Description of Core Courses

Name: **MA NING** Gender: **Male** Length of study: **4 Years**
University: **Tianjin Polytechnic University** Major: **Electronic and Information Engineering**

1、Course Name: Graduation Thesis

Title: Based on the BP neural network realization the handwritten digits identification

Academic content: Number Identification is an important research field of pattern recognition, and the handwriting recognition has broad application prospects. This paper based on the BP neural network realization the handwritten digits identification. First script for digital image preprocessing, including the treatment, gray binary processing, filtering de-noising, character segment and refining processing, extraction single number after the features of the structure of form feature vector, the last three layer based on BP neural network realized the handwritten digits identification. The application software design based on MATLAB, and the script number recognition algorithm was investigated. The results show that based on the BP neural network to identify the handwritten numerals body can get a good effect.

Credits: 15

2、Course Name: Speciality Introduction(Electronic)

Academic content: This course is a compulsory course. This course introduces the main specialized courses and study methods in the further study, and prospect and request of Electronics and Information Engineering.

Credits: 1

3、Course Name: Advanced Mathematics Ⅰ

Academic content: This subject introduces mainly function, limit, sequence, derivative, differential, theorem of mean, application of derivate, application of differential in the economics, indefinite integration, definite integration and its application in Economics, infinite series, multi-variables function calculus(partial derivative, total differential, composite function and differential method of implicit function, application of extreme, double integral, extreme value of multi-variable function), differential equation(first and second order differential equation and higher order linear equation), brief introduction to difference equation and its application in geometry and economy. By learning this subject, students could understand essential knowledge of Calculus, observe and analyze questions from quantity.

Prescribed books: Advanced Mathematics, Mathematics facility of Tong Ji University, HIGHER EDUCATION PRESS

Credits: 6

4、Course Name: Advanced Mathematics Ⅱ

Academic content: This subject introduces mainly function, limit, sequence, derivative, differential, theorem of mean, application of derivate, application of differential in the economics, indefinite integration, definite integration and its application in Economics,

infinite series, multi-variables function calculus(partial derivative, total differential, composite function and differential method of implicit function, application of extreme, double integral, extreme value of multi-variable function), differential equation(first and second order differential equation and higher order linear equation), brief introduction to difference equation and its application in geometry and economy. By learning this subject, students could understand essential knowledge of Calculus, observe and analyze questions from quantity.

Prescribed books: Advanced Mathematics, Mathematics facility of Tong Ji University, HIGHER EDUCATION PRESS

Credits: 7

5、Course Name: Linear Algebra

Academic content: Linear algebra is an important foundation for the theory courses, through this course of study, students can commonly use in applied science-matrix method, linear equations, quadratic form theory and the basic knowledge and skilled operation of matrix capacity and matrix methods to solve some practical problems, such as powers, roots, ratios, and proportions. So as to improve the quality of students in mathematics.

Prescribed books: Engineering Mathematics: Linear Algebra, Mathematics facility of Tong Ji University, HIGHER EDUCATION PRESS

Credits: 3

6、Course Name: Probability Theory and Mathematical Statistics

Academic content: The course is the study of the phenomenon of a large number of random regularity of mathematical subject. Probability theory part includes the basic concept of probability, Random variables and their function distribution, the number of random variable characteristic, the law of large number and central limit theorem. Statistics part includes random samples and its function of distribution, parameter estimate, hypothesis test, variance analysis regression analysis, etc.

Prescribed books: Probability Theory and Mathematical Statistics, Zhejiang University, HIGHER EDUCATION PRESS

Credits: 3

7、Course Name: Statistics

Academic content: Statistics introduces the fundamental principles, concepts, and computations of statistics. The content includes sources, collection and tabulation of data, description of characteristic of data distribution, probability, sampling method, regression and correlation, hypothesis testing, time series and index number.

Prescribed books: Statistics, Yuan Wei, Higher Education Press

Credits: 3

8、Course Name: Integral Transformation

Academic content: This course about integral transformation of basic theory for Electronic and Information Engineering students. It main includes Fourier transform and its property, Laplace transform and properties and application.

