ASIIN Seal & Euro-Inf® Label

Accreditation Report

Bachelor's Degree Programme
Information Security

Provided by
Shanghai University of Electric Power

Version: 23 June 2023

Table of Content

A About the Accreditation Process

Name of the degree programme (in original language)	(Official) English translation of the name	Labels applied for [1]	Previous accreditation (issuing agency, validity)	Involved Technical Committees (TC)[2]
信息安全	Information Security	ASIIN, Euro-Inf® Label		04
Date of the contract: 12.09.2019 **Submission of the final version of the self-assessment report:** 04.03.2022 **Date of the onsite visit:** March 23th-25th, 2022 **at: online**				
Peer panel: Prof. Dr. Rüdiger Reischuk, Universität zu Lübeck Prof. Dr. Ulrich Bühler, Fulda University of Applied Sciences CAI Tingkai, Technical Consultant, Google Shanghai ZHANG Siqi, student representative, Tongji University				
Representative of the ASIIN headquarter: Jing Zhang				
Responsible decision-making committee: Accreditation Commission for Degree Programmes				
Criteria used: European Standards and Guidelines as of May 15, 2015 ASIIN General Criteria, as of December 10, 2015				

[1] ASIIN Seal for degree programmes; EUR-ACE® Label: European Label for Engineering Programmes; Euro-Inf®: Label European Label for Informatics; Eurobachelor®/Euromaster® Label: European Chemistry Label

[2] TC: Technical Committee for the following subject areas: TC 04 - Informatics/Computer Science

Subject-Specific Criteria of Technical Committee 04 – Informatics/Computer Science as of March 29, 2018	

B Characteristics of the Degree Programme

a) Name	Final degree (original/English translation)	b) Areas of Specialization	c) Corresponding level of the EQF[3]	d) Mode of Study	e) Double/Joint Degree	f) Duration	g) Credit points/unit	h) Intake rhythm & First time of offer
信息安全 Information Security	Bachelor of Engineering	/	6	Full time	/	8 Semester	240 ECTS	September 1st, 2009

For the Bachelor's degree programme Information Security, the Shanghai University of Electric Power (SUEP) has presented the following profile in the self-assessment report:

Shanghai University of Electric Power (SUEP) is one of the first universities in Shanghai to start Information Security degree programme. In 2009, the Information Security programme started to enroll 4-year undergraduate students. In 2018, the programme passed the conformity assessment of the Chinese Ministry of Education (MoE). One year later, the programme was approved to be a key discipline of Shanghai Municipal Education Commission "Intelligent Power Grid Information Technology". In 2020, the programme was enlisted in Shanghai Municipal Level-1 Programme Construction Project.

The programme aims to educate outstanding engineers with good social adaptability, international vision and engineering practice capabilities. Graduates are able to engage in information security research, system design, product development, strategy formulation and operation management, infrastructure operation and maintenance technology development and application services in the information security, information science, information technology and other related fields. Students of the programme develop innovation awareness, acquire independent working ability and learning and understanding ability, have teamwork spirit, communication ability and broad international vision. Graduates meet the requirements of internationally recognized engineer qualification.

By the time the students graduate from the programme, they have competences in accordance with the programme objectives and achieve the following learning outcomes:

[3] EQF = The European Qualifications Framework for lifelong learning

1. Knowledge

1) General knowledge:

The graduates master the basic knowledge of mathematics, physics, chemistry, English etc. They possess humanistic and social knowledge, cognition on international and national situation and general knowledge of physical education and military.

2) Engineering knowledge:

The graduates master the basic knowledge of computer and information, data structure, discrete mathematics, computer network design and analysis, programming as well as project management.

3) Professional knowledge:

The graduates master the structure, principle, function and related safety knowledge of computer system, principles and design of computer operating systems, the knowledge of database, principles of cryptography, principles and professional knowledge of computer network. They understand the cutting-edge development and hot issues of information security industry.

2. Technologies

1) Operation ability

- Possess basic engineering operation skills and professional experimental skills;
- Able to perform primary security analysis of computer systems and computer networks;
- Possess the ability to eliminate and prevent security risks of computer systems and computer networks,

2) Analytical ability

- Possess the ability to effectively obtain and use information utilizing computer software and Internet;
- Possess the basic ability to process and analyze experimental and practical data;
- Able to effectively obtain and analyze various data related to information security, and analyze and diagnose related security issues in the field of computer;
- Possess the ability to understand contemporary social and technological hotspot issues from the perspective of information security,

3) Design ability

- Possess the ability to design and implement basic experiments and professional experiments;
- Initially possess the ability to analyze key issues in the field of information security, and possess the ability to design and deploy major security strategies.

3. Competences

1) Teamwork and management ability

- Have healthy mentality and personality;
- Have good sense of law and social responsibility;
- Have good communication skills, coordination skills, and teamwork spirit,

2) International communication ability

- Have adequate English professional knowledge and good foreign language ability;
- Compete in professional international exchanges;
- Have adequate cross-cultural knowledge, able to work in and cooperate with foreign or multinational companies,

3) Career development ability

- Have the ability of relearning, further study and scientific research;
- Have good understanding on the professional responsibilities and professional ethics of electric power industry and related industries.

C Peer Report for the ASIIN Seal[4]

1. The Degree Programme: Concept, content & implementation

Criterion 1.1 Objectives and learning outcomes of a degree programme (intended qualifications profile)

Evidence:

- Objectives-Module-Matrix
- Self-Assessment Report
- Discussions during the audit

Preliminary assessment and analysis of the peers:
SUEP is one of the first universities in China to offer Information Security undergraduate study programme. The programme started in 2009 in the form of a four-year full-time programme. In accordance with the university's overall strategy and orientation, the development of the qualifications profile of the study programme takes into account both the National Energy Strategy, the demand for professional talents in the electric power industry as well as the economic and social development of the city Shanghai.

According to the programme profile, the graduates of this programme have consolidated general knowledge of mathematics, physics, English as well as engineering and professional knowledge. They are qualified to perform primary security analysis of computer systems and computer networks, to eliminate and prevent security risks of computer systems and computer networks, to effectively obtain and analyze various data related to information security, and to analyze and diagnose related security issues in the field of computer. Furthermore, they are capable of analyzing key issues in the field of information security, designing and deploying major security strategies. In addition, graduates have good communication and coordination skills to be able to work in team. They acquire adequate English professional and cross-cultural knowledge, which enables them to work in and cooperate

[4] This part of the report applies also for the assessment for the European subject-specific labels. After the conclusion of the procedure, the stated requirements and/or recommendations and the deadlines are equally valid for the ASIIN seal as well as for the sought subject-specific label.

with foreign and multinational companies. Finally, graduates are capable of life-long learning, conducting further study and scientific research and they understand the professional responsibilities of electric power industry and other related industries.

