ASIIN Seal & EQAS-Food Label

Accreditation Report

Bachelor's Degree Programmes
Food Quality and Safety
Food Science and Engineering

Provided by
Shanghai Ocean University,

Version: 16.03.2021

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]
食品质量与安全	Food Quality and Safety	ASIIN, EQAS-Food Label	/	TC 08
食品科学与工程	Food Science and Engineering	ASIIN	/	TC 08

Date of the contract: 18.10.2018 **Submission of the final version of the self-assessment report:** 17.06.2020 **Date of the audit:** 15.-17.12.2020 **at:** Due to continuing travel and safety restrictions caused by the Covid-19 pandemic, the audit was carried out digitally in agreement with the principal decision of the Accreditation Commission for Study Programmes.	
Peer panel: Prof. Dr. Gerhard Flick, University of Applied Sciences Neubrandenburg, Germany Dr. Ingy Moustafa Hashad, Nutritional Consultant for Hero Baby in Egypt and the Middle East , Health Care Nutritionist at In Shape Clinic in Cairo Linlin Huang, Student at the University of Shanghai for Science and Technology Prof. Dr. Cristina Luisa Silva, Universidad Católica Potuguesa, Portugal	
Representative of the ASIIN headquarter: Christin Habermann	

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[1] ASIIN Seal for degree programmes; EQAS-Food Label

[2] TC: Technical Committee for the following subject areas: TC 08 - Agriculture, Nutritional Sciences and Landscape Architecture

Responsible decision-making committee: Accreditation Commission for Degree Programmes	
Criteria used:	
European Standards and Guidelines as of 15.05.2015	
ASIIN General Criteria as of 28.03.2014	
Subject-Specific Criteria of Technical Committee 08 – Agronomy, Nutritional Sciences and Landscape Architecture as of 09.12.2011	
European Quality Assurance for Food Study Programmes – Food Science and Technology, Procedures, Criteria and Standards as of 07.01.2016	

B Characteristics of the Degree Programmes

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
Food Quality and Safety	Bachelor of Engineering (B.Eng.)	/	6	Full time	/	8 semesters	180 ECTS	Fall semester 01.09.2004
Food Science and Engineering	Bachelor of Engineering (B.Eng.)	/	6	Full time	/	8 semesters	180 ECTS	Fall semester 01.09.1994

For the Bachelor's degree programme <u>Food Quality and Safety</u> the institution has presented the following profile in the self-assessment report:

"Food quality and safety program is an integrated major involving food science and engineering, biological science, and management science and engineering. The objectives of the program are: students will acquire good ideological and moral qualities and professional ethics; students will have a strong sense of social responsibility and ethics; students will have capabilities of research work, master the basic research methods and practical skills of the major and related majors; students will be able to read the professional literature in foreign languages and use modern information technology to obtain useful information; students will be able to write scientific papers and have scientific communication; students will have the basic abilities of food analysis and inspection, safety evaluation, quality management, scientific research and business management in food production, distribution and consumption. Students are trained to have the basic ability to engage in the whole process of food quality control management and safety assurance, understand the trends of domestic and foreign food quality and safety, and formulate and break technical barriers.

Students in this program should acquire solid basic knowledge in mathematics, chemistry, management, and food safety science during the four-year study, and pay attention to the hazards in the entire food chain, especially food raw materials, processing, storage and

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

preservation; determine problems in food through inspection and detection, evaluation, etc., and take corresponding measures to control and manage, to ensure that food safety risks are controllable.

For the Bachelor's degree programme <u>Food Science and Engineering</u> the institution has presented the following profile in the self-assessment report:

"Food science and engineering program focuses on theories, methods, techniques and practices in food science, food engineering and food logistics engineering. It also focuses on cultivating talents with good scientific and cultural literacy, a high sense of social responsibility and innovation, and systematic basic knowledge, skills and competences such as food science and engineering, food cold chain logistics engineering, etc. Students will be employable in all aspects of the food industry and related education, research, health supervision and other departments related to food or related product research and development, quality control, management, marketing and teaching and other aspects. Students are trained to be practical talent for research and application with an international perspective, lifelong learning ability and versatile development.

