Table 2-1 Matrix of objectives of Electronic Information Engineering

Program Objective	Expected achievements in knowledge, skill and competency	Module/Corresponding objective	Expected outcomes of graduate training in knowledge, skill and competency（see also in 2.2.1）
To establish virtue through education: to understand China's current social model, be able to abide by social norms, professional ethics and ethical norms in engineering practice, consider public interests, have a willingness and behavior to actively serve the country and society.	**Knowledge:** to master the knowledge of modern Chinese history, basic principles of Marxism, patriotism, humanistic spirit, physical education and military training. **Skill:** to comply with social norms, professional ethics and ethical norms in engineering practice and consideration of public interests. **Ability:** to form a sound personality and good psychological quality, have a correct outlook on life, value, morality and law, have humanistic quality and social responsibility.	**General education:** Ideological and moral cultivation and legal basis Outline of modern Chinese history Basic principles of Marxism An overview of MAO Zedong Thought and the theoretical system of socialism with Chinese characteristics An Overview of Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era Situation and Policy(1) - (8) Mental health of college students Military theory for college students	7) Ability of environmental and sustainable development; 8) Professional norms

		Centralized practice Matriculation education and military training	
Mathematics and physics basics: to master mathematics and physics and other natural sciences to lay a solid foundation for subsequent courses and apply the knowledge to solve complex engineering problems.	**Knowledge:** to master knowledge related to mathematics and physics. **Skill:** to use mathematical knowledge to understand and appropriately express practical engineering problems, and to establish basic models to solve various practical problems in technology and engineering applications. **Ability:** to observe, analyze and solve technical problems from the perspective and thinking mode of mathematics and natural science. According to the characteristics of mathematics and natural science, continuous analysis, synthesis, calculation, judgment and reasoning of engineering phenomena can be carried out to solve engineering problems.	**Mathematics and physics:** Advanced mathematics A (1)-(2) Linear algebra Probability theory and mathematical statistics Discrete mathematics Function of complex variables College physics B (1)- (2) College physics experiment	1) Knowledge of engineering; 2) Ability of problem analysis;
Professional competence: to master a wide range of basic engineering	**Knowledge:** to master the basic engineering and professional knowledge in electronic engineering, computer	**General education:** College student computer basics **Engineering basics:**	4) Ability of research; 5) Ability of using modern tools;

and professional knowledge to lay a solid foundation for the study of professional courses in the future.	technology, information technology and other fields. **Skill:** to have relevant basic engineering and professional knowledge, analyze various engineering phenomena in electronic information engineering, master general engineering knowledge, methods and skills to solve practical problems in engineering applications. **Ability:** to master the relevant concepts and basic principles of electronics, computer and information, and have the basic knowledge of engineering. According to the characteristics of electronic information engineering, through continuous analysis, induction, judgment and reasoning of engineering phenomena, engineering problems can be understood.	C language programming Circuit analysis Analog electronic technology Digital electronics Signals and Systems Data structure Communication Fundamentals Electromagnetic field and electromagnetic wave **Centralized practice:** Electronics technology internship and electronic product assembly and debugging internship Digital unit circuit simulation and development comprehensive practical training Simulation of unit circuit simulation and development comprehensive practical training internship Metalworking practice A Electrical and electronic training A	
Professional application: to master professional	**Knowledge:** to master the professional knowledge of electronic information, especially	**Engineering application:** C++ Programming Language PCB design and drawing	3) Ability of design/development solution;

knowledge to solve complex engineering problems in the field of electronic information, have skills to investigate, design, analyze and propose solutions for complex engineering problems in relevant fields, be competent in the research and development, production, sales and management of electronic information system products, and have certain innovation awareness and innovation ability.	the professional knowledge involved in the design of electronic information integration system and the comparison of integration system design scheme. **Skill:** to use relevant professional knowledge to model and propose solutions for complex problems in electronic information engineering, can design electronic information systems that meet specific requirements, and simulate and test the design and analyze its results. **Ability:** to master the design, diagnosis, optimization and operation of electronic information system, be competent in the research and development, production, sales and management of electronic information system products, and have a certain sense of innovation and innovation ability.	Modern sensor and detection technology High frequency electronic circuits Digital signal processing Principle and application of microcontroller **Autonomous development (optional):** Option 1: STM32 electronic system design and engineering application Option 2: principles and applications of FPGA Option 3: principles and applications of embedded systems **Centralized practice and graduation thesis/design:** Integrated practical training of microcontroller system Electronic system engineering practice Embedded system comprehensive training internship Graduation field work Graduation comprehensive training (thesis/design)	6) Ability of engineering and social practice;

Comprehensive quality and competency: to master comprehensive knowledge conducive to career development, have the skills of international cooperation and communication adapted to social development and cross-cultural integration, and develop comprehensively in morality, intelligence, physique, aesthetics and labor.	**Knowledge:** to master a foreign language and pass CET-4(College English Test 4), master comprehensive knowledge in morality, intelligence, physique, aesthetics and labor for career development. **Skill:** to read professional literature in English, possess comprehensive quality of electronic information, and have skills of literature search and paper writing. **Ability:** to have cross-disciplinary communication and cross-cultural exchange skills.	**General education:** Literature search and paper writing College Physical Education and Health (1) - (4) **Foreign languages:** College English (1) - (2) College English Extension Series (1) - (2) **Autonomous development:** Humanities and social sciences Art and physical education Others (1) - (2) (Cultural quality education, aesthetic education, cross-disciplinary independent development courses) **Centralized practice:** Laboring for public benefit Social practice and volunteer service	9) Ability of individual and team cooperation; 10) Skill of communication; 11) Ability of project management;
Lifelong learning: to track the development trend of related fields in electronic information, master the cutting-edge	**Knowledge:** to master cutting-edge professional knowledge and development trends in the field of electronic information. **Skill:** to have skills for independent development, innovation and entrepreneurship	**General education:** Career development and employment guidance for college students (1)-(2) Innovation and entrepreneurship foundation **Engineering application:**	12) Ability of lifelong learning

knowledge and skills in this field, have the awareness of independent learning and lifelong learning, and further self-development through job experience.	and employment. **Ability:** to improve self-development through job experience.	Introduction to electronic information engineering **Autonomous development:** Robot development Innovation and entrepreneurship **Centralized practice:** Graduating education	