After successfully completing the study of the Bachelor's degree programme, the students can continue to pursue a postgraduate study at the SUEP or other universities. The faculty (School of Computer Science and Technology) offers Master's programmes in Big Data Technology and Artificial Intelligence. A professional Master's programme in Cyberspace Security is currently being planned. The existing Master's programmes have in-depth direction in information security, so that students of the programme under review can easily continue their study. According to the programme coordinators, about 20% of the graduates apply for a master study.

During the discussions with the programme coordinators, the experts learn that the study programme not only covers general information security expertise, it offers specific modules closely related to the electric power industry as well. This concept is well received by the students, because they have a larger selection of industries, in which they then work in IT security-related professions. Graduates are reportedly very popular on the labour market and can take jobs of design, operation and maintenance, research and development, management of security system in relevant companies in energy and electric power, ICT, finance and other industries, as well as relevant departments of research institutions, universities, and government.

During the discussions with the staff members and students, which partly take place with the help of an interpreter, the experts have the feeling that English skills, especially oral skills, needs to be further strengthened. Internationalization is an important strategy of the university. English knowledge and cross-cultural competences are furthermore among the educational objectives of the study programme.

In conclusion, the peers regard the qualification objectives to be adequate and well implemented. They recommend to improve the conversational English competence of the students and staff members, for example by adding special modules or a seminar where students present a topic of IT Security and the whole conversation is done in English.

Criterion 1.2 Name of the degree programme

Evidence:

- Self-Assessment Report
- Discussions during the audit

Preliminary assessment and analysis of the peers:
The undergraduate programme “Information Security” under review started in 2009. Like all other Bachelor's degree programmes offered by Chinese universities, the title of the programme is specified by the Chinese Ministry of Education (MoE). Therefore, the university is not entitled to freely change the programme name. The peers are of the opinion, that the title of the study programme does not cause any misunderstandings or wrong expectations either among students or employers.

Furthermore, the name of the study programme is published on the subject-specific webpage and in the examination regulations. The panel confirms that the name reflects the intended objectives and learning outcomes and consider it appropriate.

Criterion 1.3 Curriculum

Evidence:

- Self-Assessment Report
- Curriculum
- Module descriptions
- Discussions during the audit

Preliminary assessment and analysis of the peers:
According to the self-assessment report the curriculum of the study programme under review consists of 9 module groups (details regarding the terminology “module” can be found in chapter 2.1), including (1) National Situation Cognition/Social Cognition (Humanities and Society), (2) Career Development Ability, (3) International Communication, (4) Science Fundamentals, (5) Engineering Fundamentals, (6) Fundamentals of Information Security/Engineering Application, (7) Professional Development, (8) Bachelor Thesis and (9) Practice.

The setting of the course structure across the 8 semesters is as follows. In the first two study years, students mainly attend courses as required by the Chinese curriculum, such as Ethics, Philosophy, English, Career Development Ability, Physical Education etc., aiming to enable the students to study English, humanities, laws and career, improve their cross-cultural communication ability, social responsibility, career cognition and knowledge of humanities. Fundamental knowledge in Science and Engineering is also taught in semester 1-4, which includes Mathematics, Physics, Introduction to Computer Science, Programming, Data Structures and Introduction to Information Security.

Between the fourth and seventh semester, students attend courses from the two module groups Fundamentals of Information Security/Engineering Applications as well as Professional Development. The module group Fundamentals of Information Security/Engineering

Applications includes theoretical courses in Database Principles, Reverse Analysis, Applied Cryptography, Computer Network and Security, Principles of Operating System, Computer System Security, Compilation Principles and practical courses in In-class Experiment, Database Application Course Project, Computer Network Course Project, Applied Cryptography Course Project, Operating System Course Project and Computer System Security Course Project. Regarding the area of Professional Development, there are a total of 9 courses with 42 ECTS credit points on offer, from which students must choose courses that in total are equivalent to 32 credits.

The Internship and Bachelor Thesis are carried out in the 7th and 8th semester. For the Bachelor Thesis, the students can choose a topic from the research areas of their lecturers or they can apply for a Bachelor project at a company. Both programme coordinators and industrial partners confirm that an internship and the final thesis can often be combined. In this case, the student stays in a company for a whole year and is supervised one-to-one by an industrial tutor. Both the internship and the thesis should prepare the students well for the practical application of the acquired knowledge and skills and thus increase the competitiveness of the graduates on the labour market.

During the discussions with the programme coordinators and industry representatives, the peers are positively impressed that SUEP regularly communicates and discusses about the quality of education with employers and alumni, listens to the opinions of related parties, updates the educational objectives and accordingly the curriculum to ensure that the competences profile of the graduates are in line with industrial and social needs.

While reviewing the current curriculum, the peers find out that Fundamentals of IT security like Information Theory, Coding Theory, Computational Complexity Theory are missing in the curriculum. The programme coordinators explain that some of these mentioned fundamentals are taught by the teaching staff in other courses, but are not explicitly listed. In order to provide transparency, the experts require that the fundamental courses be explicitly listed in the curriculum. Furthermore, the peers also notice that the number of courses to be taken by the students in each semester is high and the module descriptions of the individual courses show very broad content (more details will be discussed in chapter 5.1). They therefore have concern as to whether the workload of the students is too high. Finally, the experts indicate during the discussions with the programme coordinators that the scope of electives that students can choose from the module group Professional Development is very limited.

In conclusion, the peer group agrees that the curriculum under review generally meets the educational objectives of the study programme and the employers also affirm the professional ability and overall competences of the graduates. Based on the discussions above,

the panel requires that fundamentals of IT Security are included transparently in the curriculum. They also strongly recommend to restructure the module groups so that the number of elective modules is increased to ensure the intended specializations in the higher semesters.

Criterion 1.4 Admission requirements

Evidence:

- Self-Assessment Report
- Admission Results over years
- Discussions during the audit

Preliminary assessment and analysis of the peers:

The peers understand from the documentation and the discussions, that the admission to undergraduate degree programmes in China is centrally regulated by the government. All applicants who want to study an undergraduate programme must take part in the National College Entrance Examination (Gaokao) of the People's Republic of China (PRC) or the College Entrance Examination organized in their province or city. The applicants must meet the following conditions: (1) Comply with the constitution and law of PRC; (2) Have the diploma of senior high school or polytechnic school or equivalent education level; (3) Meet relevant physical requirements.

