><i>Contact hours (please specify whether lecture, exercise, laboratory session, etc.): 60 hours (Practice)</i></p> <p><i>Private study including examination preparation, specified in hours: 60 hours</i></p>
Credit points	<i>4.0 ECTS</i>
Required and recommended prerequisites for joining the module	
Module objectives/intended learning outcomes	<p>Knowledge:</p> <p><i>Understand the basic processes and process methods of manufacturing technology.</i></p> <p>Skill:</p> <p><i>Ability to select and use appropriate technologies, resources, and modern engineering tools.</i></p> <p><i>Ability to apply mathematics, natural sciences, engineering fundamentals to solve complex engineering problems.</i></p> <p>Competences:</p> <p><i>Develop a good sense of safety work, strengthen the awareness of engineering, teamwork, and innovation. Cultivate the spirit of tireless, daring to challenge, and not afraid of failure and the spirit of great</i></p>



	craftsmen who strive for perfection, and stimulate students' national feelings and mission to serve the country with science and technology.
Content	<p>Level 3 Safety Education, Discipline Education and Labor Education (Supporting Curriculum Objectives 1 & 3)</p> <p>Strengthen the education of the Marxist concept of labor, three-level safety education, and discipline education, pay attention to innovation and entrepreneurship, combine disciplines and specialties to carry out production labor and service labor, accumulate professional experience, and cultivate creative labor ability and honest and trustworthy legal labor consciousness.</p> <p>Internship Project 1: Basic Machining</p> <p>The composition of the lathe; classification of lathes; The main processing object of the lathe; the content of the turning process; Turning process analysis; clamping of turning tools; Adjustment of the height of the cutting edge; clamping of workpieces; The operation method of the lathe and the processing steps of the parts.</p> <p>Internship Project 2: Fitter</p> <p>It is mainly based on teaching, demonstration and operation. It requires the safety operation procedures of fitters, understands the basic requirements of fitters, and the use of common tools, and the craftsman spirit of Xuancheng excellence and hard-working.</p> <p>Familiar with the characteristics and applications of marking, sawing, filing, and other methods, as well as the use of equipment, tools, clamps, and measuring tools.</p> <p>Internship Project 3: Casting</p> <p>Lectures are taught in the form of explanations, demonstrations, and observations. Learn to understand the basic process and methods of casting. Learn to understand the types and characteristics of modern casting. Preliminary grasp of the use of common tools, the distinction and practice of simple parts parting surfaces.</p> <p>Internship Project 4: Welding</p> <p>A comprehensive understanding of welding theoretical knowledge, familiar with the flat welding operation method of arc welding, and understanding the process characteristics and welding defects of arc welding.</p> <p>Welding Comprehensive Practice (Optional)</p> <p>Example welding is carried out through manual arc welding machine and welding rod, and common welding methods such as butt and surfacing welding are completed independently.</p> <p>Internship Project 5: Typical Parts Assembly and Disassembly</p> <p>Definition, characteristics, scope of application, application and maintenance precautions of pneumatic pistol drill; its model and parameters; main components and functions; Pneumatic pistol drill disassembly steps, tools used in disassembly and assembly and precautions.</p> <p>Lathe chuck disassembly (optional)</p> <p>Definition and characteristics of chuck; its model and parameters; main components and functions; Chuck disassembly steps, tools and precautions for disassembly.</p>



	<p>Lathe tool holder disassembly and assembly (optional) Definition and characteristics of the tool holder; its model and parameters; main components and functions; The steps of disassembling and assembling the tool holder, the tools used for disassembly and assembly, and the precautions.</p> <p>Lathe tailstock disassembly (optional) Definition and characteristics of the tailstock; its model and parameters; main components and functions; Tailstock disassembly and assembly steps, tools and precautions used for disassembly and assembly.</p> <p>Practicum 6: Surveying Internship content: Mainly in the form of lectures, demonstrations, and observations, learning traditional measurement tools.</p> <p>Typical Part Mapping (Optional) Typical part characteristics, models and parameters; Choose the right measuring tool; Typical part drawing points; Formatting requirements for engineering drawings.</p>
Examination forms	<p>In-class performance (20%): Class participation, discussion ;</p> <p>Assignments(30%):Homework ;</p> <p>Final assessment (50%)</p>
Study and examination requirements	<p>Only students with class attendance rate over 2/3, assignment the completion rate over 2/3 and performing required experiments are allowed to take the exam.</p> <p>Achieve a score of 60 points or above.</p>
Reading list	<p>1.Required books</p> <p>ZHU Jianjun. Basic practice course of manufacturing technology[M]. Beijing: China Machine Press</p> <p>2.Reference books</p> <p>[1] Xu C, Cheng J. Basic training course of manufacturing technology[M]. Beijing: China Machine Press, 2008</p> <p>[2] Jia Cili. Basic training course of mechanical manufacturing[M]. Beijing: China Machine Press, 2003</p> <p>[3] Huazhong Zhao, Yan Liu. Fundamentals of manufacturing technology[M]. Beijing: Tsinghua University Press, 2013</p>



Module designation	<i>Engineering Basic Training A (II)</i>
Semester(s) in which the module is taught	<i>3rd semester</i>
Person responsible for the module	<i>Ting Ding</i>
Language	<i>Chinese</i>
Relation to curriculum	<p><i>Compulsory</i></p> <p><i>This course not only has the basic theoretical knowledge of CNC machining technology, but also has the teaching of operation skills practice, students in the basic training of engineering A (1) on the basis of learning and then this course learning, master the basic theoretical knowledge of CNC machining technology, and be able to independently program, debug, Operate machine tools, complete the processing of comprehensive parts, and improve students' hands-on ability and innovation ability.</i></p>
Teaching methods	<i>Practice</i>
Workload (incl. contact hours, self-study hours)	<p><i>(Estimated) Total workload: 120 hours</i></p> <p><i>Contact hours (please specify whether lecture, exercise, laboratory session, etc.): 60 hours (Practice)</i></p> <p><i>Private study including examination preparation, specified in hours: 60 hours</i></p>
Credit points	<i>4.0 ECTS</i>
Required and recommended prerequisites for joining the module	
Module objectives/intended learning outcomes	<p>Knowledge:</p> <p><i>Master the basic knowledge of engineering structure and engineering technology;</i></p> <p>Skill:</p> <p><i>Ability to select and use appropriate technologies, resources, and modern engineering tools.</i></p> <p><i>Ability to apply mathematics, natural sciences, engineering fundamentals to solve complex engineering problems.</i></p> <p>Competences:</p> <p><i>Cultivate the attitude and awareness of pursuing innovation, be tireless, dare to challenge, and not be afraid of failure; Possess the ability to operate in basic practice and improve innovation ability.</i></p>
Content	<i>Level 3 Safety Education, Discipline Education and Labor Education (Supporting Curriculum Objectives 1 & 3)</i>