Students in this major should acquire solid basic knowledge in mathematics, natural sciences, humanities and social sciences during the four-year study; systematically master the professional knowledge in the field of food science and engineering, and the relevant knowledge in economics and management."

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:
- Appendix K - Diploma Supplements for both degree programmes
- Appendix B - Module Handbook for both degree programmes
- Objective-Module Matrixes for both degree programmes
- Self-Assessment Report
- Discussions during the audit

Preliminary assessment and analysis of the peers:

For the degree programmes under review, the higher education institution (HEI) presents an extensive description of learning outcomes in the self-assessment report (SAR). This description is accompanied by learning module matrices for each programme, matching learning objectives, modules and the ASIIN Subject-Specific Criteria (SSC) as well as the criteria for the EQAS-Food Label. A short English description of the learning outcomes is also presented in the Diploma Supplements for both degree programmes. In addition, the module descriptions include the learning outcomes of each individual module.

The peers discuss the learning outcomes of each degree programme, which can be found in their entirety in the Annex to this accreditation report, with regard to the following criteria: the level of academic qualification aimed at, the respective ASIIN subject-specific label (SSC), whether the intended qualification profiles allow the students to take up an occupation corresponding to their education, which stakeholders are involved in the continuous assessment and further development of the objectives. The peers refer to the SSC of the Technical Committee Agriculture, Nutritional Sciences and Landscape Architecture as a

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[4] This part of the report applies also for the assessment for the 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.

basis for judging whether the objectives and intended learning outcomes of the two degree programmes, as defined by Shanghai Ocean University (SHOU) correspond. The peers thus judge the transparency of the qualification objectives but especially their accordance with the respective SSC and come to the following conclusion: The objectives and intended learning outcomes of both degree programmes under accreditation are consistent with the EQF levels aimed at and adhere to the relevant ASIIN SSC. The objectives and learning outcomes are clearly defined and published in the Diploma Supplement as well as on the university's website.

As has been mentioned already, the faculty appears keen to equip the graduates of the <u>Food Quality and Safety programme</u> with competences fitting international standards as well. In this respect, the peers take note that the faculty further applies for the EQAS-Food Label of the International ISEKI-Food Association aside from the ASIIN seal. The programme coordinators provide evidence that the intended learning outcomes at the programme level also match the relevant subject-specific criteria of the EQAS-Food Label. The peers agree that the learning outcomes in the areas of Food Safety and Microbiology, Food Chemistry and Analysis, Food Processing and Engineering, Quality Management and Law, and, finally, Generic Competences are largely equivalent to the exemplary learning outcomes presented in the IFA standards[5].

Subject-specific competences and transferable skills conveyed in the programme according to the matrices and the module descriptions from the peers' point of view are indicative for a Bachelor's degree programme at level 6 of the European Qualification Framework (EQF).

The peers discuss with the programme coordinators of SHOU if and how the programme objectives and programme learning outcomes are regularly reviewed and updated. They learn that every four years the curricula are reviewed by a range of stakeholders, including representatives from the industry, students and alumni with regard to the latest development of market and society. This review results in a so-called "Cultivation Plan". In addition, SHOU holds annual seminars with alumni and representatives from the industry in which they discuss the curricula. As such, the study programmes undergo minor adaptations every year, while big changes, such as the inclusion of new learning outcomes or modules, are undertaken every four years. The peers are very satisfied knowing that the objectives and learning outcomes are continuously updated and believe that especially the input of

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[5] See EQAS-Food Award. European Quality Assurance For Food Studies Programmes – Food Science and Technology, Procedures, Criteria and Standards as of 2017-01-09, available at: https://www.iseki-food.net/webfm_send/2440 (Download: 18.01.2019)

the external stakeholders ensures that students are best qualified for a successful career after graduation.