Based on the results of the entrance examination, students may choose from subjects at universities distinguished in three levels (Level 1 are the universities directly under the Ministry of Education, with a total of about 70. Level 2 are provincial- and ministerial-level jointly built universities and provincial key universities, with a total of about 100. Level 3 are other regular universities, and SUEP is at this level). Students apply with their examination results to those universities open to them and the universities follow their own admission procedure.

The specialty distribution of SUEP follows the principle "score at highest priority", and no level difference between different specialties, in other words, the students will be distributed to different specialties based on the intention the student declared and their entrance examination score, and those achieving higher score have higher priority to be distributed to the programme they applied for. In average about 70 students are admitted to the study programme Information Security every year. Statistics from 2018 to 2021 show that all students of the programme "Information Security" successfully finish their study and achieve the Bachelor's degree.

In conclusion, the peers agree that the admission process is nationally applied and transparent. Through this procedure, it is ensured that only highly qualified students are admitted to the programme.

Final assessment of the peers after the comment of the Higher Education Institution regarding criterion 1:

As the university did not comment the report the peers confirm their preliminary assessment.

2. The degree programme: structures, methods and implementation

Criterion 2.1 Structure and modules

Evidence:

- Self-Assessment Report
- Curriculum
- Modul descriptions
- Discussions during the audit

Preliminary assessment and analysis of the peers:

The study programme under review is a full-time programme with a regular study period of 8 semesters. The expert group is of the opinion that the term “module” used in the self-assessment report and curriculum is actually the designation of a group of modules, which extend over several semesters and are classified according to the area of competence. Technically, the individual courses in the respective module groups are the units of teaching and learning and therefore can be regarded as modules.

Based on the analysis of the sequence of modules and the respective module descriptions, the panel concludes that the structure of the curriculum ensures that the intended learning outcomes can be reached by the students in general. The curriculum is structured in a way to allow students to complete the degree without exceeding the regular study duration. Students and teachers confirm during the discussions that the majority of students is able to graduate within the intended study time.

According to the curriculum, students must complete a 6-week graduation internship in their final semester and will achieve 8 ECTS credit points. Through the internship, students get to know the development, trend and national policies of electric power industry as well

as the connotation of engineering ethics, preliminary awareness of innovation and entrepreneurship. The learning outcomes of the internship are reportedly evaluated by the team leader of the company and communicated to the academic mentor at the faculty. During the discussions with the students, the peers learn that it is also possible to start an internship in the 7th semester. If the topic is interesting, the students are also willing to work in a company for a longer period of time.

Regarding student mobility, international exchange is supported both by the university and the faculty. The office for international affairs of the university concludes cooperation agreements with universities abroad at the university level and offers exchange programs for university students as part of the cooperation. The programme coordinators report that exchange programs typically last 3 to 6 months, while the 3-month programs often take place during the Chinese university summer holidays between June and August. Usually there is an agreement between the partner universities on the recognition of courses and accumulated credit points. For students who attend exchange programs for one semester at a partner university, the SUEP offers online courses so that the compulsory courses can still be taken by the students during their exchange program and the students can complete their studies on time. Statistics from 2016 to 2019 (Table 4-6 Information on student overseas exchange in the self-assessment report) show small number of students who took part in international exchange programs. Experts understand the current Covid-19 pandemic situation and recommend to organize more exchange programs when travel is possible again for Chinese students.

In summary, the peers agree that the structure and modules of the programme contribute to the achievement of the intended learning outcomes, a successful study process and good job opportunities for the students after graduation.

Criterion 2.2 Work load and credits

Evidence:

- Self-Assessment Report
- Module descriptions
- Study plan of the degree programme
- Discussions during the audit

Preliminary assessment and analysis of the peers:

According to the self-assessment report, 16 contact hours of study in the theoretical module or 20 contact hours of practical training courses are equivalent to one Chinese credit point. Unlike the European Credit Transfer System (ECTS), the Chinese credit point system refers to the attendance time only. To enable comparison, the Chinese credit points have

been converted to the ECTS credits in the self-assessment report. The result shows that average credit points for one academic year are around 60 ECTS credits or 1,800 study hours (workload). That looks in principle reasonable to the panel.

In order to achieve the objectives and learning outcomes of the study programme and reach the Bachelor´s degree, students must obtain Chinese credit points equivalent to 240 ECTS credits, that is an average of 30 credits per semester and 900 study hours (workload) respectively. Lecturers of each course analyze the examination results. Student counselors and head teachers investigate frequently the workload of the students by performing surveys on the students' learning hours. They get the data of students' actual workload every semester in order to ensure their actual workload keep consistent with the planned workload.

In principle, the peers consider the workload bearable, and the students' comments do not give any hints to the contrary. They confirmed during the discussions with the experts that the estimated time budgets are generally realistic and the workload is well-balanced, so that no structure-related peaks occur. According to the programme coordinators, the study programme can usually be finished within the intended time of four years with very few exceptions.

Criterion 2.3 Teaching methodology

Evidence:

- Self-Assessment Report
- Module descriptions
- Discussions during the audit

Preliminary assessment and analysis of the peers:
From the presented material as well as the discussions with the programme coordinators and staff members, it becomes apparent to the peers that pedagogical skills are highly valued at the university. New teaching staff receive training and workshops on teaching methods take place regularly. Different teaching methods are in place at the undergraduate stage. Most of the general courses in social cognition and career development ability and basic courses in natural sciences are taught in big (100 students) or medium (70 students) class. Courses in engineering fundamentals and applications often consist of theory and experiment part. The experiment part is taught in groups in relevant laboratories. The Information Security programme owns an electric power information network security laboratory which is jointly built by central government and local government, one energy big data attack and defense laboratory, three professional basic teaching laboratories, able to

adequately satisfy the requirements of each grade for course learning experiments and course project practice.

In addition to classroom teaching, the programme coordinators emphasize the importance of practical training. Since the College of Computer Science and Technology has established long-term partnership with many companies, students can conduct practical training in the industry. Furthermore, students also have the opportunity to participate in teachers' research projects to conduct practical research, which improves and develops students' research and practice ability. Besides, each student must participate in innovation and entrepreneurship training, 6-week internship and 12-week thesis for bachelor's degree.