	<p><i>Strengthen the education of the Marxist concept of labor, three-level safety education, and discipline education, pay attention to innovation and entrepreneurship, combine disciplines and specialties to carry out production labor and service labor, accumulate professional experience, and cultivate creative labor ability and honest and trustworthy legal labor consciousness.</i></p> <p>Internship Project 1: CNC Lathes</p> <p><i>the composition of the CNC lathe; classification of CNC lathes; The main processing object of CNC lathe; the content of CNC turning process; CNC turning process analysis; The setting of the coordinate system of the CNC lathe; Common function instructions and programming basis of CNC lathe; The operation method of CNC lathe and the processing steps of parts.</i></p> <p><i>Slant bed CNC lathe (optional)</i></p> <p><i>The components of the inclined bed CNC lathe and the functions of each part; Programming of Mitsubishi CNC system; Operation of a CNC lathe with a slanted bed.</i></p> <p><i>Turning center (optional)</i></p> <p><i>the components of the turning center and the functions of each part; Programming of Mitsubishi CNC system; Definition and application of rapid prototyping technology for operation of inclined bed CNC lathe; major rapid prototyping technologies; AuroraFM software; 3D model manipulation.</i></p> <p>Internship Project 2: CNC Milling Machine</p> <p><i>Overview of CNC milling machines; CNC milling processing technology; Tool setting method of CNC milling machine; Programming basics of CNC milling machines; Operation of CNC milling machine.</i></p> <p>Comprehensive practice of programming and operation of CNC milling machine (optional)</p> <p><i>Programming of parts and operation of the machine.</i></p> <p>Internship Project 3: Modern Precision Machining</p> <ol style="list-style-type: none"> <i>1. Overview of modern precision machining technology;</i> <i>2. CAD/CAM technical process, CAD/CAM drawing programming;</i> <i>3. Key components and functions of five-axis processing machines, composite processing machine tools, industrial robots and flexible automated manufacturing;</i> <i>4. Five-axis engraving tool setting and calling program processing method.</i> <p>Internship Project 4: Special Processing</p> <p><i>Laser cutting processing</i></p> <p><i>The processing principle and characteristics of laser cutting; Classification of cutting materials for laser cutting; processing technology of laser cutting; CAXA software drawing.</i></p> <p>EDM Wire EDM Comprehensive Training (Optional)</p> <p><i>clamping and correction of workpiece and electrode wire; Wire EDM machine operation.</i></p> <p>Internship Project 5: Rapid Prototyping Technology</p>
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	<p><i>Definition and application of rapid prototyping technology; major rapid prototyping technologies; Rapid prototyping equipment supporting software; Rapid prototyping equipment operation.</i></p> <p>Internship Project 6: Laser Welding and Engraving (Optional)</p> <p><i>The principle and characteristics of laser generation; processing principles and characteristics of laser welding and laser marking; The composition of the laser welding machine and the laser marking machine; laser welding and laser marking processing technology; Operation of laser welding and laser marking machines.</i></p>
Examination forms	<p><i>In-class performance (20%): Class participation, discussion ;</i></p> <p><i>Assignments(20%):Homework ;</i></p> <p><i>Final assessment (60%)</i></p>
Study and examination requirements	<p><i>Only students with class attendance rate over 2/3, assignment the completion rate over 2/3 and performing required experiments are allowed to take the exam.</i></p> <p><i>Achieve a score of 60 points or above.</i></p>
Reading list	<p>1.Required books</p> <p><i>ZHU Jianjun. Basic practice course of manufacturing technology[M]. Beijing: China Machine Press, 2019</i></p> <p>2.Reference books</p> <p><i>[1] Jia Cili. Basic training course of machinery manufacturing[M]. Beijing: China Machine Press, 2003</i></p> <p><i>[2] Yanliu. Training course of modern manufacturing technology[M]. Beijing: Tsinghua University Press, 2011</i></p> <p><i>[3] Gu Bei. Typical case tutorial of modern manufacturing technology practice[M]. Beijing: Tsinghua University Press, 2013</i></p> <p><i>[4]Tang Jia. Modern Manufacturing Technology Practice Problem Collection[M]. Beijing: Tsinghua University Press, 2013</i></p>



Module designation	<i>Model Making</i>
Semester(s) in which the module is taught	<i>3rd semester</i>
Person responsible for the module	<i>Chao Zheng</i>
Language	<i>Chinese</i>
Relation to curriculum	<i>Compulsory</i>
Teaching methods	<i>Practice</i>
Workload (incl. contact hours, self-study hours)	<p><i>(Estimated) Total workload: 120 hours</i></p> <p><i>Contact hours (please specify whether lecture, exercise, laboratory session, etc.): 60 hours (Practice)</i></p> <p><i>Private study including examination preparation, specified in hours: 60 hours</i></p>
Credit points	<i>4.0 ECTS</i>
Required and recommended prerequisites for joining the module	
Module objectives/intended learning outcomes	<p>Knowledge:</p> <p><i>Have the comprehensive literacy under the education goal system in the new era, and through the cognition of model making, strengthen personal ideals and beliefs, cultivate patriotism, increase knowledge and insight, cultivate the spirit of independent struggle, and enhance comprehensive quality. Enhance the comprehensive and coordinated development of personal knowledge, ability and quality.</i></p> <p>Skill:</p> <p><i>Master the basics of model making</i></p> <p><i>Familiar with the specific application examples of spatial models in the field of catering</i></p> <p><i>Proficient in the basic skills of model making, and independently complete model production and expression.</i></p> <p>Competences:</p> <p><i>Integrate social, health, safety, legal, cultural and environmental factors, design systems, processes and equipment to meet the needs of industrial design, and reflect the sense of innovation in the design and development process.</i></p>
Content	<p>Chapter 1 Basic Concepts of Architectural Models</p> <p><i>The definition and basic elements of the building model, the classification, meaning, value, and type of the building model</i></p>



	<p>Chapter 2 Design Concept of Architectural Model <i>The design of architectural models, the overall design and detailed design of architectural models, and the appreciation of architectural model design ideas</i></p> <p>Chapter 3 Tools and Materials for Architectural Modelling <i>tools for making architectural models; Material classification of architectural models</i></p> <p>Chapter 4 Practical training and assessment of architectural model scenes <i>Practical training, operation and assessment of model making</i></p>
Examination forms	<p>Practical case training <i>According to the students' software operation and application ability, the teacher selects an appropriate design proposition, and trains the students' design ability through practical operation, interactive discussion and teacher's explanation of key points in the classroom.</i></p> <p>Hands-on labs <i>The content of the actual hands-on operation is mainly to use the model materials to make the design scheme into a solid model.</i></p> <p>Homework <i>There is no separate exercise class, and the homework is required to be completed by students after class, and the teacher will use the fragmented time of the class to explain</i></p>
Study and examination requirements	<p><i>Only students with class attendance rate over 2/3, assignment the completion rate over 2/3 and performing required experiments are allowed to take the exam.</i></p> <p><i>Achieve a score of 60 points or above.</i></p>
Reading list	<p>1.Required books <i>Automobile Clay Model, Huang Guolin, People's Communications Press, 2023-11</i></p> <p>2.Reference books 1. Lan Yuqi, Zhang Ying, Pan Tao, Zhang Xikui. <i>Product Design Model Making and Technology (3rd Edition)</i>. Tsinghua University Press, 2018.092 <i>Editor-in-Chief of China Architecture & Building Press, Architectural Society of China, Architectural Design Data Collection (Volume 5 Leisure & Entertainment, Catering, Hotel, Commerce). China Architecture & Building Press, 2007.13</i> Yao Ting, Huang Yan, Li Jieru. <i>Interior model making</i>. Huazhong University of Science and Technology Press. 2021.08</p>