Prescribed books: Engineering Mathematics: Integral Transformation, Mathematics facility of Xi An Jiaotong University, HIGHER EDUCATION PRESS
Credits: 2

9、Course Name: Complex Function
Academic content: This course about complex functions of basic theory and two commonly used integral transform and its application. Contents include the plural and complex functions, analytical function and its sufficient and necessary conditions of complex-variable function and integral calculation, Cauchy-Goursat basic theorem, and the composite closed circuit principle, Cauchy integral formulas and analytical function of high order derivative formula, the plural of series and a complex function series (Taylor series and Laurent series), the number of its stay in the application of the definite integral computation, total conformal mapping.
Prescribed books: Engineering Mathematics: Complex Function, Mathematics facility of Xi An Jiaotong University, HIGHER EDUCATION PRESS
Credits: 2

10、 Course Name: Field Theory
Academic content: In many areas of physics, the understanding of the essential physical phenomena requires the consideration of the collective effects of a large number of degrees of freedom. Field Theory is the tool as well as the language that has been developed to describe the physics of problems. The aim of this course is to provide the basic tools of Field Theory to students (both theorists and experimentalists) with a wide range of interests in Physics. These ideas and tools will be used in subsequent and more specialized courses. We will study the basic conceptual and computational tools of quantum field theory. As long as the students have a better understanding of this fundamental course, they will have no difficult to take advanced courses for special research interests further.
Prescribed books: Engineering Mathematics: Vector analysis and Field Theory, Xie Shuyi, HIGHER EDUCATION PRESS
Credits: 2

11、 Course Name: College Physics Ⅰ& College Physics Ⅱ
Academic content: College Physics is a compulsory course for students of science and engineering. The purposes of this course are to enable students to familiarize structures, interaction and properties of objects in nature and its basic laws of movement, master methods of physical research, form world outlook and methodology of dialectical materialism, improve their abilities to set up physical models, qualitative analyses, estimating, quantitative computation and independently obtaining knowledge, and thus lay a solid foundation for further study. The contents of the course cover particle kinematics, mechanical quantity conservation of particle system, wave optics (interference, diffraction, and polarization), kinetic theory of gases, macroscopic thermodynamic basis， electrostatic field in the vacuum, electrostatic induction and polarization of medium, static magnetic fields, magnetization of media, electromagnetic induction and electromagnetic field, plastic mechanics of special relativity, and basics of quantum physics.

Prescribed books: College Physics, Shanghai Jiaotong University Press
Credits: 4 & 4

12、 Course Name: College physics Experiment

Academic content: This curriculum, a required curriculum, is the beginning of the system test method and experiment skills training after students enter the college. Through a number of general experiment content, students accept systematic training in basic knowledge, method and skills of physics experiment. Contents of the experiment course are mechanics, thermal physics, optics, electrics, magnetics, and modern physics.
Prescribed books: College Physics, Shanghai Jiaotong University Press
Credits: 1 & 1

13、 Course Name: Circuit Theory

Academic content: This course introduces resistance circuit, dynamic circuit and the basic theory of steady sinusoidal circuit and basic analysis method. Main contents: circuit components, Kirchhoff's law, superposition theorem, substitution theorem, Thevenin's theorem , Norton's theorem, equivalent transformation of circuit, analysis of the circuit nodal method, the nets hole method and loop method. Linear dynamic circuit of the zero input response, zero state response and complete response, analysis of first and second order circuit, method of analyzing sine steady-state circuit by phasor graphology, the concept of the three-phase circuit and simple analysis, the frequency response and syntony of circuit, coupling inductance and ideal transformer and two-port network.
Prescribed books: Circuit, Qiu Guanyuan, HIGHER EDUCATION PRESS
Credits: 5