In conclusion, the peers agree that the teaching methods and instruments used support the students in achieving the learning outcomes and the large practical part also enables the students to engage more time with self-study. To encourage students' independent scientific work, the peers recommend to additionally include a module or course in the form of seminar, where students work independently on scientific papers and then present their reflections or opinions in groups.

Criterion 2.4 Support and assistance

Evidence:

- Self-Assessment Report
- Discussions during the audit

Preliminary assessment and analysis of the peers:

A number of different advisory offices are in place. For administrative routine support of undergraduate students, the Student Affairs Office is in charge of guiding and supporting students in all matters of general information, study organization and self-management. Furthermore, the Student Counselor system is composed of full-time undergraduate counselors, who are responsible for the guidance and psychological counseling of students. Additionally, according to the SAR, every class has a Head Teacher, who normally is responsible for the management of one class for 4 years, providing students with professional advice and guidance. Finally, the university implements mentor system for undergraduates as well, including academic mentor and business mentor. The academic mentor is usually the professor or associate professor at the forefront of scientific research. During the study, the academic mentor will guide the students to conduct relevant academic research activities according to their personal capabilities and interest, and provide constructive suggestion on their academic research. Business mentor is responsible for guiding students to complete project during their internship, and continuously communicates with academic mentor on teaching cooperation.

The experts recognize that the SEUP has established appropriate processes and responsibilities to effectively advice and counsel students. The students also confirmed that they are satisfied with the support and mentoring system in place at SUEP. At the beginning of the study, students are well informed about all the necessary information and sources of information for their study programme. During your studies you will also find support if you need it. Head teachers or academic mentors are reportedly available if students have questions or need other assistance.

In conclusion, the peers are convinced that sufficient information is available and that the subject-specific and general advisory methods are suitable to help students achieve the learning outcomes and complete their degree within the normal period of study.

Final assessment of the peers after the comment of the Higher Education Institution regarding criterion 2:

As the university did not comment the report the peers confirm their preliminary assessment.

3. Exams: System, concept and organisation

Criterion 3 Exams: System, concept and organisation

Evidence:

- Self-Assessment Report
- Exam Regulations
- Discussions during the audit

Preliminary assessment and analysis of the peers:

Regulations on study and examinations are in place, defining the rules and conditions of the exams in the undergraduate degree programme under review. According to the documents and discussions with the programme coordinators and teaching staff members, the peers learn that the methods of examination include written examinations, online examinations, oral examinations, comprehensive exercises, practice or experimental operations, reports and projects. A summative information of the assessment methods can be found in the relevant module descriptions. In each course, the final grade represents a mixture of students' overall performance during the classes (attendance, homework, participation), the mid-term exam as well as the final exam at the end of the semester.

Final examinations are usually conducted within two examination weeks at the end of each semester, in the 16th and 17th semester week. This means that all exams take place within

2 weeks. In case that a student fails an exam, the school offers make-up exams. The make-up exams are arranged by the Dean's Office and take place at the beginning of the following semester. If the student again fails the make-up exam, he/she will have to retake the course at the next opportunity when it is offered, that means in one or two semesters. The programme coordinators also add, that if a student is about to graduate and fails the exam for a mandatory course, he/she does not need to wait for one or two semesters. Instead, the student is allowed to study by himself/herself and then retake the exam at an agreed time. This requires however a special permit from the examination board. The peers learn during the discussions with the programme coordinators that there is no upper limit regarding the number of repetitions of a course, but the total study time must not exceed 6 years.

Regarding the Bachelor Thesis, it must be conducted In the eighth semester within 12 weeks under the guidance of supervisors. With the thesis work, students are required to prove that they are able to solve an engineering task at an adequate level of difficulty independently and within a given timeframe. The university provides a digital platform where students can choose and register for a topic that interests them. On the online platform, students can find out detailed information about the tasks of the final project and the respective supervisor. Both the programme coordinators and the industry representatives have confirmed that there are collaborative research projects between the university and companies. Part of the research content can be offered as topics of Bachelor thesis. In this case, students are supervised by an academic supervisor from the university and an engineer supervisor from the company as well. At the end, the Bachelor thesis is graded by both sides.

The experts assess the examinations and some samples of bachelor theses. They regard the requirements of those exams and theses adequate to the aimed qualification level.

Final assessment of the peers after the comment of the Higher Education Institution regarding criterion 3:

As the university did not comment the report the peers confirm their preliminary assessment.

4. Resources

Criterion 4.1 Staff

Evidence:

- Self-Assessment Report.

- Staff Handbook
- Discussions during the audit

Preliminary assessment and analysis of the peers:
The university presents in the self-assessment report and staff handbook extensive data about the number and overall qualifications of the staff members for the study programme. The programme owns a teaching team consisting of 14 full-time lecturers, 100% of whom hold a master's degree and 87.5% a doctor's degree. 3 staff members have the status of professor and 9 associate professor. Lecturers of this study programme have received many awards and honorary titles in recent years, such as Shanghai Excellent Academic Leader, Shuguang Scholar, Pujiang Scholar ect., which reflects the good performance of the staff members.

Lecturers of the degree programme "Information Security" are recruited through two channels. Applicants who have completed their PhD or post-doctoral studies can be employed as lecturers. These also include applicants who have completed their doctorate at a foreign university and have international experience. The second group of applicants are industry professionals with engineering experience.

SUEP specifies the rated teaching workload of 300 hours per full-time staff. During the discussions, the peers learn that there are basically two types of staff members. The first type focuses mainly on teaching activities of general courses and the second type leads research projects and conduct the teaching of subject-specific courses. In addition to teaching and research activities, each staff member must arrange adequate time to answer students' questions after class, review homework, provide guidance on innovation and entrepreneurship, and they serve as head teacher, provide the students with guidance on scientific innovations.

From the Appendix U "Teacher Evaluation Summary" it can be seen that the students are generally very satisfied with the teaching members, since most of them receive a grade of over 95 out of 100. The peers praise the arrangement of the staff members and agree that the students get adequate guidance on relevant courses and thus achieve the learning outcomes.