Module designation	<i>Comprehensive Material Performance</i>
Semester(s) in which the module is taught	<i>2nd semester</i>
Person responsible for the module	
Language	<i>Chinese</i>
Relation to curriculum	<p><i>Compulsory</i></p> <p><i>This course is a comprehensive training at the end of the first year of the course, which aims to help students further understand the properties of materials, processes and the use of integrated materials to create. Through the study of this course, students can preliminarily master the material-related parts of the industrial design major, exercise their design expression ability, innovation ability, display roadshow skills, and expand their artistic thinking ability.</i></p>
Teaching methods	<i>Practice</i>
Workload (incl. contact hours, self-study hours)	<p><i>(Estimated) Total workload: 120 hours</i></p> <p><i>Contact hours (please specify whether lecture, exercise, laboratory session, etc.): 60 hours (Practice)</i></p> <p><i>Private study including examination preparation, specified in hours: 60 hours</i></p>
Credit points	<i>4.0 ECTS</i>
Required and recommended prerequisites for joining the module	<p><i>Three-dimensional composition(070570)</i></p> <p><i>Color composition(070563) , Plane composition(070562)</i></p> <p><i>Drawing(070901)</i></p> <p><i>Color(075425)</i></p> <p><i>Composition(070554)</i></p>
Module objectives/intended learning outcomes	<p>Knowledge:</p> <p><i>master the professional knowledge of mathematics, natural science, engineering foundation and related disciplines required in the field of industrial design, and be able to solve applied engineering problems in the fields of material forming process, mechanical analysis, electronics, model making and other fields of industrial design.</i></p> <p>Skill:</p> <p><i>Be able to flexibly apply the professional knowledge learned to professional practice, and be able to take into account the perspectives of society, health, safety, law, management and cultural environment in practice, carry out comprehensive practical activities of industrial design seeking truth from facts, solve real industrial design problems, and put forward valuable design solutions.</i></p>



	<p><i>have the ability to design innovative thinking, and be able to integrate social, health, safety, legal, cultural and environmental factors, and reflect the sense of innovation in the design and development process.</i></p> <p>Competences:</p> <p><i>be able to clarify and abide by relevant professional ethics and norms in business practices such as design, development, and production of industrial products, and fulfil job responsibilities. have humanities and social science literacy, social responsibility, and be able to carry forward the spirit of advocating labor and selfless dedication in the practice of industrial design.</i></p>
Content	<p>Chapter 1: Ceramics</p> <ol style="list-style-type: none"> 1) Overview of ceramic materials 2) Basic properties of ceramic materials 3) Ceramic product processing technology 4) Ceramic materials and product design 5) Ceramic materials and artistic creation <p>Chapter 2: Understanding Plastics</p> <ol style="list-style-type: none"> 1) Overview of plastic materials 2) Basic properties of plastic materials 3) Processing technology of plastic material products 4) Plastic materials and product design 5) Plastic materials and artistic creation <p>Chapter 3: Common Mold Materials</p> <ol style="list-style-type: none"> 1) Mold overview 2) The basic performance and processing technology of the mold 3) Mold and product design 4) Mold materials and artistic creation <p>Chapter 4: Understanding Metals</p> <ol style="list-style-type: none"> 1) Overview of metal materials 2) The basic properties and processing technology of metal 3) Metal & Product Design 4) Metal materials and artistic creation <p>Chapter 5: Understanding Paper</p> <ol style="list-style-type: none"> 1) Overview of paper materials 2) Basic properties and processing technology of paper materials 3) Paper and product design 4) Paper and art creation <p>Chapter 6: Understanding Wood</p> <ol style="list-style-type: none"> 1) Overview of wood 2) Basic properties and processing technology of wood 3) Wood & Product Design 4) Wood art creation



	<p>Chapter 7: Additive Manufacturing and 3D Printing</p> <p>1) Basic concepts and cases of additive manufacturing</p> <p>2) Basic operation of 3D printing</p> <p>Chapter 8: Cases and Practices of Mixed Media Expression</p> <p>1) Cases of comprehensive material performance</p> <p>2) Thematic practice of comprehensive material expression</p>
Examination forms	<p><i>In-class performance (20%): Class participation, discussion ;</i></p> <p><i>Assignments(30%):Homework ;</i></p> <p><i>Final assessment (60%)</i></p>
Study and examination requirements	<p><i>Only students with class attendance rate over 2/3, assignment the completion rate over 2/3 and performing required experiments are allowed to take the exam.</i></p> <p><i>Achieve a score of 60 points or above.</i></p>
Reading list	<p>1.Required books</p> <p><i>Zhang Xiang and Tang Yong, eds., Comprehensive Materials[M]. Chengdu:Southwest University Press, 2022.3.</i></p> <p><i>Monica Andre. The Art of Film Photography[M].Beijing:People's Posts and Telecommunications Press,2021.9.</i></p> <p><i>Pan Lusheng. Shanghai:China Textile Press,2022.6.</i></p> <p>2.Reference books</p> <p><i>[1] Bruce Barnbeaugh. Beijing:People's Posts and Telecommunications Press,2021.10.</i></p> <p><i>[2] John Berger. Understanding a Photo: John Berg on Photography[M].Guilin:Guangxi Normal University Press,2021.7.</i></p> <p><i>[3] Peter Nestruk. The Theory of Black and White Photography[M] .Beijing:China National Photography Art Publishing House,2016.1</i></p> <p><i>[4]Wu Lieyan,Zhou Qing. Material expression[M]. Hangzhou: China Academy of Art Press, 2012.8.</i></p> <p><i>[5] Wang Zhuzhen, Chen Yaoming. Shanghai:Shanghai University Press,2005.11.</i></p> <p><i>[6] Wang Chaogang, Luo Le. Chongqing:Southwest Normal University Press,2021.1.</i></p> <p><i>[7] Bruce Industries, Langman, Xu Liang. Abstract composition and spatial form[M].Beijing:China Architecture Press,2020.11.</i></p>



Module designation	<i>Product Sketch</i>
Semester(s) in which the module is taught	<i>4th semester</i>
Person responsible for the module	<i>Shun Zeng</i>
Language	<i>Chinese</i>
Relation to curriculum	<p><i>Compulsory</i></p> <p><i>Starting from the basic knowledge of product sketching, the course explains the basic tools of rendering performance, the composition, proportion, perspective, structural expression of product sketching, the basic training of product design expression techniques, product color and material performance, the light and shadow foundation of basic modeling, the types and expression methods of product design renderings, the layout design of renderings, and the appreciation and analysis of works, so as to cultivate students to be able to accurately, quickly and completely express product design creative solutions on the basis of basic product sketching ability. Pave the way for advanced design ability cultivation for senior design related design courses and portfolios.</i></p>
Teaching methods	<i>Practice</i>
Workload (incl. contact hours, self-study hours)	<p><i>(Estimated) Total workload: 120 hours</i></p> <p><i>Contact hours (please specify whether lecture, exercise, laboratory session, etc.): 60 hours (Practice)</i></p> <p><i>Private study including examination preparation, specified in hours: 60 hours</i></p>
Credit points	<i>4.0 ECTS</i>
Required and recommended prerequisites for joining the module	
Module objectives/intended learning outcomes	<p>Knowledge:</p> <p><i>Understand the front-end of product design, and observe and think about the structure, shape, color, and material of existing market products.</i></p> <p>Skill:</p> <p><i>master the elements of product sketching, the tools of product sketching, the general process and method, and the hand-drawn expression methods of basic structure, shape, color, material, and perspective.</i></p> <p><i>be proficient in the basic shorthand monetization methods of products, and on this basis, express design ideas accurately, quickly and completely.</i></p>