14、 Course Name: Circuit Theory Experiment

Academic content: Electric Circuit Theory is one of the most important fundamental theories in which all branches of electrical engineering are built. Therefore, the course is one of the most important courses for an electrical engineering student. In order to train high quality talents, experiment content and mode in practical teaching are essential in classroom teaching. This experiment course mainly focus on the Circuit practical skills of students.
Prescribed books: Circuit, Qiu Guanyuan, HIGHER EDUCATION PRESS
Credits: 1

15、 Course Name: C Language Programming

Academic content: This course is a beginner course of C language programming design, mainly introduces the basic knowledge of computer hardware and software, paying special attention to the basic concept of C language and structured programming skills training. The course is a professional basic course of Information and Computing Science and focuses on C language structure, flow control statements, data type and structure, function and the variables of the scope, operating mode of Pointers and address, the structure and the unions and documents, etc.
Prescribed books: Program Design in C, Tan Haoqiang, Tsinghua University Press
Credits: 4

16、 Course Name: Computer Practice(C language)

Academic content: This course is a related course of C Language Programming. C programming language preliminary design, the basic concepts of algorithm, constants, variables, operators and expression, program control structure, function, compile pretreatment, array, pointer, structure body and common body, etc.

Prescribed books: Program Design in C, Tan Haoqiang, Tsinghua University Press

Credits: 2

17、 Course Name: Computerized Vision

Academic content: The central focus of this course is the computer analysis of pictorial information. Computerized Vision covers all aspects of image analysis from the low-level, iconic processes of early vision to the high-level, symbolic processes of recognition and interpretation. The main content in the course is Images and Imaging Operations, Color &Color Space, Thresholding, Edge Detection, Binary Shape Analysis and Line Detection.

Prescribed books: Computer Vision, Linda G.Shapiro, CHINA MACHINE PRESS

Credits: 3

18、 Course Name: Image Processing and Pattern Recognition

Academic content: This course is a compulsory course for Information and Computer Engineering. In this course, teacher will systematically explain the whole system of Image Processing and Pattern Recognition. This course covers the Image Capturing System, Image Enhancement System, Feature Extraction and Representation, Object Classification System and apply these theories with the MATLAB programming. The tasks of this course is to describe the basic techniques of image transformations, image enhancement, image restoration, image coding and compression, Mathematical morphology. The objective is to introduce to students the basic conception, theory and methods for digital image processing, so as to pave a path to further studies and researches in the area of image processing and pattern recognition.

Prescribed books: Image Processing and Pattern Recognition, Fan Linan, Science Press

Credits: 2

19、 Course Name: Embedded Systems Practice

Academic content: This course mainly introduces the design principle and methods of embedded systems. By the study of this course, the students can understand the architecture and instruction system of ARM7 embedded processor, and get the analysis and design methods of embedded system.

Prescribed books: ARM Embedded Systems Fundamentals Tutorial, Zhouligong, Beijing University of Aeronautics and Astronautics Press

Credits: 2

20、 Course Name: Practice of FPGA Embedded Systems Design

Academic content: This course involves Embedded System Design concepts including topics like elements of embedded system design, programmable logic device architecture, Verilog based design of logic modules, tools for design and prototyping, design of advanced FPGA-

based systems.

Prescribed books: FPGA Embedded Systems Design, Meng Xianyuan, Publishing House of Electronics Industry

Credits: 3

21、 Course Name: Analog Electronic Technology

Academic content: This course covers complex semiconductor electronic circuits to include application of field-effect transistor circuitry, amplitude/phase shift response of transistor amplifiers, integrated circuits, negative and positive feedback circuits, active filters, industrial control circuits, switching power supplies, voltage regulators, operational amplifiers, spectrum analysis, and harmonic distortion. The course offers practical hands-on experience using an array of test equipment and assigned laboratory projects incorporated to supplement classroom lectures.

Prescribed books: Analog Electronic Technology, Tong Shibai, HIGHER EDUCATION PRESS

Credits: 4

22、 Course Name: Analog Electronic Technology Experiment

Academic content: This experiment course is a package course of Analog Electronic Technology. The purpose is to enable the students to grasp the characteristics and parameters of commonly used semiconductor device, to master basic analysis method of electronic circuits of basic amplifier and negative feedback amplifier, a typical integrated operational amplifier. To make students be capable of practical skills and ability.