Criterion 4.2 Staff development

Evidence:

- Self-Assessment Report
- Discussions with the programme coordinators and teaching staff during the audit

Preliminary assessment and analysis of the peers:

SUEP and the College of Computer Science and Technology provide the teaching staff with various training opportunities, allowing them to obtain adequate ability to engage in the disciplinary development and teaching process of the study programme. Every year, the university organizes one-month pre-job trainings for new teaching staff, in order to improve their teaching philosophy and professional skills. Also development programs are launched to help more staff members to be qualified for national research projects. In addition, the university provides funding and personnel support to encourage the teaching staff, especially young staff members to go abroad for sabbaticals. In order to develop a high-quality teaching team having "double professional titles" and international vision, the university established double-professionally-titled teacher development mechanism. Under this program, staff members aged 45 or below will be sent to work in an enterprise for one year. According to the relevant regulations, any lecturer will not be granted senior professional title until he/she has at least one-year engineering practice experience in the industry.

SUEP supports research in different ways. The faculty follows the philosophy "research leads teaching", developing and improving the research ability and teaching quality of mid-aged and young staff members by hosting national research projects and building high-level experiment and practice platforms. Over the past 5 years, staff members of this programme have undertaken more than 30 national, ministerial and provincial research projects including the State Key Program of National Natural Science Foundation of China, published over 100 papers, completed the construction of high-level experimental and practical platforms. During the audit, part of the staff members of the programme "Information Security" presented their ongoing projects to the expert team. Overall, the peers gain a good impression about the research work at SUEP.

In conclusion, the experts are of the opinion that the university attaches great importance to the further development of the staff members and sufficient measures are in place. Research activities are supported at different levels as well.

Criterion 4.3 Funds and equipment

Evidence:

- Self-Assessment Report
- Information of laboratories with pictures and videos
- Partnership Agreements
- Discussions during the audit

Preliminary assessment and analysis of the peers:
From the pictures and videos presented, the peer group is able to gain a comprehensive impression of the new campus of SUEP, including modern facilities, laboratories and libraries. Due to the combined support from national as well as regional government, the university management confirms that they dispose of an excellent funding for the future development. In the past three years, the fund that the college invested in staff and programme development, in scientific research and equipment purchase of Information Security Programme has been growing every year.

In addition to the support from government, the university benefits from cooperation with the industry, which also funds and supports joint research projects. There exists a long-standing mechanism of university-enterprise joint talent training, including organization system, operation and management mechanism, etc. Partners are either leading Internet companies with closed ties with the Information Security programme, or relevant companies of power grid having a certain abilities of electric power research and electric power information engineering design.

SUEP has an department responsible for the planning, implementation and management of the laboratories and equipment. The laboratories related to this programme mainly include ordinary labs and professional labs. The university attaches high importance to laboratory safety and takes a series of measures to improve the laboratory safety awareness of all staff and students. From the discussions with the students, the experts learn that they are very satisfied with the modern equipment and facilities. The staff members also confirm that the laboratory equipment is sufficient for both teaching and research activities.

In summary, the peers are convinced that the existing funding, joint research activities with industry partners and laboratory equipment are adequate for the performance of the programme under review.

Final assessment of the peers after the comment of the Higher Education Institution regarding criterion 4:

As the university did not comment the report the peers confirm their preliminary assessment.

5. Transparency and documentation

Criterion 5.1 Module descriptions

Evidence:

- Self-Assessment Report
- Module descriptions
- Discussions during the audit

Preliminary assessment and analysis of the peers:
After reviewing the module descriptions, the peers confirm that they include all necessary information about the individual courses. In particular, the descriptions provide comprehensive information about the person(s) responsible for each course, the different types of learning and teaching, the methods of assessment used, the workload calculation and credit point attribution ect.

With regard to the content described in the module handbook, however, the reviewers notice that many courses have extremely broad content. The experts take the course Applied Cryptography as an example to discuss with both the programme coordinators and the lecturers in order to understand whether and how all the content can be covered within one semester. In the end, the experts find out that some of the topics listed were already taught in courses in the previous semester(s) and therefore occur repeatedly.

In order to avoid repetitions and provide more transparency to the students, the peers require to reorder and restructure the courses and content and also indicate the clear competence level that must be reached by the students. In this way, the modules are restructured so that it becomes clearer where the basics are taught and which are the specific topics in the higher semesters.

Criterion 5.2 Diploma and Diploma Supplement

Evidence:

- Sample of Bachelor's Degree Certificate and Graduation Certificate
- Sample Diploma Supplement
- Self-Assessment Report
- Discussions during the audit

Preliminary assessment and analysis of the peers:
The university presented samples of the Bachelor's Degree Certificate and Graduation Certificate, as well as Diploma Supplement along with the self-assessment report. After the review of the documents, the experts notice that the Diploma Supplement only lists courses the students attend and the achieved grade and credit points. Necessary information such as the qualifications profile of the study programme and the classification of

the programme in the education system are however missing, thus the competences a student achieves, is not clear to the potential employer or other third parties.

In order to provide better transparency towards the employers or other third parties, the experts require that the qualifications profile is supplemented.

Criterion 5.3 Relevant rules

Evidence:

- Self-Assessment Report
- Exam Regulations
- Discussions during the audit

Preliminary assessment and analysis of the peers:
From the documents provided as well as the discussions during the audit, the peers assess that SUEP follows a policy of transparent and open rules and regulations.

Students receive right at the beginning of their study a printed handbook, which includes teaching management regulations, student affairs management regulations, student honor and reward schemes and student discipline regulations. All aspects of admission, examination, internship, Bachelor thesis, disqualification and grading policy and procedure are addressed in the relevant study and exam regulations and are reportedly also outlined on the website of the university. Discussions with the students confirm that they feel well informed about relevant regulations and are comfortable about the access to any information needed for the study.

Final assessment of the peers after the comment of the Higher Education Institution regarding criterion 5:

As the university did not comment the report the peers confirm their preliminary assessment.

6. Quality management: quality assessment and development

Criterion 6 Quality management: quality assessment and development

Evidence:

- Self-Assessment Report

- Exam Regulations and Teaching Quality Assurance, Appendix G
- Teaching Quality Assessment Form of Course, Appendix O
- Sample from Graduate Training Quality Evaluation Data Report 2019, Appendix Q1
- Teacher Evaluation Summary, Appendix U
- Discussions during the audit

Preliminary assessment and analysis of the peers:
The experts see that the SUEP has defined and implemented comprehensive quality assurance measures, feedback cycles and follow-up processes. Thus, the teaching process is subject to the scrutiny of student evaluations and graduates' surveys. Student statistics such as admission and graduation rates as well as examination scores are analyzed and results used to remedy shortcomings of the degree programmes and to provide adequate support for students. Additionally, the peers gain the impression that the university undertakes efforts to communicate with the industry and get feedbacks from employers and cooperating companies regarding the demands of the industry and new technological developments, which industry representatives explicitly confirm. The curriculum of the study programme is thus explicitly developed and further adapted according to the technological and social needs. Principles of the recruitment strategy of teaching staff along with a string of incentives to improving the individual teaching capabilities are further elements of a common understanding of quality.