The peers inquire the different employment options for both degree programmes. They learn that graduates of the Ba Food Quality and Safety usually find employment in higher education institutions, government institutions or the industry in areas of food safety testing, food safety evaluation, quarantine, marketing management, food safety control or food safety supervision. Graduates of the Ba Food Science and Engineering work in the industry, in research institutions, higher education institutions or government institutions in areas of food production, food analysis, food product marketing as well as food logistics and distribution. Around 10% of students will continue with the Master's degree, due to employment opportunities already being available after finishing the undergraduate degree.

In summary, the peers are very satisfied with the qualification objectives and learning outcomes of each degree programme as they match EQF, ASIIN SSC criteria and criteria of EQAS-Food Label, are continuously evaluated and developed by all relevant stakeholders and are published transparently.

Criterion 1.2 Name of the degree programme

Evidence:
- Appendix K - Diploma Supplements for both degree programmes
- Appendix B - Module Handbook for both degree programmes
- Self-Assessment Report
- Discussions during the audit

Preliminary assessment and analysis of the peers:
The peers agree that the names of the degree programmes adequately reflect their respective aims, learning outcomes and curricula.

Criterion 1.3 Curriculum

Evidence:
- Appendix D - Curricula for both degree programmes
- Appendix B - Module handbooks for both degree programmes
- Self-Assessment Report
- Discussions during the audit

Preliminary assessment and analysis of the peers:

Both degree programmes have a duration of four years. The curriculum of the Ba Food Quality and Safety is divided into eight groups of modules: chemistry, mathematics, biology, food quality management and safety control, foreign language, general courses, practical training, and bachelor thesis. Similarly, the curriculum of the Ba Food Science and Technology is also divided into eight groups of modules: natural science, food science, food engineering, electives, general courses, foreign language, practice training and bachelor thesis. In their self-assessment report as well as the module handbook, SHOU explains in detail the individual competences and skills that are associated with each of these module groups and which individual modules are contained in which group. The peers thus gain a distinct overview of the curricular content of both degree programmes (cf. Annex to this accreditation report).

The presented curricula of both degree programmes leave the expert panel with the impression that these curricula offer a comprehensive overview and sound basis of food quality and safety and food science and technology, respectively. The curricula appear reasonable and meaningfully designed, thereby ensuring that students will achieve the above-mentioned learning outcomes. In particular, the auditors come to see that the students gain the skills and competences defined by the SSC of the Technical Committee 08. In addition, the curriculum of the Ba Food Quality and Safety also matches the standards described by IFA (EQAS-Food Label). The skills and competences students are expected to acquire in the broad fields of food safety and microbiology, food chemistry and analysis, food processing and engineering, quality management and food law are not only adequately reflected in the Learning Objective Matrix (as part of the SAR) but also plausibly implemented and operationalized in the curricula of the programmes. This is transparently indicated in the Learning Objective matrix and generally evidenced in the module descriptions.

However, for the Food Quality and Safety programme, the peers ask whether any specific modules on quality management exist, especially with regard to international safety norms and regulations. They are content to hear that students must take the mandatory module "Standards and Regulations" which focuses primarily on international (EU and US) regulations. In addition, questions of legal international food regulations or certifications are included in a variety of other modules whenever possible.

For the Food Science and Engineering programme, the peers inquire whether topics such as "transport phenomenon" or "modelling and simulation" are taught. They are satisfied upon learning that these areas are covered in modules such as "Technology of Food Storage in Low Temperature" or "Food Logistic Information Technology".

Upon discussions with the students as well as the representatives from the industry, the peers learn that both groups wish some skills and competencies to be more pronounced in the curricula of both degree programmes. For example, while the representatives from the industry are generally very happy with the quality of the alumni, they nonetheless feel that communication and presentation skills as well as leadership and organizational competences of the students are oftentimes lacking. The programme coordinators have already been made aware of this and have begun to offer extracurricular activities for students to advance those skills. For example, students organize community events in which they inform the public about certain aspects of food production or food quality. This enables them to develop their communication as well as their organizational skills. The peers view this as a good starting point but recommend increasing the communication and presentation skills as well as the leadership and organizational competences of the students. In addition, the representatives from the industry also believe that it is beneficial to the students if they deepen their knowledge of marketing, finance or management. Here, the peers recommend establishing a few elective module that aid the students in further developing these skills.