Prescribed books: Analog Electronic Technology, Tong Shibai, HIGHER EDUCATION PRESS

Credits: 1

23、 Course Name: Digital Electronic Technology

Academic content: Digital Electronic Technology mainly introduces the basic methods and basic principle of digital circuit analysis, digital circuit design method. Its main contents include digital logic, combinational logic circuit analysis and design, analysis and design of the sequential logic circuit, pulse signal generation and plastic, d/a and analog-to-digital conversion.

Prescribed books: Foundation of Digital Electronic Technology, Yan Shi, HIGHER EDUCATION PRESS

Credits: 3

24、 Course Name: Digital Electronic Technology Experiment

Academic content: This course introduces the EWB software's characteristics and the circuit simulation function, discusses the application and example in experiment teaching of digital electronic technique.

Prescribed books: Foundation of Digital Electronic Technology, Yan Shi, HIGHER EDUCATION PRESS

Credits: 1

25*、 *Course Name: Signals and Systems

Academic content: The course is a professional theory basic course of Electronic information and Communication Engineering etc. It mainly involves Time domain analysis of continuous systems, discrete systems with time-domain analysis, frequency domain analysis of continuous systems, S-domain analysis of continuous systems, and Z-domain analysis of discrete systems.

Prescribed books: Signals and Systems, Wangruilan, CHINA MACHINE PRESS

Credits: 4

26*、 *Course Name: Communication Theory

Academic content: With the main line of introducing a variety of analog and digital modulation techniques, this course analyzes closely around the validity and reliability of communication system, compares the performance of the communication system. Through the teaching and experiment, it makes the students master the basic theory of communication system and the analysis method, and lay a good foundation for the follow-up courses.

Prescribed books: Communication Theory, Zhang Lijun, HIGHER EDUCATION PRESS

Credits: 5

27*、 *Course Name: SCM Application and Practice

Academic content: This course shows the introductions to functional structure, principle, instructions, assemble language programming, interface and application of MCS-51 single chip microcomputer. By the study of this course, the students can get the design and development ability of simple SCM application system.

Prescribed books: Principle and Application of Single Chip Microcomputer, Zhangqi, CHINA MACHINE PRESS

Credits: 3

28*、 *Course Name: SCM Technology and Design Practice

Academic content: The main target of SCM Technology and Design Practice provides students a simulation environment to be better acquainted with the structure of MCS-51 as follow: The working principle and application of internal hardware resources of MCS-51, such as I/O ports, interrupt system, timer, etc. command system and program. The extension technology of MCS-51, such as memory, I/O, A/D, etc. The application in the mine monitoring and control system of single chip microcomputer.

Prescribed books: Principle and Application of Single Chip Microcomputer, Zhangqi, CHINA MACHINE PRESS

Credits: 2

29*、 *Course Name: High Frequency Electronic Technology

Academic content: The courses in communication system as the main object of study, which discusses each unit circuit the fundamental working principle of a transmitting device, receiving device, the typical circuit, and the actual circuit of high frequency current development level and the application in different systems.

Prescribed books: High-Frequency Electronic Circuit, Zhang Suwen, HIGHER

EDUCATION PRESS
Credits: 5

30、 Course Name: Principle and Application of PLC
Academic content: The course is a professional basic course of Information and Computing Science，Automation etc. The course introduces PLC hardware and software structure and the basic working principle，it mainly involves：PLC wiring, memory allocation, instruction, I / O modules, serial communications, program design
Prescribed books: Principle and Application of PLC, Wangweibing, CHINA MACHINE PRESS
Credits: 2