Regarding the evaluation of teaching, the SUEP conducts two types of evaluations of the lecturers and their teaching performance, as the programme coordinators report, namely the internal and external evaluation. The internal evaluation is carried out at two levels, the university level and the faculty level. Teaching monitoring organized by the university takes place three times a semester, at the beginning, in the middle and at the end of each semester. The faculty establishes in addition a teaching supervision committee and supervises the implementation of the curricula and teaching quality. Inspections mainly include: lesson plan, lesson notes, classroom teaching, student learning effects, examination papers, and bachelor thesis process etc. The teaching supervision committee makes suggestions to the teaching staff on teaching methods and will evaluate the teaching performance from many angles, the results of which them gives important indicator for promotion.

In addition, external assessments are carried out and the participants of the assessment mechanism include superior management departments, employers, universities, teachers and students. Every 5 years, the Minstry of Education of China (MoE) conducts on the national level a teaching assessment and audit for all study programmes at the Chinsese universities. The Shanghai Municipal Education Commission also evaluates the undergraduate

study programmes which are involved in the classification evaluation of the universities every year.

According to the programme coordinators, students' evaluation on teaching quality plays an important role in the teaching evaluation system. Every student must submit a teaching quality evaluation form before selecting courses at the beginning of every semester. Important criteria in the survey are, for example, punctuality, fairness and willingness to provide assistance to the students who need help. The experts ask how to proceed if there is a conflict between the teaching staff and the students. Programme coordinators report that an education management system is in place that analyzes students' opinions. If problems are reported about one single teaching staff by several students, discussions will take place with the students and the staff concerned as well, in order to understand the problem objectively and to find common solutions.

In summary, the peers gain the impression that the quality assurance system at SUEP and within the faculty is well balanced and involves all relevant stakeholders. The measures ensure that the quality of the study programme sees continuous improvement and that the assessment by the students plays an important role in the university's quality management.

Final assessment of the peers after the comment of the Higher Education Institution regarding criterion 6:

As the university did not comment the report the peers confirm their preliminary assessment.

D Additional Documents

Before preparing their final assessment, the panel asks that the following missing or unclear information be provided together with the comment of the Higher Education Institution on the previous chapters of this report:

D 1. Diploma Supplement
D 2. Graphic which illustrates the correlation of the different study programmes offered by the faculty
D 3. Plan for further development regarding Master programmes

E Summary: Peer recommendations (31.05.2022)

Taking into account the additional information and the comments given by the university the peers summarize their analysis and **final assessment** for the award of the seals as follows:

Degree Programme	ASIIN Seal	Maximum duration of accreditation	Subject-specific label	Maximum duration of accreditation
Ba Information Security	With requirements for one year	30.09.2027	Euro-Inf®	30.09.2027

Requirements

A 1. (ASIIN 1.3) Ensure that the fundamentals of IT Security like Information Theory, Coding Theory, Complexity Theory are included transparently in the curriculum.
A 2. (ASIIN 5.1) Ensure that modules are restructured so that it becomes clearer where the basics are taught and which are the specific topics in the higher semesters.
A 3. (ASIIN 5.2) Ensure that the Diploma Supplement provides information on student's qualifications profile.

Recommendations

E 1. (ASIIN 1.1) It is recommended to improve the conversational English competence of the students and staff members, for example by adding special modules or by teaching IT Security modules in English.
E 2. (ASIIN 1.3) It is strongly recommended to structure the specialization areas and increase the number of elective modules.
E 3. (ASIIN 2.1) It is recommended to further extend the student exchange programs.

F Comment of the Technical Committee 04 – Informatics/Computer Science (15.06.2022)

Assessment and analysis for the award of the ASIIN seal:

The Technical Committee deems that the intended learning outcomes of the degree programme do comply with the Subject-Specific Criteria of the Technical Committee 04 – Informatics/Computer Science. The committee follows the assessments and analysis of the peers and adds only one small editorial change to A 2.

Assessment and analysis for the award of the Euro-Inf® Label:

The Technical Committee deems that the intended learning outcomes of the degree programme do comply with the Subject-Specific Criteria of the Technical Committee 04 – Informatics/Computer Science. The committee follows the assessments and analysis of the peers and adds only one small editorial change to A 2.

The Technical Committee 04 – Informatics/Computer Science recommends the award of the seals as follows:

Degree Programme	ASIIN Seal	Maximum duration of accreditation	Subject-specific label	Maximum duration of accreditation
Ba Information Security	With requirements for one year	30.09.2027	Euro-Inf®	30.09.2027

Requirements

A 1. (ASIIN 1.3) Ensure that the fundamentals of IT Security like Information Theory, Coding Theory, Complexity Theory are included transparently in the curriculum.

A 2. (ASIIN 5.1) Ensure that the module catalogues are restructured so that it becomes clearer where the basics are taught and which are the specific topics in the higher semesters.

A 3. (ASIIN 5.2) Ensure that the Diploma Supplement provides information on student's qualifications profile.

Recommendations

E 1. (ASIIN 1.1) It is recommended to improve the conversational English competence of the students and staff members, for example by adding special modules or by teaching IT Security modules in English.

E 2. (ASIIN 1.3) It is strongly recommended to structure the specialization areas and increase the number of elective modules.

E 3. (ASIIN 2.1) It is recommended to further extend the student exchange programs.

G Decision of the Accreditation Commission (24.06.2022)

Assessment and analysis for the award of the subject-specific ASIIN seal:

The Accreditation Commission discusses the procedure and agrees with the proposed requirements and recommendations of the peer group and the Technical Committee.

Assessment and analysis for the award of the Euro-Inf® Label:

The Accreditation Commission discusses the procedure and agrees with the proposed requirements and recommendations of the peer group and the Technical Committee.

The Accreditation Commission decides to award the following seals:

Degree Programme	ASIIN Seal	Maximum duration of accreditation	Subject-specific label	Maximum duration of accreditation
Ba Information Security	With requirements for one year	30.09.2027	Euro-Inf®	30.09.2027

Requirements and recommendations for the applied labels

Requirements

A 1. (ASIIN 1.3) Ensure that the fundamentals of IT Security like Information Theory, Coding Theory, Complexity Theory are included transparently in the curriculum.