	<p><i>Strengthen students' sense and ability of teamwork, determine their position and subjective initiative in the team, be able to carry out the practice of practical design projects in a teamwork manner, and have a reasonable division of labor and effective management.</i></p> <p>Competences:</p> <p><i>Cultivate students' awareness and communication skills in product sketching, product sketching, product creative design sketching, etc., with a global cultural vision, global economic integration, competition and cooperation awareness.</i></p>
Content	<p>Chapter 1 Overview 1</p> <p>1.1 Understanding Renderings 2</p> <p>1.1.1 Purpose of rendering 2</p> <p>1.1.2 Functions and types of renderings 3</p> <p>1.1.3 The importance of product design renderings 3</p> <p>1.2 Application of product renderings in different design stages 3</p> <p>1.2.1 Initial Ideation Stage 3</p> <p>1.2.2 Design Communication and Debriefing Presentation Phase 7</p> <p>1.2.3 Detail and styling perfection stage 8</p> <p>Chapter 2 Basic Tools for Renderings 11</p> <p>2.1 How to use the pen drawing tool 12</p> <p>2.1.1 Use of pencils 12</p> <p>2.1.2 Use of charcoal 13</p> <p>2.1.3 Use of fountain pens and needle pens 15</p> <p>2.1.4 Use of the highlighter 18</p> <p>2.1.5 Use of duckbill pen 18</p> <p>2.1.6 Use of dipping pens 19</p> <p>2.2 How to use the Paint Drawing tool 21</p> <p>2.2.1 Colored pencil 21</p> <p>2.2.2 Airbrush coloring 23</p> <p>2.2.3 Marker coloring 28</p> <p>2.2.4 Towel coloring 32</p> <p>2.2.5 Watercolor coloring 36</p> <p>2.2.6 Coloring of acrylic paints 38</p> <p>2.2.7 Gouache 39</p> <p>Chapter 3 Basic Training in Product Design Performance Techniques 43</p> <p>3.1 Perspective Spatial Composition 44</p> <p>3.1.1 A little perspective 44</p> <p>3.1.2 Two-point perspective 46</p> <p>3.1.3 Three-point perspective 47</p> <p>3.1.4 Application of basic perspective in product design 48</p> <p>3.2 Basic Physical Exercises 50</p>



	<p>3.2.1 Exercises for Straight Lines and Cubes 50</p> <p>3.2.2 Exercises for curves, circles, and ellipses 58</p> <p>3.2.3 Exercises for cylinders 63</p> <p>3.2.4 Exercises for spheres 67</p> <p>3.2.5 Exercise 68 for fillet corners</p> <p>Chapter 4 Product Color and Material Performance 75</p> <p>4.1 Expression of product color 76</p> <p>4.1.1 Explanation of color basics 76</p> <p>4.1.2 Color representation of backgrounds 78</p> <p>4.2 Expression of product materials 85</p> <p>4.2.1 Representation of wood 85</p> <p>4.2.2 Representation of transparent materials 87</p> <p>4.2.3 Representation of smooth and rough materials 91</p> <p>4.2.4 Representation of metal materials 95</p> <p>4.2.5 Expression of patterns and textures 97</p> <p>4.3 Expression of different colors of the product 100</p> <p>4.3.1 Performance of monochrome product color matching 100</p> <p>4.3.2 Performance of multi-color product color matching 102</p> <p>Chapter 5 The Basics of Light and Shadow in Basic Modeling 107</p> <p>5.1 Fundamentals of projection 109</p> <p>5.1.1 Light sources 109</p> <p>5.1.2 Projection methods 110</p> <p>5.2 Projection modeling 112</p> <p>5.2.1 Cube 113</p> <p>5.2.2 Cylinders and spheres 115</p> <p>Chapter 6 Types and Representation Methods of Product Design Renderings 121</p> <p>6.1 Exploding diagram 122</p> <p>6.2 Cross-sectional view 124</p> <p>6.3 Transflective view 126</p> <p>6.4 Flowchart 128</p> <p>6.5 Usage Scenario Figure 130</p> <p>6.5.1 Scene Drawing 130</p> <p>6.5.2 Hand drawing 132</p> <p>6.5.3 Human body drawing ?134</p> <p>Chapter 7 Renderings Layout Design 139</p> <p>7.1 Basic Modules for Renderings 140</p> <p>7.2 Layout of renderings 142</p> <p>7.2.1 Size selection of products in renderings 142</p> <p>7.2.2 Selection of the angle of view of the product in the rendering 143</p> <p>7.3 Composition of renderings 145</p> <p>Chapter 8 Appreciation and Analysis of Excellent Works 149</p> <p>8.1 Appreciation of the effect of quick questions 150</p>
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	<p>8.2 Appreciation of renderings in the creative stage 154</p> <p>8.3 Appreciation of classic renderings 157</p>
Examination forms	<p>Attendance (40%)</p> <p>Final assessment (60%)</p>
Study and examination requirements	<p>Only students with class attendance rate over 2/3, assignment the completion rate over 2/3 and performing required experiments are allowed to take the exam.</p> <p>Achieve a score of 60 points or above.</p>
Reading list	<p>1.Required books</p> <p>Zhehao Zhang, Haiming Wang, Hand-drawn Expression Techniques for Product Design Renderings (Second Edition), Tsinghua University Press, 2023</p> <p>2.Reference books</p> <p>1. Li Yuansheng, Industrial Product Design Hand-Painted Example Tutorial 3rd Edition, People's Posts and Telecommunications Press, 2022</p> <p>2. Huang Yi, Indoor Hand-Painted Renderings, Peking University Press, 2022.9 3.</p> <p>3. Du Jian, Lv Lupu, Excellent Hand-Painted 30-Day Indoor Hand-Painted Rapid Performance (2nd Edition), Huazhong University of Science and Technology Press, 2021.9</p>