31、 Course Name: Electromagnetic Fields and Electromagnetic Waves
Academic content: This course introduce the basis theories of Electromagnetic induction and electromagnetic energy, Maxwell's integral and differential equations, boundary conditions, constitutive relations, energy conservation and Pointing vector, wave equation, plane waves, propagating waves and transmission lines, characteristic impedance, reflection coefficient and standing wave ratio, in-depth analysis of coaxial and strip lines, electro- and magneto-quasistatics, simple boundary value problems, correspondence between fields and circuit concepts, energy and forces.
Prescribed books: Electromagnetic Fields and Electromagnetic Waves, Xie Chufang, HIGHER EDUCATION PRESS
Credits: 3

32、 Course Name: Electromagnetic Fields Theory
Academic content: Electrical engineers need to understand the fundamental principles and laws of electromagnetism to develop and implement better analog and digital electronic system that take into account electromagnetic propagation and radiation effects. This course is an introductory treatment on the junior level for a two-semester electrical engineering course starting from the Coulomb-Lorentz force law on a point charge. Sample problems and their solutions are presented for each new concept with great emphasis placed on classical models of physical phenomena such as polarization, conduction, and magnetization. This course may be one of the more challenging junior courses in the EE degree plan. However, it will get you ready for advanced courses in antenna, microwave, radar, and semiconductor engineering.
Prescribed books: Electromagnetic Fields Theory, He Tingyu, POST& TELECOM PRESS
Credits: 3

33、 Course Name: Computer Communication Networks
Academic content: This course is a required technology basic course for electronics and information engineering. This course focus on the system structure of computer network and the application of network communication technology and protocol, cultivating students' ability of the communication technology and the protocol design based on computer network. The classification of computer network and the level system structure, OSI/RM and TCP/IP

system structure, data communication and network exchange technology. The physical layer of the computer network structure, the data link layer, the network layer, the transport layer, the application layer, the function of each layer and the technical protocol, LAN technology, WAN technology, Networking technology and equipment, Network management and network operating system, Network security technology; Internet technology.

Prescribed books: Computer Networks, Xiexiren, Publishing House of Electronics Industry

Credits: 2

34、 Course Name: Microcomputer Principles and Interface Technology

Academic content: Microcomputer Principle and Interface Technology, this course introduces the international 8086 / 8088 assembler instruction, interface application technology and application programming. Application programming interfaces and methods of application technology. This course is based on theory and application of computer technology. The course of study and application of principles of computer hardware knowledge, improve their use of computer hardware, this course a very important computer networking technology courses, students in the future other relevant professional courses of study, provides a good platform and complete knowledge. This course has formed with the birth of the microprocessor, the development as it develops, and this course focuses on X88 processors, although the X88 processor escalating. Because the new processor before the processor constantly compatible, but they have much in common, so Microcomputer Principle and Interface Technology curriculum content is relatively stable.

Prescribed books: Principle and Interface Technology of Microcomputer, Lixiaolin, Publishing House of Electronic Industry

Credits: 3

35、 Course Name: Microcomputer Principles and Interface Technology Experiment

Academic content: This course is a experiment course of Microcomputer Principles and Interface Technology, taking 80x86 CPU as an example, introduces the principle and architecture of microcomputer, assembly language programming etc. By the study of this course, the students can understand development concepts of computer control system and get certain system development ability.

Prescribed books: Principle and Interface Technology of Microcomputer, Lixiaolin, Publishing House of Electronic Industry

Credits: 1

36、 Course Name: Automatic Control Theory

Academic content: This course provides coverage of classical control, including mathematical modeling of dynamic systems, transient and steady state response analyses, the stability of linear feedback Systems, root-locus analysis, frequency-response Analysis and introduction to analysis of linear discrete and nonlinear control system.

Prescribed books: Automatic Control Theory, Chen Xiangguang, HIGHER EDUCATION PRESS

Credits: 4

37、 Course Name: Object-oriented Programming(VC)

Academic content: A course that focuses on introducing students to computer science through object-oriented design and programming. The course features an "objects first" approach to object-oriented programming, starting with objects, classes and methods, and then moves on to inheritance, interfaces and polymorphism, before covering traditional topics such as arithmetic and flow-of-control. The course reinforces concepts with practical exercises in weekly laboratory sessions and with challenging and engaging programming assignments such as Tetris, all of which have GUIs.