Regarding the internationalisation strategy of the university and its implementation in the Faculty of Food Science and Technology, the peers welcome the mandatory English courses in the curriculum. If the students were either to work in international companies or to continue their studies in Master or PhD programs abroad, they will benefit from acquiring English skills early on in their education. During the discussion with the students, they wished for more English language courses as well as modules taught in English. Especially the latter would enable them to understand technical vocabulary and utilize it in an international working environment. The peer panel therefore suggests offering more language courses or modules taught in English in order to increase the English speaking abilities of the students.

The peer panel generally values the strong connection between the university and the industry, especially with regard to the regular excursions, trainings and the mandatory internship (see section 2.1).

In summary, the peers gain the impression that the overall objectives and learning outcomes of the degree programmes are systematically substantiated and updated within the individual modules and that the students gain the necessary skills, knowledge and competences for a successful career in local, national or even international companies and organisations.

Criterion 1.4 Admission requirements

Evidence:

- Appendix S – Admissions Statistics 2014-2018

- Self-Assessment Report

- Discussions during the audit

Preliminary assessment and analysis of the peers:

The peers understand from the documentation and the discussions on site, that the admission to Bachelor's degree programmes in China is centrally regulated and organised by the government. Graduates of secondary schools take the National University Entrance Exams (Gaokao). Based on the results, students may choose from subjects at Universities distinguished in three categories (40 elite Universities in the highest level, 100 key provincial Universities – among those the SHOU – at second level and the rest in the third category of general Universities). Students apply with their results to those Universities eligible to them and the Universities follow their own admission procedure. If students are declined although they fulfil the basic entry requirements, Universities have to explain why they were not admitted at last. Since an admission reform in 2016, programmes of food specialty, including the Bachelor's programmes Food Quality and Safety as well as Food Science and Engineering have participated in the spring admission for one of the biennial admissions. A system for comprehensive evaluation and selection has been adopted which combines the spring college entrance examination results and the school's independent testing and comprehensive quality evaluation. Students admitted through this method have the same student register and curriculum. The spring admission plan includes a quota of 30 students, accounting of 18,75% of the total admission in both degree programmes.

The auditors find the terms of admission to be binding and transparent as they are available on SHOU's website in both Chinese and English. They confirm that the admission requirements support the students in achieving the intended learning outcomes.

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

The university refrains from providing a statement.

In conclusion, the peers considers this criterion to be fulfilled.

2. The degree programme: structures, methods and implementation

Criterion 2.1 Structure and modules

Evidence:

- Appendix K - Diploma Supplements for both degree programmes

- Appendix B - Module Handbook for both degree programmes

- Objective-Module Matrixes for both degree programmes

- Appendix N - Student Score List

- Self-Assessment Report

- Discussions during the audit

Preliminary assessment and analysis of the peers:

The study programmes under review are divided into modules, which comprise a sum of teaching and learning. The panel finds the structure of the modules to be adequate and manageable. Both programmes also include a certain variety of elective courses among which the students can choose in order to develop individual specializations.

The peers learn that the first year is identical in both study programmes. This allows students to decide during the first year, which degree programme they want to choose. In order to help them make that decision, students take evaluations at the end of the first year and may talk to a counsellor or tutor.

As already mentioned, the expert panel positively acknowledges the professional training units included in the curriculum of both programmes with regard to the professional perspectives of students. At SHOUS, there exist two types of practical trainings: a short-term practice training and a long-term internship. For the short-term practice, students will complete practical training session at laboratories on or off-campus and industry-university research bases under the guidance of experienced professionals. These short-term trainings usually last for a day and include areas such as food production (cakes or yoghurts), cognition practice, or food quality evaluation. For long-term practice training students conduct internships at local or national companies. These internships have a duration of seven weeks in the Food Quality and Safety programme and four weeks in the Food Science and Engineering programme.