A 2. (ASIIN 5.1) Ensure that the module descriptions are restructured so that it becomes clearer where the basics are taught and which are the specific topics in the higher semesters.

A 3. (ASIIN 5.2) Ensure that the Diploma Supplement provides information on student's qualifications profile.

Recommendations

E 1. (ASIIN 1.1) It is recommended to improve the English competence of the students and staff members, for example by adding special modules or by teach-ing IT Security modules in English.

E 2. (ASIIN 1.3) It is strongly recommended to structure the specialization areas and in-crease the number of elective modules.

E 3. (ASIIN 2.1) It is recommended to further extend the student exchange programs

H Fulfilment of Requirements (23.06.2023)

Requirements

For all degree programmes

A 1. (ASIIN 1.3) Ensure that the fundamentals of IT Security like Information Theory, Coding Theory, Complexity Theory are included transparently in the curriculum.

Initial Treatment	
experts	fulfilled Vote Justification: 3 courses were added to the curriculum, the content of these courses are in the module handbook: coding theory is in S1 and S2, information theory is in S4, complexity theory is in S3
TC 04	fulfilled Vote: unanimous Justification: The Technical Committee follows the assessment of the experts without any changes.
AC	fulfilled Vote: unanimous Justification: The Accreditation Commission follows the assessment of the experts and the TC 04 without any changes.

A 2. (ASIIN 5.1) Ensure that the module descriptions are restructured so that it becomes clearer where the basics are taught and which are the specific topics in the higher semesters.

Initial Treatment	
experts	fulfilled Vote Justification: The module descriptions were restructured accordingly.
TC 04	fulfilled Vote: unanimous Justification: The Technical Committee follows the assessment of the experts without any changes.
AC	fulfilled Vote: unanimous Justification: The Accreditation Commission follows the assessment of the experts and the TC 04 without any changes.

A 3. (ASIIN 5.2) Ensure that the Diploma Supplement provides information on student's qualifications profile.

Initial Treatment	
experts	fulfilled Vote Justification: The diploma contains much more information, especially regarding learning outcomes/student's qualifications.
TC 04	fulfilled Vote: unanimous Justification: The Technical Committee follows the assessment of the experts without any changes.
AC	fulfilled Vote: unanimous Justification: The Accreditation Commission follows the assessment of the experts and the TC 04 without any changes.

Draft resolution for the AC Programmes on 23.06.2023:

Degree programme	**ASIIN-label**	**Subject-specific label**	**Accreditation until max.**
Ba Information Security	All requirements fulfilled	Euro-Inf	30.09.2027

Appendix: Curriculum

The following **curriculum** is presented:

Course Type	Course Module	Course Code		ECTS Credit	ECTS Hours	Work Load (Hours)		Credit in Each Semester						
						Contact Hours	Self Study	S1	S2	S3	S4	S5	S6	S7	S8
General Course 15 credits	National situation cognition / social cognition	6000184	Essentials of Chinese Modern History	3	90	48	42	3							
	International communication	2900141-42	College English(1)	4	120	64	56	4							
	Career development ability	7000001-04	Physical Education(1)	2	60	32	28	2							
		3800005	College Entrance Education and Career Planning	1	30	16	14	1							
		8300019	Military Theory	2	60	32	28	2							
		8300018	Military Skills	2	60	40	20	2							
		6000183	Energy China	1	30	16	14	1							
		2900129	The Light of the Silk Road												
		2100053	Conspectus of Energy and Electric Power												
Discipline Basis 14 Credits	Science fundamentals	2800007	Linear Algebra	2	60	32	28	2							
		2800001-2	Advanced Mathematics(1)	6	180	96	84	6							
	Engineering fundamentals	2500085	C Language Programming A	4	120	64	56	4							
		2500105	Introduction to Computer Science	2	60	32	28	2							
Summary				29	870	472	398	29							
General Course 11 credits	National situation cognition / social cognition	6000212	Ideological Morality and Rule of Law	3	90	48	42		3						
		6000020-22	Current Event and Policy(1)	1	30	16	14		1						
	International communication	2900141-42	College English(2)	4	120	64	56		4						
	Career development ability	7000001-04	Physical Education(2)	2	60	32	28		2						
		3800006	Mental Health for College Students	1	30	16	14		1						
Discipline Basis 20 Credits	Science fundamentals	2800001-2	Advanced Mathematics(2)	5	150	80	70		5						
		2800021-22	College Physics (1)	3	90	48	42		3						
		2800023-24	Experiments of Physics (1)	2	60	32	28		2						
		2505006	Discrete Mathematics	3	90	48	42		3						
	Engineering fundamentals	2505414	Object-oriented Programming(C++)	4	120	48	72		4						
		2525059	High-level Programming Language Course Practice	3	90	40	50		3						
Summary				31	930	472	458		31						
General Course 10 credits	National situation cognition / social cognition	6000016	Basic Principles of Marxism	3	90	48	42			3					
	International communication	2900120	Integrated Course for EGAP	2	60	32	28			2					
		2900166	English of Energy and Electric Power	2	60	32	28			2					
	Career development ability	7000001-04	Physical Education(3)	2	60	32	28			2					
		2505294	Practice of Cognition	1	30	20	10			1					
Discipline Basis 21 Credits	Science fundamentals	2800021-22	College Physics (2)	3	90	48	42			3					
		2800023-24	Experiments of Physics (2)	1	30	16	14			1					
		2800214	Probability and Statistics A	4	120	64	56			4					
	Engineering fundamentals	8200011	Engineering Practical Training	2	60	40	20			2					
		2600090	Digital Circuit and Digital Logic	3	90	48	42			3					
		2600021	Electronic Testing & Lab Technology（Digial)	1	30	16	14			1					
		2505483	Data Structures(C++)	5	150	80	70			5					
		2505309	Data Structure Course Project	2	60	20	40			2					
Summary				31	930	496	434			31					