Module designation	<i>Course Design</i>
Semester(s) in which the module is taught	<i>4th semester</i>
Person responsible for the module	<i>Zhongming Ren</i>
Language	<i>Chinese</i>
Relation to curriculum	<p><i>Compulsory</i></p> <p><i>This course is a course that focuses on practical links, and it is also a preliminary exploration of the design course that systematically integrates the basic knowledge and skills of design, and systematically and comprehensively applies all the basic knowledge and skills of all majors in the first and second years of college. The course design and selection topics highlight the characteristic positioning of the major. In terms of design professional ability and professional ethics, it plays a role in enabling students to adapt to the market demand of design talents and the role transformation from students to designers. While improving students' professional ability in design, it strengthens the guidance of the awareness of ethical norms in the designer industry and the implementation of the responsibilities of designers.</i></p>
Teaching methods	<i>Practice</i>
Workload (incl. contact hours, self-study hours)	<p><i>(Estimated) Total workload: 120 hours</i></p> <p><i>Contact hours (please specify whether lecture, exercise, laboratory session, etc.): 60 hours (Practice)</i></p> <p><i>Private study including examination preparation, specified in hours: 60 hours</i></p>
Credit points	<i>4.0 ECTS</i>
Required and recommended prerequisites for joining the module	
Module objectives/intended learning outcomes	<p>Knowledge:</p> <p><i>Cultivate students' awareness of green design, increase product life cycle, and positively convey the design concept of beauty and innovation goals.</i></p> <p>Skill:</p> <p><i>Train students in industrial product design from the design requirements;</i></p> <p><i>Adequate market research;</i></p> <p><i>Design positioning on the basis of feasibility innovation, project cycle, feasibility materials and processes, renderings, and finished production;</i></p> <p><i>Industrial product system design;</i></p>



	<p>Systematic industrial product design training such as cycle nodes, workflow and awareness.</p> <p>Competences:</p> <p>Strengthen students' teamwork spirit, communication skills, proposal skills, etc., which can draw inferences from each other's lifelong learning potential.</p>
Content	<p>Course Design Content 1: Project Comprehensive Design Topic Proposal and Research</p> <p>Course design content: According to the requirements of industrial product design topics, formulate the work content of the design cycle node and conduct research.</p> <p>Curriculum Design Content 2: Design Creativity and Hand-Drawn Expression</p> <p>Course design content: According to the mind map and user portrait of industrial product design positioning, design creativity and hand-drawn expression, as well as software basic expression, solve the ergonomics of the design scheme, clarify the innovation point, structure, shape and color, preliminarily formulate the process and materials, and estimate the cost and processing cycle.</p> <p>Course Design Content 3: Completion of the Design Plan</p> <p>Course design content: According to the preliminary design plan, use AutoCAD to complete the three views of the size, and Rhino and Keyshot complete the design scheme renderings, and make the finished draft.</p> <p>Course Design Content 4: Preparation of Design Proposal Materials and Presentation, Design Proposal Display</p> <p>Course design content: According to the whole design process, materials, photos and design drafts, fully prepare logical and passionate proposal materials for presentation.</p>
Examination forms	<p>Attendance (110%)</p> <p>Assignments(30%):Homework</p> <p>Final assessment (60%)</p>
Study and examination requirements	<p>Only students with class attendance rate over 2/3, assignment the completion rate over 2/3 and performing required experiments are allowed to take the exam.</p> <p>Achieve a score of 60 points or above.</p>
Reading list	<p>1. Required books</p> <p>Lin Yufeng, <i>Product System Design and Development</i>, China Light Industry Press, 2023</p> <p>2.Reference books</p> <p>Zhang Lei, <i>Green Design</i>, Tsinghua University Press, 2023</p> <p>Huang Guoliang, Duan Shengfeng, <i>Intelligent Product Design and Thinking</i>, Peking University Press, 2023</p>



Module designation	<i>Thematic Design and Roadshow Presentation</i> (The course description is not available in the school education system, because it is newly added and will be available by 2026 spring semester).
Semester(s) in which the module is taught	<i>7th semester</i>
Person responsible for the module	<i>N/A</i>
Language	<i>Chinese</i>
Relation to curriculum	<i>Compulsory</i>
Teaching methods	<i>Practice</i>
Workload (incl. contact hours, self-study hours)	<i>(Estimated) Total workload: 120</i> <i>Contact hours (please specify whether lecture, exercise, laboratory session, etc.): 60hours</i> <i>Private study including examination preparation, specified in hours: 60 hours</i>
Credit points	<i>4.0 ECTS</i>
Required and recommended prerequisites for joining the module	<i>N/A</i>
Module objectives/intended learning outcomes	<i>N/A</i>
Content	<i>N/A</i>
Examination forms	<i>N/A</i>
Study and examination requirements	<i>N/A</i>
Reading list	<i>N/A</i>



Module designation	<i>Cultural and Creative Internship</i>
Semester(s) in which the module is taught	<i>2nd semester</i>
Person responsible for the module	<i>Quan Gan</i>
Language	<i>Chinese</i>
Relation to curriculum	<p><i>Compulsory</i></p> <p><i>The Cultural and Creative Internship Course is an intensive practical teaching session. By leading students to conduct field trips and study in typical cities with mature development of China's cultural and creative industries, and visit relevant cultural and creative industry exhibitions, cultural and creative industry clusters, enterprises and universities, students can have a deep understanding of the development status of cultural and creative industries, understand the practical methods of cultural creativity and the production system and production process of cultural creativity, and understand the importance of culture and creativity in the current cultural construction and development.</i></p>
Teaching methods	<i>Practice</i>
Workload (incl. contact hours, self-study hours)	<p><i>(Estimated) Total workload: 180 hours</i></p> <p><i>Contact hours (please specify whether lecture, exercise, laboratory session, etc.): 60 hours (Practice)</i></p> <p><i>Private study including examination preparation, specified in hours: 120 hours</i></p>
Credit points	<i>6.0 ECTS</i>
Required and recommended prerequisites for joining the module	
Module objectives/intended learning outcomes	<p>Knowledge:</p> <p><i>To cultivate students' awareness of thinking and solving problems from an overall perspective.</i></p> <p><i>To cultivate students to have certain cultural and creative knowledge and do a good job in case accumulation.</i></p> <p>Skill:</p> <p><i>To cultivate students' practical ability of cultural creativity, and further motivate students to actively participate in the development of China's cultural and creative industries, and contribute their talents to the development of China's cultural and creative undertakings.</i></p> <p>Competences:</p> <p><i>Enhance the cultural self-confidence of China's cultural and creative industries, motivate students to innovate and design ability, and strengthen the sense of responsibility for creative design.</i></p>