Prescribed books: Object-oriented Programming, Leng Yingnan, Publishing House of Electronics Industry

Credits: 2

38、 Course Name: Microcomputer Control Technology

Academic content: This "Microcomputer Control Technology" course aims to address the variety of issues arising in the implementation of computer-based controlled systems in an integrated and simplified manner. By focusing on the use of PC104 boards and MATLAB xPC Target toolbox, it provides a global perspective of the entire process of implementing and testing embedded controllers, but avoids time-consuming dwellings in less-often encountered details. Small-scale but representative projects form the core of the instruction and provide hands-on expertise.

Prescribed books: Computer Control System, Liu Jianchang, Science Press

Credits: 3

39、 Course Name: Practice of Computer Control System Design

Academic content: The main teaching content of this course includes composition, types and characteristics of computer control systems, the input/output interface technology of computer control systems, man-machine interface technology and digital process control technology, digital information processing technology, digital controller design methods, the general design methods and application examples of computer control systems.

Prescribed books: Computer Control System, Liu Jianchang, Science Press

Credits: 2

40、 Course Name: EDA Principles and Application

Academic content: This course is for the undergraduate students of the departments of computer science, electronics and automation. The main goals are as follows: Provide basic theory to EDA（Electronic Design Automation）developer. Provide professional knowledge to EDA designer. Training students to grasp the design method for digital systems. Introduce the basic theory and the newest progress of many areas of design automation for digital systems, including high-level description language VHDL, simulation, logic-level and high-level synthesis, test pattern generation and formal verification.

Prescribed books: EDA Principles and Application, He Jiacai, Chemical Industry Press

Credits: 4

41、 Course Name: Curriculum Design of EDA

Academic content: The EDA curriculum design benefit is the software platform on QuartusII Verilog hardware design language for programming PLD circuit, the final design of a simple digital clock circuit, and the EDA program code into the chamber for verification. The course mainly involve the software program designed hierarchically, modular programming ideas, the structure of programming and hardware differences pure software programming, simulation and actual programming combined with the gradual improvement of its logic function. After this course student will know and grasp the principle of a basic functional circuit clock, alarm circuits, dynamic display control circuit, divider circuit, display circuit status lights, key circuit, alarm time, the whole point of time, adjusting hours and other functions.

Prescribed books: EDA Principles and Application, He Jiacai, Chemical Industry Press

Credits: 2

42、 Course Name: Principles of Electronic Measurement

Academic content: This course is electronics based course dealing with measurements and instrumentation designed for students in Electrical and Electronics Engineering and allied disciplines. It is a theory course based on the use of electrical and electronics instruments for measurements. The course deals with topics such as Principle of measurements, Errors, Accuracy, Units of measurements and electrical standards, Q- meters, Watt-meters, Semiconductor device testers Counters, Digital voltmeters, X-Y recorders, Temperature controllers, Operational amplifiers, transducers, introduction to the design of electronic equipments for temperature measurement, resistance, liquid level, speed etc.

Prescribed books: Principles of Electronic Measurement, Gu Tianxiang, CHINA MACHINE PRESS

Credits: 3

43、 Course Name: Principles of Program-controlled Switching

Academic content: This course introduces the basic principle and the hardware and software realization method of the program-controlled exchange, voice digital communication principle, the basic principle of digital switching, the composition of digital program-controlled switching system, the composition of digital switching network, software and hardware design method of small digital exchange network, etc.

Prescribed books: Principles and Equipment of Program-controlled Switching, Luo Jianguo, HIGHER EDUCATION PRESS

Credits: 3

44、 Course Name: Virtual Instrument Technology

Academic content: The virtual instrument technology is the current development trend of measurement technology and one of the required courses in electronic and information engineering. Virtual Instrument Technology introduce the signal acquisition and process, measurement and testing by using computer simulation technology.