Appendix: Curriculum

Course Type	Course Module	Course Code		ECTS Credit	ECTS Hours	Work Load (Hours)		Credit in Each Semester							
						Contact Hours	Self Study	S1	S2	S3	S4	S5	S6	S7	S8
General Course 6.5 credits	National situation cognition / social cognition	6000185	Introduction to Mao Zedong`s Thoughts and Theoretical System of the Chinese Characteristic Socialism	5	150	80	70				5				
		6000020-22	Current Event and Policy(2)	0,5	15	8	7				1				
	Career development ability	7000001-04	Physical Education(4)	1	30	16	14				1				
Elective Public Course 4 credits	Humanity and Social Science	Select from General Elective Course of SUEP		1	30	16	14				1				
	Science	Select from General Elective Course of SUEP		1	30	16	14				1				
	English Development	Select from General Elective Course of SUEP		2	60	32	28				2				
Discipline Basis 8 Credits	Engineering fundamentals	2505005	Principle of Computer Configuration	4	120	64	56				4				
		2525001	Introduction to Information Security	4	120	32	88				4				
Professional Course 12 Credits	Fundamentals of Programme / Engineering applications	2505013	Database Principles	8	240	64	176				8				
		2505465	Database Application Practice	4	120	40	80				4				
Summary				30,5	915	368	547				30,5				
Elective Public Course 2 credits	Humanity and Social Science	Select from General Elective Course of SUEP		1	30	16	14					1			
	Arts	Select from General Elective Course of SUEP		1	30	16	14					1			
Professional Course 30 Credits	Fundamentals of Programme / Engineering applications	2525062	Reverse Engineering	4	120	48	72					4			
		2525033	Applied Cryptography	6	180	64	116					6			
		2525027	Applied Cryptography Course Project	2	60	20	40					2			
		2525069	Computer Network and Network Security	6	180	64	116					6			
		2505482	Computer Networks Practice	2	60	20	40					2			
	Professional development	2525054	Machine Learning Based Web Security（Python）	6	180	48	132								
		2525064	Information Hiding（Matlab）	6	180	48	132								
		2525016	Computer Virus Principle and Prevention	4	120	32	88								
		2525056	Capture The Flag	4	120	32	88								
		2525021	Application of Identification-based Information Security Technology	4	120	32	88					10			
		2525057	Security Protocol Analysis and Practice	6	180	48	132								
		2525032	Wireless Network Security	4	120	32	88								
		2525058	Network Attack and Defense Technology	4	120	32	88								
		2525066	Industrial Control Systems Security	4	120	32	88								
Summary				32	960	238	722					32			
General Course 4.5 credits	National situation cognition / social cognition	6000020-22	Current Event and Policy(3)	0,5	15	8	7						1		
	Career development ability	2700184	College Employment and Entrepreneurship Practice	1	30	8	22						1		
		2700172	Start up Basis for College Students	1	30	16	14						1		
		2525068	Training and Practice on the Innovation and Entrepreneurship	2	60	40	20						2		
Elective Public Course 2 credits	Arts	Select from General Elective Course of SUEP		1	30	16	14						1		
	Science	Select from General Elective Course of SUEP		1	30	16	14						1		
Professional Course 24 Credits	Fundamentals of Programme / Engineering applications	2505125	Theory of Operating Systems	6	180	48	132						6		
		2525026	Operating System Course Project	2	60	20	40						2		
		2505464	Compiling Principles	6	180	48	132						6		
	Professional development	2525054	Machine Learning Based Web Security（Python）	6	180	48	132								
		2525064	Information Hiding（Matlab）	6	180	48	132								
		2525016	Computer Virus Principle and Prevention	4	120	32	88								
		2525056	Capture The Flag	4	120	32	88								
		2525021	Application of Identification-based Information Security Technology	4	120	32	88						10		
		2525057	Security Protocol Analysis and Practice	6	180	48	132								
		2525032	Wireless Network Security	4	120	32	88								
		2525058	Network Attack and Defense Technology	4	120	32	88								
		2525066	Industrial Control Systems Security	4	120	32	88								
Summary				30,5	915	210	705						30,5		

Appendix: Curriculum

Course Type	Course Module	Course Code		ECTS Credit	ECTS Hours	Work Load (Hours)		Credit in Each Semester						
						Contact Hours	Self Study	S1	S2	S3	S4	S5	S6	S7	S8
General Course 4.5 credits	National situation cognition / social cognition	6000020-22	Current Event and Policy(3)	0,5	15	8	7						1		
	Career development ability	2700184	College Employment and Entrepreneurship Practice	1	30	8	22						1		
		2700172	Start up Basis for College Students	1	30	16	14						1		
		2525068	Training and Practice on the Innovation and Entrepreneurship	2	60	40	20						2		
Elective Public Course 2 credits	Arts	Select from General Elective Course of SUEP		1	30	16	14						1		
	Science	Select from General Elective Course of SUEP		1	30	16	14						1		
Professional Course 24 Credits	Fundamentals of Programme / Engineering applications	2505125	Theory of Operating Systems	6	180	48	132						6		
		2525026	Operating System Course Project	2	60	20	40						2		
		2505464	Compiling Principles	6	180	48	132						6		
	Professional development	2525054	Machine Learning Based Web Security（Python）	6	180	48	132								
		2525064	Information Hiding（Matlab）	6	180	48	132								
		2525016	Computer Virus Principle and Prevention	4	120	32	88								
		2525056	Capture The Flag	4	120	32	88								
		2525021	Application of Identification-based Information Security Technology	4	120	32	88						10		
		2525057	Security Protocol Analysis and Practice	6	180	48	132								
		2525032	Wireless Network Security	4	120	32	88								
		2525058	Network Attack and Defense Technology	4	120	32	88								
		2525066	Industrial Control Systems Security	4	120	32	88								
Summary				30,5	915	210	705						30,5		
Professional Course 22 Credits	Fundamentals of Programme / Engineering applications	2525035	Computer System Security	6	180	64	116							6	
		2525028	Course Project of Compuetr System Security	4	120	20	100							4	
	Professional development	2525054	Machine Learning Based Web Security（Python）	6	180	48	132								
		2525064	Information Hiding（Matlab）	6	180	48	132								
		2525016	Computer Virus Principle and Prevention	4	120	32	88								
		2525056	Capture The Flag	4	120	32	88								
		2525021	Application of Identification-based Information Security Technology	4	120	32	88							12	
		2525057	Security Protocol Analysis and Practice	6	180	48	132								
		2525032	Wireless Network Security	4	120	32	88								
		2525058	Network Attack and Defense Technology	4	120	32	88								
		2525066	Industrial Control Systems Security	4	120	32	88								
6 Credits	Bachelor Thesis	2525067	Graduation Designing Project(Thesis)	6	780	260	520							6	
Summary				28	1440	356	1084							28	
General Course 8 credits	Career development ability	2525060	Graduation Internship	8	240	40	200								8
20 Credits	Bachelor Thesis	2525067	Graduation Designing Project(Thesis)	20	780	260	520								20
Summary				28	1020	300	720								28