While the peers generally believe internships and practical trainings to be beneficial for the students' education, they believe that a longer period of working in the industry would aid the students in developing professional skills. This sentiment is mirrored by the students themselves, who wish to spent a longer period of time working in the industry in order to prepare for their future career. In the discussion with alumni of both degree programmes,

the peers learn that they felt unsure about the work environment upon starting their employment, as their degree programme did not offer the opportunity for a longer internship. As such, the peers recommend increasing the students' contact to the industry, either by prolonging the mandatory internship or by offering seminars taught by alumni or industrial representatives.

Mobility

Internationalization is of growing importance for SHOU and the respective programmes. While all students have to take mandatory English language courses, few courses are taught in English (cf. section 1.3). This is one of the reasons that only 4-5 students of each degree programme take the chance to spend a year abroad at a different university. This is in so far unfortunate, as SHOU holds cooperation with many international universities in Japan, South Korea, the United States or Germany and provides scholarships and allowances for students willing to go abroad. Thus, the peers again strongly recommend furthering the English-speaking abilities of the students so they can benefit from these cooperation and financial support. In addition, however, both programmes offer 2-4 week long oversea study tour projects during the summer holidays, which between 50 to 70 students participate in each year.

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

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Criterion 2.2 Work load and credits

Evidence:
- Appendix D - Curricula for both degree programmes
- Appendix B - Module Handbook for both degree programmes
- Self-Assessment Report
- Discussions during the audit

Preliminary assessment and analysis of the peers:
The peers learn that the traditional Chinese credit system is not based on the workload but merely on the contact hours, with 16 theoretical contact hours or 32 practical training contact hours being equivalent to one Chinese credit. To transfer the Chinese credits to ECTS credits, they are multiplied by 1.5. The peers understand the transfer and see that the module descriptions clearly outline the expected workload of students separated by contact hours and time for self-study.

They wonder however, that while both programmes last for four years, students only gain 180 ECTS credits. Whereas in Europe it is customary that one semesters consists of 30 ECTs credits, in UOS is consists of 22 ECTS. The programme coordinators explain that it is a government regulation that mandates 180 ECTS credits in four years but that it is possible for students to finish their studies in three years as well. In the discussion with the students, the peers furthermore learn that they are aware of the amount of credits each course has and are generally satisfied with the distribution of the workload. In addition, the students' workload is regularly surveyed as part of the course evaluations. If constant mismatches between expectation and reality appear, the course contents will be adapted. In conclusion, it is apparent to the peers that the workload is generally suitable; courses are adequately credited and contribute to the study process.

Criterion 2.3 Teaching methodology

Evidence:
- Appendix O – Students Innovative Project Awards and Competition Awards
- Appendix R – Students Innovation Projects List
- Appendix T – Teaching and Research Awards
- Appendix V1 and V2 – Internship Statistics

Preliminary assessment and analysis of the peers:
From the presented material as well as the discussions on site, it becomes apparent that pedagogical skills and adequate teaching methodology are highly valued at SHOU and in the programmes under review. Evaluations of pedagogical skills and methods are frequently performed and workshops and trainings are offered to the teaching staff. Basic courses, such as "Advanced Mathematics", are mostly taught in larger classes with about 60 to 100 students, while professional basic courses are usually taught in smaller classes with about 60 to 70 students. However, for experimental, approximately 30 to 40 students participate in each class. Some modules not only include theoretical courses, but also experimental courses related to the theoretical teachings. In addition to in-class teachings, practical training is an important part of undergraduate education at SHOU. The university holds a national experimental teaching demonstration centre for food science and engineering, a Shanghai engineering centre as well as a key aquatic product quality safety and risk assessment laboratory of the Ministry of Agriculture, which provide great conditions for practical and experimental work (cf. section 4.3 of this report). In addition, the college has established various off-campus practice bases with some partnering enterprises where students may also spend time to do practical work. Each student must participate in professional comprehensive experiments, course projects, innovation and entrepreneurship training, business practice training as well as conduct research for their Bachelor's thesis.

The peers also laude that online teaching is increasingly utilized in both programmes. The university has built an information system for teaching management and an online teaching platform. Three online courses have been developed until 2018 while due to the Corona-Pandemic, all courses are currently taught online. Thus, students are enabled to learn independently as well.