Content	<p>Internship Program 1: Cultural and Creative Heritage and Cultural and Creative Industry Cluster Park Investigation (Contact-hours:40 hours, Self-study hours: 40 hours)</p> <p>1. Concentrate on the theoretical knowledge of the development of cultural and creative industries, explain the internship purpose, internship content, internship requirements, internship itinerary and precautions of this course.</p> <p>2. Cultural and creative industries/enterprises, innovative design, and expo research methods.</p> <p>3. Cultural and creative design principles, design methods, production realization, operation promotion, publicity and promotion, project management and other content of understanding and learning.</p> <p>4. Explain the current situation of China's excellent culture and creative design.</p> <p>Internship Program 2: Internship research on cultural and creative topics and analyse (Contact-hours:10 hours, Self-study hours: 10 hours)</p> <p>Combined with the expertise of this design major, the internship content was organized, classified, analyzed and summarized by observation method, interview method, data collection, statistical analysis method, comparative method and other research and analysis methods.</p> <p>Internship Program 3: Presentations & Exhibitions (Contact-hours:10 hours, Self-study hours: 10 hours)</p> <p>Complete the writing of the internship report as required, so that it is clearly organized and illustrated. In addition, self-evaluation, mutual evaluation, and teacher evaluation are used to complete internship reports and exhibitions.</p>
Examination forms	<p><i>In-class performance (30%): Class participation, discussion ;</i></p> <p><i>Final assessment (50%): Project</i></p>
Study and examination requirements	<p><i>Only students with class attendance rate over 2/3, assignment the completion rate over 2/3 and performing required experiments are allowed to take the exam.</i></p> <p><i>Achieve a score of 60 points or above.</i></p>
Reading list	<p>1.Required books</p> <p>ZHOU Rui,FEI Lingfeng,GAO Senmeng. Beijing:Chemical Industry Press,2023</p> <p>2.Reference books</p> <p>[1] White Lotus. Beijing:Tsinghua University Press,2023</p> <p>[2] LI Cui,ZHANG Na,WANG Dongdong. Beijing:China Light Industry Press,2021</p>



Module designation	<i>Folk Art Collection</i>
Semester(s) in which the module is taught	<i>6th semester</i>
Person responsible for the module	<i>Mingjie Zhu</i>
Language	<i>Chinese</i>
Relation to curriculum	<i>Compulsory</i> <i>This course is an internship course for Industrial Design major, with the purpose of cultivating students' comprehensive practice and research ability, and the course improves students' cognitive outlook through internship.</i>
Teaching methods	<i>Practice</i>
Workload (incl. contact hours, self-study hours)	<i>(Estimated) Total workload: 270 hours</i> <i>Contact hours (please specify whether lecture, exercise, laboratory session, etc.): 90 hours</i> <i>Private study including examination preparation, specified in hours: 180 hours</i>
Credit points	<i>9.0</i>
Required and recommended prerequisites for joining the module	<i>Introduction to Industrial Design</i>
Module objectives/intended learning outcomes	<p>Knowledge:</p> <p><i>To learn the knowledge of design needs from the details of life;</i></p> <p>Skill:</p> <p><i>The ability to discover design needs from the details of life;</i></p> <p><i>The ability to discover and collect materials with a professional eye;</i></p> <p><i>The ability of students to transform materials into design elements as needed;</i></p> <p><i>The ability to conceive, hand-draw and design the content of the design plan collaboratively, and the ability to complete and present the design plan collaboratively.</i></p> <p>Competences:</p> <p><i>Students will develop their moral, intellectual, physical, aesthetic, and labor skills in an all-round way, and learn to take the core values of socialism as the guide, coordinate the development of curriculum theory, comprehensive ability and quality, and finally cultivate students with a cognitive outlook that conforms to the core values of socialism.</i></p>
Content	<i>Internship Project 1: Investigation of ethnic and folk culture in the video</i>



	<p><i>Carefully observe the ethnic and folk cultures in the video materials, search for and record design elements, and learn from the design wisdom in folk cultures.</i></p> <p>Internship Project 2: Conduct a survey of the characteristic natural environment of Shanghai's local ancient town</p> <p><i>Find materials or inspiration in the objective nature shown in the wind collection, and cultivate the habit of real-time recording</i></p> <p>Internship Project 3: Organize materials and produce report materials</p> <p><i>Classify and organize the content of video materials, and make report materials according to the requirements.</i></p> <p>Internship Project 4: Professional Creation Report</p> <p><i>Internship content: Students will create professionally according to their internship experience and harvest.</i></p>
Examination forms	<p><i>Attendance (10%): Class participation, discussion ;</i></p> <p><i>Assignments(30%):Homework ;</i></p> <p><i>Final assessment (60%): project</i></p>
Study and examination requirements	<p><i>Only students with class attendance rate over 2/3, assignment the completion rate over 2/3 and performing required experiments are allowed to take the exam.</i></p> <p><i>Abide by school discipline and respect local customs and habits.</i></p>
Reading list	<p>1.Required books</p> <p><i>JIANG Yuemin. Art and Design Major Collection and Investigation (Second Edition), Huazhong University of Science and Technology Press, 2022</i></p> <p>2.Reference books</p> <p><i>1. Yang Yang, Bai Wei. Product Design Research and Planning. Tsinghua University Press.2020.</i></p> <p><i>2.Mao Bin. Design Procedures and Methods. Water Resources and Hydropower Press.2020.3.</i></p> <p><i>3. Kevin Henry. Product Design Hand Drawing: Perception, Conception and Presentation. People's Posts and Telecommunications Press, 2013.</i></p>



Module designation	<i>Commercial Kitchen Understanding Internship</i>
Semester(s) in which the module is taught	<i>2nd semester</i>
Person responsible for the module	<i>Yi Zhuang</i>
Language	<i>Chinese</i>
Relation to curriculum	<p><i>Compulsory</i></p> <p><i>The course is a professional internship course in industrial design (smart kitchen system engineering design). Mainly through the field investigation and study of different types of commercial kitchen enterprises and actual operation sites. To better meet the needs of the market and the development of the times, it is the part that students should prepare for in-depth thinking through the internship of business chefs. Through the internship of business chefs, students should be able to recognize the key and difficult points of the knowledge system involved in the professional direction, and focus on them in the follow-up study, form systematic thinking habits and design thinking, and cultivate the ideas and abilities of combining art and engineering, and combining technology and technology to design.</i></p>
Teaching methods	<i>Practice</i>
Workload (incl. contact hours, self-study hours)	<p><i>(Estimated) Total workload: 180 hours</i></p> <p><i>Contact hours (please specify whether lecture, exercise, laboratory session, etc.): 60 hours (Practice)</i></p> <p><i>Private study including examination preparation, specified in hours: 120 hours</i></p>
Credit points	<i>6.0 ECTS</i>
Required and recommended prerequisites for joining the module	
Module objectives/intended learning outcomes	<p>Knowledge:</p> <p><i>To train students to have a comprehensive understanding of the important position of smart commercial kitchen system engineering design in economic and market development.</i></p> <p><i>Cultivate students' understanding of the key and difficult links of this design direction in design practice.</i></p> <p>Skill:</p> <p><i>Cultivate students' ability to think about and solve problems from a global perspective;</i></p> <p><i>Cultivate students' ability to quickly recognize and adjust the development trend of commercial kitchens;</i></p> <p><i>Cultivate students' ability to think about the development direction of disciplines and plan the direction of career development.</i></p>



