

## **I. Duration of Study**

3 Years

## **II. Medium of Instruction**

Chinese (HSK Level 4)

## **III. Cultivation Objective**

This major is oriented to vocational ability and job requirements, aims to cultivate students' "Chinese language proficiency+job competence+vocational literacy", scientifically positioned to create the professional characteristics of "internationalisation, skillfulness and vocationalisation", and masters the basic knowledge of electronic information technology, with the ability of manufacturing embedded products, software and hardware auxiliary design, and the ability to engage in the production of intelligent embedded products, product adjustment and design. With the ability of embedded product manufacturing, software and hardware auxiliary design, high-quality technical and skilled personnel engaged in the production of intelligent embedded products, product testing, technical support, software and hardware auxiliary design and other front-line work, and at the same time, understand the traditional Chinese culture and humanities and history.

## **IV. Employment**

Main positions:

Electronic Equipment Assembly and Debugging

Electronic Equipment Inspection

Electronic Product Design and Development

Secondary positions:

Electronic Product Maintenance

Electronic Equipment Production Management

Electronic Information System Integration

## **V. Co-operative Enterprise**

SK Hynix Semiconductor (Wuxi) Co.,Ltd

Wuxi Xinje Electric Co.,Ltd.

China Resources Microelectronics Ltd

Aerospace New Sky Technology Co.,Ltd

Wuxi Tongzhou Electronic Industry Co., Ltd

Wuxi KEH Electronics Co.,Ltd

Wuxi Electronic Instrument Industry Co.,Ltd

Wuxi Tongbu Electronics Co., Ltd

Wuxi Jingzhe Technology Co., Ltd

**VI. Main courses**

| <b>Serial number</b> | <b>Course Name</b>   | <b>Main Content<br/>(Limit to 80 characters)</b>   | <b>Hours and Credits</b>    | <b>Course Type</b> | <b>Term</b> |
|----------------------|----------------------|--|-----------------------------|--------------------|-------------|
| 1                    | Circuit Fundamentals | This course mainly teaches DC resistance circuits and single-phase AC circuits, three-phase AC circuits and analysis, application of common circuit theorems, transition processes in first-order circuits, analysis of non-sinusoidal periodic circuits, and the basics of magnetic circuits and core coil circuits.                                      | 64 class hours<br>4 credits | Compulsory         | 2           |
| 2                    | C Programming        | This course mainly teaches the basic concepts and methods of data structures, program structures, arrays, functions, pointers, structures and shared bodies, and file operations of the C language.  | 64 class hours<br>4 credits | Compulsory         | 2           |
| 3                    | Analogue Electronics | This course mainly teaches the performance and identification of various semiconductor devices, characterisation of basic unit circuits and typical circuits, and applications of integrated circuits. The aim is to provide students with the initial ability to consult electronic component manuals and to read and analyse simple electronic circuits. | 80 class hours<br>5 credits | Compulsory         | 3           |

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|---|--|---|-----------------------------|------------|---|
| 4 | Automatic Detection and Sensing Technology | This course mainly teaches the automatic detection, conversion and processing technology of physical quantities such as temperature, pressure, flow, displacement, speed and other physical quantities commonly used in industrial control, as well as sensor analogy, selection and practical application. Introduction to integrated, digital and test intelligent sensors.             | 48 class hours<br>3 credits | Compulsory | 3 |
| 5 | Digital Electronics                        | This course mainly teaches the basics of digital circuits, integrated logic gate circuits, combinational logic circuits, integrated flip-flops, timing logic circuits, pulse circuits, the principles and applications of A/D and D/A circuits, the use of small-scale and medium-scale commonly used integrated circuits as well as the design methods of simple digital logic circuits. | 64 class hours<br>4 credits | Compulsory | 4 |
| 6 | Microcontroller and interface technology   | This course mainly teaches the principle of microcontroller-based, system composition, system expansion and application technology in industrial control. Through the basic theory teaching and a lot of practical exercises, the students have the ability to design the hardware of microcontroller and use C language for programming and debugging.                                   | 64 class hours<br>4 credits | Compulsory | 4 |

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|---|---|--|--------------------------------|------------|---|
| 7 | STM32<br>Microcontroller<br>Applications  | This course mainly teaches STM32 series embedded microcontroller, systematically introduces SRAM, FLASH and E2PROM memory, interrupt system, GPIO, timer/counter, A/D and D/A, USART, SPI and TWI and other on-chip functional modules of the structure, principles and methods of use, and finally combined with the example of its application system design, development and debugging. Finally, the design, development and debugging of the application system are also introduced with examples. | 64 class<br>hours<br>4 credits | Compulsory | 5 |
| 8 | RFID<br>Technology<br>and<br>Applications | This course mainly teaches RFID (radio frequency identification) technology and applications, the main contents of the course are: the working principle of radio frequency identification technology, frequency standards and technical specifications, read-write and electronic tags, radio frequency identification application system, radio frequency identification security and privacy protection.  | 48 class<br>hours<br>3 credits | Compulsory | 5 |