Curriculum Plan for CS&T Overseas Students

I. Objectives International Certification Standards

The purpose of this major is to train engineering and technical talents in the field of computer science with humanities and social science literacy, sense of social responsibility, professional ethics, international vision and to better understand China and be more friendly to China. They are able to apply basic knowledge of natural science, basic theory and professional knowledge of computer science and technology to solve complex engineering problems, and have good ability of systematic analysis, development, practice and project organization and management to constantly meet the needs of rapid social and economic development. Students can be engaged in the computer field of engineering technology research and development or engineering project management, have the sense of innovation and the ability to constantly update knowledge, and eventually become IT industry engineers, technical backbone or project management international talents.

II. Graduation Requirements

REQ1- Career Specification: To have correct life view, world view, humanities and social sciences, abide by social morality, engineering professional ethics and norms, fulfill responsibilities, understand Chinese culture and history, make objective and correct judgments for international cultural exchanges, and can play a certain role in promoting the spread of Chinese culture.

REQ2- Engineering Knowledge: To have the ability to apply mathematics, natural science, engineering foundation and professional knowledge to solve complex engineering problems in computer field.

REQ3- Problem Analysis: To have the ability to apply the basic principles of mathematics, natural science and engineering science to identify, express and analyze complex computer engineering problems with literature research in order to obtain effective conclusions.

REQ4- Design/Develop Solutions: To have the ability to design solutions to complex engineering problems in the computer field, design systems and units that meet specific needs, and reflect innovative awareness in the design process, taking into account social, health, safety, legal, cultural and environmental factors.

REQ5- Research: To concern the present situation and trend of the development of computer science and technology, be able to study complex engineering problems in the field of computer science and technology based on scientific principles and scientific methods, be able to design experiments, analyze and interpret data, and get effective conclusions through information synthesis.

REQ6- Usage of Modern Tools: To have the ability to develop and select appropriate technologies, resources and modern engineering tools, including the simulation and prediction of complex engineering problems, and understand its limitations, in view of the complex engineering problems in the field of computer science and technology.

REQ7- Projects and Society: To have the ability to conduct reasonable analysis based on engineering-related background knowledge, evaluate how engineering practices and complex engineering problem solutions in the field of computer science and technology impact on society, health, safety, law and culture, and understand their responsibilities.

REQ8- Environment and sustainable development: To have the ability to understand and

evaluate the impact of engineering practice on the sustainable development of environment and society in the field of computer.

REQ9- Individuals and teams: To have the ability to assume the roles of individual, team member and leader in a multidisciplinary team.

REQ10- Communication: To have the ability to effectively communicate and exchange with peers and the public on complex engineering issues in the computer field, including writing reports and designing manuscripts, making presentations, clearly expressing or responding to instructions. Have a certain international perspective, able to communicate and communicate in a cross-cultural context, in order to adapt to cross-border positions.

REQ11- Project Management: To have the ability to understand, master and apply engineering management principles and economic decision-making methods in multidisciplinary environment. **REQ12- Lifelong Learning:** To have the ability to have the consciousness of autonomous learning and lifelong learning, adapt to social development.

Core Curriculum: Discrete mathematics, object-oriented programming, data structure, digital logic, operating system, computer composition principle, compilation technology, computer network, embedded system, database system principle.

III. Majors:

Fields of Disciplines of Conferring Academic degrees: Mechanics

Specialty Category: Computer

Major Name: Computer Science and Technology

Major Code: 080901

IV. Training System and Course Module

1. Curriculum System

It consists of general education courses, basic courses of major, professional courses, electives of independent research and learning, quality development and practice.

(1) General education courses 56.5 credits, including compulsory courses 52.5 credits, electives 4 credits;

(2) Basic courses of major 36 credits, including compulsory courses 34 credits, electives2credits;

(3) Professional courses 30.5 credits, including compulsory courses 22.5 credits, electives 8 credits;

(4) Independent research and learning, 15 credits;

(5) Quality development 6 credits, including social activities (such as academic seminar), social practice activities, professional skills training, competitions, innovation and entrepreneurship practices;

(6) Practice 32 credits, including Academic paper writing training, engineering basic training, practical courses, innovation and entrepreneurship practice, graduation practice and graduation design (Thesis).

2. School enterprise cooperation

- Cognitive practice activities: Viisit relevant enterprises, such as Jiangbin Hospital, Zhenjiang Telecommunication Company, to participate in professional cognitive;
- Academic Seminars: Hire out-of-school experts to give lectures on relative computer cutting-edge technology;

• professional skills training can hire enterprise mentors to participate in at least 1/3 class hours of teaching, guidance;

V. Duration and Degree

Four years of basic schooling, Three to eight years of flexible schooling, Bachelor of Engineering

VI. Credits (Minimum Required Credits for Graduation)

credits: 176

Category	Credits	Hours and Week		Credits Portion			
		Hours	Week	compulso ry courses	Portion	Electives	Portion
General Education Courses	56.5	1224	/	52.5	29.83%	4	2.27%
General basic Courses	36	648	/	34	19.32%	2	1.13%
Professional Courses	30.5	596	/	22.5	12.78%	8	4.54%
Independent Research	15	96	/	/	/	15	8.5%
Quality development	6	/	/	/	/	6	3.4%
Practice	32	/	34	32	20.17%	/	/
Total	160	2564		141	80.11%	35	19.89%

VII. Distribution Sheet for Credits and Hours):

Other Instructions:

 Each student can obtain credit for innovation and entrepreneurship practice by participating in discipline competitions, innovation projects, papers, patents, entrepreneurship and other activities;
Academic seminars and other community activities can regularly participate in in-school professor lectures, foreign experts academic lectures; new technology lectures can hire extracurricular experts to teach;

3. Actively promote the reform of teaching methods, and focus on building problems based courses (PBL) such as Java programming, python programming and data analysis, and case-based courses (CBL) such as software engineering;

4. Docking online and offline teaching, combined with high-quality network teaching platform, in the independent research module, each student need to study extracurricular online learning advanced related subjects courses, including big data, deep learning, algorithm and full stack web page design, etc., equipped with teacher guidance; 《PROBLEM-SOLVING WITH MACHINE LEARNING》、《PYTHON Fundamental》 are selected from E-CORNELL as compulsory online courses; Students also need to complete 4 credits of interdisciplinary courses and advanced Chinese courses;

5.In general basic courses module, students are requested to elect one of three following courses: calculation method, combinatorial mathematics and signal and linear system;

6. In Professional Courses module, students are requested to elect one of <.NET

Programming>,<Java Programming>; one of <LINUX> and <Distributed System and Cloud

Computing>, one of <Data mining> and <Computer Graphics>

7. The graduation project is arranged in the eighth semester, with a total of 16 weeks, including 3 weeks of graduation practice and 13 weeks of design work;

8. Encourage students to enter the enterprise internship in the fourth academic year, which also can obtain the corresponding innovation and entrepreneurship practice credit;

VIII. Guide map of curriculum system



VIII. Course Semester Distribution Guide Map