	<p>Competences:</p> <p><i>With the comprehensive quality under the education goal system in the new era, through internship and investigation, strengthen personal ideals and beliefs, cultivate patriotism, increase knowledge and insight, cultivate the spirit of independent struggle, and enhance comprehensive quality. Enhance the comprehensive and coordinated development of personal knowledge, ability and quality.</i></p>
Content	<p>Internship Project 1</p> <p><i>Explain the purpose of the professional internship course, the content of the internship, the internship requirements, the internship itinerary and precautions.</i></p> <p>Internship Project 2</p> <p><i>Commercial kitchen centralized site visit, operation practice and in-depth learning.</i></p> <p>Internship Project 3</p> <p><i>visits, practice and in-depth learning of commercial kitchen equipment and facilities.</i></p> <p>Internship Project 4</p> <p><i>Visit, practice and study of the overall scene environment of smart commercial kitchens in professional related enterprises such as cruise space, star-rated restaurants and high-end hotel catering environments.</i></p> <p>Internship Project 5</p> <p><i>Summary of internship in commercial kitchen.</i></p>
Examination forms	<p><i>Final report</i></p> <ol style="list-style-type: none"> <i>1. The school's printing center has a unified cover, and the number of words in the internship report is not less than 2,000 words, with pictures and texts.</i> <i>2. Introduction to the time and place of course internship.</i> <i>3. The content of the homework, the requirements of the instructor and the guidance and evaluation of the homework.</i> <i>4. Students' understanding and harvest of the course through the internship, and the professional experience in the internship process will be introduced through case studies.</i> <i>5. Summarize the difficulties and suggestions encountered in the learning process of students' internship courses.</i>
Study and examination requirements	<p><i>Only students with class attendance rate over 2/3, assignment the completion rate over 2/3 and performing required experiments are allowed to take the exam.</i></p> <p><i>Achieve a score of 60 points or above.</i></p>
Reading list	N/A



Module designation	<i>Commercial Kitchen Design Internship</i>
Semester(s) in which the module is taught	<i>6th semester</i>
Person responsible for the module	<i>Shun Zeng</i>
Language	<i>Chinese</i>
Relation to curriculum	<p><i>Compulsory</i></p> <p><i>The commercial kitchen design internship is mainly through participating in the design project practice in the enterprise, under the leadership of the enterprise team instructor, participating in the actual design project of the enterprise, and getting in touch with the relevant matters that need to be paid attention to in the space planning, engineering design, equipment layout and facility selection of smart commercial kitchen design, combined with the intelligence and data in the Internet era, and using the intelligent interactive system to realize the function setting of the smart kitchen.</i></p>
Teaching methods	<i>Practice</i>
Workload (incl. contact hours, self-study hours)	<p><i>(Estimated) Total workload: 270 hours</i></p> <p><i>Contact hours (please specify whether lecture, exercise, laboratory session, etc.): 90 hours</i></p> <p><i>Private study including examination preparation, specified in hours: 180 hours</i></p>
Credit points	<i>9.0</i>
Required and recommended prerequisites for joining the module	
Module objectives/intended learning outcomes	<p>Knowledge:</p> <p><i>Cultivate students' macro ideas of systematically designing smart business kitchens, and combine them with the lifestyle of the Chinese people.</i></p> <p><i>Cultivate the key and difficult links of students' design practice in Chinese-style commercial smart kitchens.</i></p> <p>Skill:</p> <p><i>Cultivate students' concept of human-computer interaction and cultural expression for the Chinese lifestyle.</i></p> <p><i>Cultivate students' ability to work in social enterprises and institutions and the comprehensive quality of interpersonal communication.</i></p> <p>Competences:</p> <p><i>With the comprehensive literacy under the education goal system in the new era, through the comprehensive cognition of the design of commercial kitchen enterprises, strengthen personal ideals and beliefs,</i></p>



	<p>cultivate patriotism, increase knowledge and insight, cultivate the spirit of independent struggle, and enhance comprehensive quality. Enhance the comprehensive and coordinated development of personal knowledge, ability and quality.</p>
Content	<p>Internship Project 1: Concentrate on teaching professional theoretical knowledge and explain the internship objectives and arrangements of this course.</p> <p>Explain the purpose of the professional internship course, the content of the internship, the internship requirements, the internship itinerary and precautions</p> <p>Internship Project 2: Participation in the operation practice of commercial kitchen enterprises.</p> <p>Be able to distinguish the differences between various commercial kitchens, and plan the layout, space and equipment in the back kitchen use environment and the front office dining environment.</p> <p>Internship Project 3: Participation in the operation practice of commercial kitchen enterprises.</p> <p>Operate the kitchen equipment of the internship company, and master the matters that should be paid attention to in its product design and kitchen system engineering design.</p> <p>Internship Project 4: Participation in the operation practice of commercial kitchen enterprises.</p> <p>Operate the kitchen equipment of the internship company, and master the matters that should be paid attention to in its product design and kitchen system engineering design.</p> <p>Internship Project 5: Participation in the operation practice of commercial kitchen enterprises.</p> <p>Operate the kitchen equipment of the internship company, and master the matters that should be paid attention to in its product design and kitchen system engineering design.</p> <p>Internship Project 6: Participation in the operation practice of commercial kitchen enterprises.</p> <p>Cruise space, star-rated restaurants and high-end hotel catering environment and other professional related enterprises, a comprehensive understanding of the practical application of smart commercial kitchen system engineering design in practice, and the integration of needs and design.</p> <p>Internship Project 7: Participation in the operation practice of commercial kitchen enterprises.</p> <p>Cruise space, star-rated restaurants and high-end hotel catering environment and other professional related enterprises, a comprehensive understanding of the practical application of smart commercial kitchen system engineering design in practice, and the integration of needs and design.</p> <p>Internship Project 8: Summary of Professional Internship.</p> <p>Combine professional learning and internship practice experience, summarize the visit and learning experience of smart kitchen operation space, front hall dining space, equipment production enterprises, etc., and think about the direction of specialization and career planning that you will focus on in the future.</p>



Examination forms	<p><i>Final report</i></p> <ol style="list-style-type: none"> <i>1. The school's printing center has a unified cover, and the number of words in the internship report is not less than 2,000 words, with pictures and texts.</i> <i>2. Introduction to the time and place of course internship.</i> <i>3. The content of the homework, the requirements of the instructor and the guidance and evaluation of the homework.</i> <i>4. Students' understanding and harvest of the course through the internship, and the professional experience in the internship process will be introduced through case studies.</i> <i>5. Summarize the difficulties and suggestions encountered in the learning process of students' internship courses.</i>
Study and examination requirements	<p><i>Only students with class attendance rate over 2/3, assignment the completion rate over 2/3 and performing required experiments are allowed to take the exam.</i></p> <p><i>Achieve a score of 60 points or above.</i></p>
Reading list	N/A