Prescribed books: Basics tutorial of virtual instrument design, Huang Songling, Tsinghua University Press

Credits: 2

45、 Course Name: Sensor Technology

Academic content: This course is a broad introduction to a host of sensor technologies, illustrated by applications drawn from human-computer interfaces and ubiquitous computing. After extensively reviewing electronics for sensor signal conditioning, the course cover the principles and operation of a variety of sensor architectures and modalities, including pressure, strain, displacement, proximity, thermal, electric and magnetic field, optical, acoustic, RF, inertial, and bioelectric. Simple sensor processing algorithms and wired and wireless network standards are also discussed.

Prescribed books: Sensor Technology, Li Kejie, CHINA MACHINE PRESS

Credits: 2

46、 Course Name: Digital Signal Processing

Academic content: The main contents of this course include transform-domain analysis of discrete-time signals and systems, DFT, FFT, design techniques of digital IIR filters, design of FIR digital filters and so on.

Prescribed books: Digital Signal Processing, Wang Shiyi, BEIJING INSTITUTE OF TECHNOLOGY PRESS

Credits: 3

47、 Course Name: DSP Curriculum Design Practice

Academic content: This course will develop skills for analyzing and synthesizing algorithms and systems that process discrete time signals, with emphasis on realization and implementation. Mainly contents are Fourier and Z transforms, DFT, 2-dimensional versions. Digital signal processing topics: flow graphs, realizations, FFT, quantization effects, linear prediction. Digital filter design methods: windowing, frequency sampling, S-to-Z methods, frequency-transformation methods, optimization methods, 2-dimensional filter design.

Prescribed books: Digital Signal Processing, Wang Shiyi, BEIJING INSTITUTE OF TECHNOLOGY PRESS

Credits: 2

48、 Course Name: Electromagnetic Compatibility

Academic content: As digital circuits continue to be produced at increasingly smaller size and with higher speeds, electromagnetic interference become much severer in a digital system. Therefore, the need for effective electromagnetic compatibility (EMC) design has become more critical than ever. In order to avoid unnecessary costs in bringing products into compliance with governmental regulations, many solutions are proposed to improve the interference of systems. In this course, basic concept and design method for a digital system will be illustrated elaborately.

Prescribed books: Electromagnetic Compatibility Principles, Tan Zhiliang, National Defense Industry Press

Credits: 2

49、 Course Name: Fundamentals of Computer Operation

Academic content: This course is a compulsory course. With large rang of knowledge and

powerful impact, it mainly introduce the basic knowledge and cultivates the fundamental computer application ability of students. It is a systematic study of the basic computer concepts, such as computer systems, composition, classification and application of the operating system, computer network building, computer network architecture, and information security technology. This course is a broad introduction to the use of computers as tools for creativity, communications and organizing information.

Prescribed books: Fundamentals of Computer Operation, Zhang Jin, CHINA MACHINE PRESS

Credits: 3

50、 Course Name: Web Design Technology

Academic content: This course used to train students to build and master the junior webpage design and website management ability, learn how to build and perfect the web page design, website planning, layout and construction, establish and maintain a web site. Master web design software Dreamweaver, Photoshop, flash the various applications. Like web match colors knowledge base, Dreamweaver CS3 application explanation, Photoshop CS3 use base, flash CS3 animation production, learning this course for the future of the learning website graphic design, page development, interface design, process design, such as dynamic web site to lay the foundation.

Prescribed books: Website Designing and Developing, Geng Xia, POST& TELECOM PRESS

Credits: 2

51、 Course Name: Engineering Drawing

Academic content: This course is a compulsory main basic course. Through the teaching of this course, the cultivation of the students' space stereo imagination ability, and can according to related national standards, to design ideas of the expression of plane view, to knowledge chart, drawing, and other comprehensive training goal. This course lays a solid foundation for the subsequent course of study in engineering design, construction and management.

Prescribed books: Engineering Drawing, Wu Hua, CHINA MACHINE PRESS

Credits: 4

Note: The course description above is not all of my courses. Other courses include common courses (Physical Education, English courses, etc.), my desired optional courses and practices courses.