Criterion 2.4 Support and assistance

Evidence:

- Self-Assessment Report

- Discussions during the audit

Preliminary assessment and analysis of the peers:

The peers get a comprehensive impression of the offers related to support and assistance of the students at SHOU. The students confirm that an open-door policy is being practised and that the students can always approach all teaching and administrative staff. Each student is assigned an academic supervisor at the beginning of the degree programme; on average, each member of the teaching staff supervises about five students. These supervisors are the first to be contacted by the students with any kind of problems, be it purely academic or even private. Similarly, a very personal supervision is organised during the internships and graduation projects when students and supervisors meet on a regular basis and discuss issues and progress. Apart from the personal supervision and academic support, the University offers a broad variety of support measures, be it in the form of sports clubs, science clubs, research teams or internationalization. In summary, the peers agree that the support and assistance measures in place at SHOU contribute to the successful completion of the study programmes under review.

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

The university refrains from providing a statement.

In conclusion, the peers considers this criterion to be fulfilled.

3. Exams: System, concept and organisation

Criterion 3 Exams: System, concept and organisation

Evidence:

- Appendix E1 – Approaches for Violations of National Education Examination Regulations
- Appendix E2 – Regulations on Test Papers Printing
- Appendix E3 – Examination Room Rules for Students
- Appendix E4 – Proctor's Duties
- Appendix E5 – Specification for Examination Paper Grading
- Appendix F5 – Provision on the Work on Undergraduate Thesis
- Sample of Exams and Final Thesis
- Self-Assessment Report
- Discussions during the audit

Preliminary assessment and analysis of the peers:

All course content within the reviewed study programmes is examined. The examination type is defined in the module descriptions. Examination types are selected based on their competence orientation and may include written exams, oral exams, presentation, project work, experiments or thesis. Per semester, the students have to take a maximum of seven exams. For general courses, exams take place during the three final weeks of the semester, while for the major courses, exams can take place during the semester as well.

Failed exams can always be repeated once; if the second attempt also fails, the module has to be repeated. Theoretically, a module can be repeated infinitely, yet additional repetitions have to be paid for since the student fees are based on the respective number of courses taken. The students approve the examination system and are content with the workload.

Course grades are recorded in the student's file according to the overall assessment results. The overall grade consists of two parts, namely the regular grade and the finale exam score. The regular grades are mainly evaluated based on students' attitudes towards study, attendance, in-class performance, quizzes and mid-term exams. Usually, the regular grades account for 30-50% of the overall grade, while the final grade amounts to 50-70% respectively. A score of 60 or more in the overall course grades is deemed as a pass. Students can only obtain credits if they have passed the module.

During the final semester, students must conduct a 16-week long Bachelor's thesis. Here they must independently complete thesis (project) tasks and write their thesis under the guidance of the faculty. Bachelor's projects may also be carried out in cooperation with the

industry; in this case the student is supervised by both a representative from the industry and an instructor from the university to ensure that the progress of the project is consistent with the guidelines. The grades of the Bachelor's thesis are determined after comprehensive evaluation of on-site defence and thesis review.

SHOU has handed in a number of exams as well as Bachelor's theses for the peers to review. The peers are able to confirm that the quality of both exams and Bachelor's theses match the EQF level 6. While most of the peers were not familiar with the Chinese language, they were nonetheless able to judge the quality of the Bachelor's thesis/es given the scope of the document, its bibliography, its format as well as the abstract, which is given in English.

The peers conclude that the criteria regarding the examination system, concept, and organization are fulfilled and that the examinations are suitable to verify whether the intended learning outcomes are achieved.

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

The university refrains from providing a statement.

In conclusion, the peers considers this criterion to be fulfilled.

4. Resources

Criterion 4.1 Staff

Evidence:
- Appendix A – Staff Handbooks for both degree programmes
- Self-Assessment Report
- Discussions during the audit

Preliminary assessment and analysis of the peers:
The faculty currently has 135 faculty members, among them 31 professors, 36 associate professors, including 12 doctoral supervisors. SHOU has provided curriculum vitae for all members of the teaching staff involved in the two degree programmes.