Module designation	<i>Home Furnishing Cognition Internship</i>
Semester(s) in which the module is taught	<i>2nd semester</i>
Person responsible for the module	<i>Mingjie Zhu</i>
Language	<i>Chinese</i>
Relation to curriculum	<p><i>Compulsory</i></p> <p><i>The course is to visit the physical cases and design sites of smart home under the guidance of the instructor of the school-enterprise team, understand the application scenarios and core technologies of smart home design, combine the intelligence and data in the Internet era, and use the intelligent interactive system to realize the innovative design of smart home. Through the home design internship, students should be able to clarify the horizontal breadth and vertical depth of the knowledge system of the professional direction, establish a self-supervision, gradually overcome the learning attitude and ideas, develop a macro thinking perspective and systematic design thinking, and establish the concept of design innovation for the Chinese people to build a future smart home.</i></p>
Teaching methods	<i>Practice</i>
Workload (incl. contact hours, self-study hours)	<p><i>(Estimated) Total workload: 180 hours</i></p> <p><i>Contact hours (please specify whether lecture, exercise, laboratory session, etc.): 60 hours (Practice)</i></p> <p><i>Private study including examination preparation, specified in hours: 120 hours</i></p>
Credit points	<i>6.0 ECTS</i>
Required and recommended prerequisites for joining the module	
Module objectives/intended learning outcomes	<p>Knowledge:</p> <p><i>To understand the development status and future trends of smart home, application scenarios and core technologies.</i></p> <p>Skill:</p> <p><i>Be able to operate a simple smart home module, and use the Internet of Things to build a small intelligent system.</i></p> <p>Competences:</p> <p><i>To establish pride and self-confidence in China's Internet of Things, and to cultivate designers with a future vision and a global view</i></p>
Content	<p>Internship Project 1: Teach the basic background, internship objectives and arrangements of this course.</p> <p><i>Explain the purpose of the professional internship course, the content of the internship, the internship requirements, the internship itinerary and precautions</i></p>



	<p>Internship Project 2 Home Furnishing Case Study Workshop <i>e able to operate a simple smart home module, and use the Internet of Things to build a small intelligent system.</i></p> <p>Internship Project 3 Visit IKEA – Smart Design in IKEA <i>Visit the IKEA experience store to learn about the product design and user experience related to smart home.</i></p> <p>Internship Project 4 UIOT Super Smart Home Offline Experience Store <i>Visit, practice and study of the overall scene environment of smart commercial kitchens in professional related enterprises such as cruise space, star-rated restaurants and high-end hotel catering environments.</i></p> <p>Internship Project 5 Apple Homekit Apple Smart Home Platform <i>Summary of internship in commercial kitchen.</i></p> <p>Internship Project 6: Mijia Whole House Smart Offline Experience <i>Visit Mijia Whole House Intelligence</i></p> <p>Internship project 7: People's decoration "Zhilian Huijia" home life service platform <i>Visit the home furnishing experience hall of the people's decoration company to understand the "Zhilian Huijia" home life service platform and design process</i></p> <p>Internship Project 8: Review and Summary of Smart Home Awareness Internship <i>Summarize the visit cases and group discussions, summarize the main software and hardware, functional modules, design points and user market demand of smart home design, and put forward prospects for future learning.</i></p>
Examination forms	<p><i>Final report</i></p> <ol style="list-style-type: none"> <i>1. The school's printing center has a unified cover, and the number of words in the internship report is not less than 2,000 words, with pictures and texts.</i> <i>2. Introduction to the time and place of course internship.</i> <i>3. The content of the homework, the requirements of the instructor and the guidance and evaluation of the homework.</i> <i>4. Students' understanding and harvest of the course through the internship, and the professional experience in the internship process will be introduced through case studies.</i> <i>5. Summarize the difficulties and suggestions encountered in the learning process of students' internship courses.</i>
Study and examination requirements	<p><i>Only students with class attendance rate over 2/3, assignment the completion rate over 2/3 and performing required experiments are allowed to take the exam.</i></p> <p><i>Achieve a score of 60 points or above.</i></p>
Reading list	N/A



Module designation	<i>Home Furnishing Design Internship</i>
Semester(s) in which the module is taught	<i>6th semester</i>
Person responsible for the module	<i>Hui Kang</i>
Language	<i>Chinese</i>
Relation to curriculum	<p><i>Compulsory</i></p> <p><i>The course is a concentrated practical teaching session. By leading students to visit and study enterprises with mature development of China's home design industry, and visit related industry exhibitions, industrial clusters, enterprises and universities, students can have a deep understanding of the development status of the home design industry, understand the home design, production system and production process, and understand the importance between home design and processing.</i></p>
Teaching methods	<i>Practice</i>
Workload (incl. contact hours, self-study hours)	<p><i>(Estimated) Total workload: 270 hours</i></p> <p><i>Contact hours (please specify whether lecture, exercise, laboratory session, etc.): 90 hours</i></p> <p><i>Private study including examination preparation, specified in hours: 180 hours</i></p>
Credit points	<i>9.0</i>
Required and recommended prerequisites for joining the module	
Module objectives/intended learning outcomes	<p>Knowledge:</p> <p><i>Enhance students' understanding of the home design industry, and enhance their insight into the home design industry and social development trends.</i></p> <p>Skill:</p> <p><i>Cultivate students' awareness of thinking and solving problems from the perspective of the overall situation.</i></p> <p><i>To equip students with a practical ability in home design</i></p> <p>Competences:</p> <p><i>Students will enhance their understanding of the home design market and brands at home and abroad, and further motivate students to actively participate in the development of the home design industry.</i></p>
Content	<p>Internship Program 1:Home designCreative industry clusters and enterprise inspections</p> <p><i>1. Concentrate on the theoretical knowledge of the development of home design creative industry, explain the internship purpose,</i></p>



	<p>internship content, internship requirements, internship itinerary and precautions of this course.</p> <p>2. Home design creative industry/enterprise, innovative design, expo research methods.</p> <p>3. Understanding and learning of creative design principles, design methods, production realization, operation promotion, publicity and promotion, project management and other contents of home design.</p> <p>4. Explain the current situation of creative design of home design.</p> <p>Internship Program 2: Research and analysis of cultural and creative internships</p> <p>Combined with the expertise of this design major, the internship content was organized, classified, analyzed and summarized by observation method, interview method, data collection, statistical analysis method, comparative method and other research and analysis methods.</p> <p>Internship Program 3: Presentations & Exhibitions</p> <p>Complete the writing of the internship report as required, so that it is clearly organized and illustrated. In addition, self-evaluation, mutual evaluation, and teacher evaluation are used to complete internship reports and exhibitions.</p>
Examination forms	<p><i>Final report</i></p> <p>1. The school's printing center has a unified cover, and the number of words in the internship report is not less than 2,000 words, with pictures and texts.</p> <p>2. Introduction to the time and place of course internship.</p> <p>3. The content of the homework, the requirements of the instructor and the guidance and evaluation of the homework.</p> <p>4. Students' understanding and harvest of the course through the internship, and the professional experience in the internship process will be introduced through case studies.</p> <p>5. Summarize the difficulties and suggestions encountered in the learning process of students' internship courses.</p>
Study and examination requirements	<p>Only students with class attendance rate over 2/3, assignment the completion rate over 2/3 and performing required experiments are allowed to take the exam.</p>
Reading list	<p>1. Required books</p> <p>Liang Jun, Home Design Training (Loose-leaf Textbook) New Form Textbook of Art Design for General Higher Education, China Water Resources and Hydropower Press, 2022.1</p> <p>2. Reference books</p> <p>1. Hong Wei, Contemplation: The Philosophy of Dwelling, Shanghai Translation Publishing House, 2025.1</p> <p>2. Yan Jinnan, Zhu Xiaobin, You Ne, The Complete Book of Smart Home Design, Jiangsu Phoenix Science and Technology Press, 2022.10</p> <p>3. X-Knowledge, Japan Co., Ltd., The Complete Book of Home Design Layout and Size, Chemical Industry Press, 2024.10</p>