At SHOU, staff members have different academic positions. There are professors, associate professors and lecturers. The academic position of each staff member is based on research activities, publications, academic education, supervision of students and other supporting activities. For example, there are lecturers who hold a PhD degree and lecturers who hold

a Master's degree. In addition, the responsibilities and tasks of staff members with respect to teaching, research and supervision depends on the academic position.

For the Food Quality and Safety programme, there are 36 full-time staff members, including 9 professors, 17 associate professors and 10 lecturers/technicians. 83% of these staff members hold a doctorate degree and 67% have gained experience overseas. For the Food Science and Engineering programme, there are 34 full-time staff members, including 11 professors, 13 associate professors and 10 lecturers/technicians. 79% hold doctorate degrees and 50% have gained experience overseas.

When reading the curriculum vitae of the members of staff prepared by SHOU as part of their self-assessment report, the peers conclude that the teaching staff is highly qualified and covers all areas of expertise necessary for both degree programmes.

The university stipulates that each faculty's specified workload for undergraduate theoretical and experimental teaching is no less than 108 hours/year. Faculties are required to undertake student tutoring and homework review in addition to the necessary teaching and are encouraged to guide students' innovation and entrepreneurship. The workload of each member of staff depends upon their position and ranges from 120h (experimental staff) to 160h (professors and associated professors) and 180h (lecturer). From these numbers, the peers gather that the teacher-student ratio as well as the overall workload of the teachers is sufficient.

In summary, the peers confirm that the composition, scientific orientation and qualification of the teaching staff are suitable for successfully implementing and sustaining the degree programmes. The auditors are impressed by the excellent and open-minded atmosphere among the students and the staff members. It is supported by an extensive advisory system, which ensures that every student has an academic advisor.

Criterion 4.2 Staff development

Evidence:
- Appendix C – Research Projects
- Self-Assessment Report
- Discussions during the audit

Preliminary assessment and analysis of the peers:
According to the self-assessment report, staff development is carried out on a regular basis to improve the quality, competence and performance of the teaching staff.

In order to improve the further development of new staff members, for example, the university holds one-month pre-job trainings each year and also assign them to comprehensive training in Shanghai for three to four months. The university has further formulated a "Mentor Trial System" and provides mentors to new staff members to facilitate their progress. In addition, the university provides staff with funding to improve their professional and teaching skills that amounts to RMB 100,000 yuan per person per year. Staff members, who participate in practical training in relevant enterprises or scientific research institutions or governmental institutions get funding of RMB 50,000 yuan per person per year while additional 50,000 yuan are provided for new staff members with a doctoral degree.

To further their practical experience, SHOU regularly sends all members of staff to companies to gain on-the-job-training to ensure their familiarity with the current advancements in the industry. It is further stipulated that lecturers must have at least one-years' experience in a company or government institute within the past five years in order to be promoted to a senior level. Each full-time faculty member also has the opportunity to study abroad. Each year, two to three faculty members gain funding from the Ministry of Education or the Shanghai Municipal Education Commission or the university itself for spending six to twelve months at a university abroad. SHOU includes a list detailing which universities staff members have been visiting over the past five years, among them universities in Canada, the United States, Europe and Japan.

In the past five years, more than 970 research papers and nine textbooks and monographs have been published. In addition, over the past five years, 350 research projects have been undertaken by members of the faculty, including 107 scientific research projects of national or provincial/ministerial level funded by National Natural Science Foundation of China, the Ministry of Education or the Ministry of Science. A list of both scientific research projects and scientific publications has been added to the self-assessment report.

In summary, the peers confirm that SHOU offers sufficient support mechanisms and opportunities for members of the teaching staff, who wish to further develop their professional and didactical skills.

Criterion 4.3 Funds and equipment

Evidence:
- Appendix G – Equipment Procurement in Recent Years
- Appendix H – Laboratory Information
- Videos depicting the laboratories, teaching spaces and equipment
- Self-Assessment Report

- Discussions during the audit

Preliminary assessment and analysis of the peers:

SHOU is a multi-disciplinary applied research-based institution of higher education, which has been jointly established by Shanghai Municipal People's Government, State Oceanic Administration and the Ministry of Agriculture.

In their SAR, the university states that enough funding is provided to maintain and update the working spaces. In the past four years, a total of nearly 40 million yuan (€ 5,09 million) has been invested in laboratory construction and 2 million yuan (€ 250,000) for curriculum development and university student development. In addition, research funding and budgets of the faculty have increased yearly over the course of the past four years. In 2018, the budget reached 6 million yuan (€ 760,000) and the research funding more than 20 million yuan (€ 2,5 million).

As the audit was conducted online, the peers were not able to visit the laboratories and teaching spaces. Instead, SHOU has provided extensive documentation, including lists of laboratories and equipment and a variety of videos. In addition, during the audit, members of the teaching staff gave a live-tour through some of the many laboratorial spaces SHOU holds and answered questions the peers had. For example, the peers were able to gather detailed information about the Food Engineering Fundamentals Lab, the Food Chemistry Lab, the Food Safety Lab or the Food Thermal Processing Engineering Technology Research Lab. The SAR also provides details regarding the overall infrastructure of the university and its campuses. The peers are convinced that the teaching and office facilities, the libraries and the computer labs are sufficient for all students and staff members.

In summary, the peers confirm that SHOU holds enough work spaces and laboratories and that all laboratories are equipped with modern and sophisticated instruments to accommodate the needs of the students as well as the teaching staff in conducting practical training and research. In addition, the current funding allows maintaining the current standard and purchasing further instruments if necessary.

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

The university refrains from providing a statement.

In conclusion, the peers considers this criterion to be fulfilled.

5. Transparency and documentation

Criterion 5.1 Module descriptions

Evidence:

- Appendix B – Module Handbooks for both degree programmes

Preliminary assessment and analysis of the peers:

The peers review the module descriptions for the programmes and see that they provide adequate information about the respective content, learning outcomes, examinations, workload distribution and grading. The students confirm during the discussions that information about the courses are always available online and that details concerning examinations and contents are provided at the beginning of each course by the teaching staff.

Criterion 5.2 Diploma and Diploma Supplement

Evidence:

- Appendix J – Degree and Diploma Certificate Template for both degree programmes
- Appendix K - Diploma Supplements for both degree programmes
- Appendix L - Student Transcript Sample for both degree programmes

Preliminary assessment and analysis of the peers:

At graduation, each student is provided with a Diploma as well as a Diploma Supplement providing information about the programme, the curriculum, the individual grading, the average grading and the higher education system in China.

Criterion 5.3 Relevant rules

Evidence:

- All relevant regulations on the course of studies, admission, degree, examinations, quality assurance, etc., including information on the status of the binding character are available.

Preliminary assessment and analysis of the peers:

From the documents provided and the discussion during the audit, the peers learn that SHOU follows a policy of transparent and open rules and regulations. All required rules and regulations are made accessible to students at any time online; full syllabi of the course contents are also provided to the students at the beginning of each course. The discussion with the students confirms that they feel well informed about regulations and comfortable about the access to any information about their degree programmes.

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

The university refrains from providing a statement.

In conclusion, the peers considers this criterion to be fulfilled.

6. Quality management: quality assessment and development

Criterion 6 Quality management: quality assessment and development

Evidence:
- Appendix I – Teaching Quality Evaluation Form
- Appendix M – Rules for Quality Assurance
- Appendix U – Questionnaire for Employment Institutes and Graduates
- Self-Assessment Report
- Discussions during the audit

Preliminary assessment and analysis of the peers:
At SHOU, a thorough system of quality management has been introduced and is observed to ensure the ongoing process of development and programme improvement. All modules are reviewed annually based on this feedback mechanism and updated if input from the various participating stakeholders requires it. Feedback from industry partners as well as alumni is regularly requested as is confirmed by the industry partners. At the centre of the feedback system are the course evaluations. Each semester, the university organises mid-term and end-of-term teaching inspections, bachelor thesis inspections and reviewing of teaching materials such as lecture plans and exam papers, to discover and solve problems that may arise from teaching and management. For example, for a review of examination papers, university and faculties shall conduct random checks to the examination papers each semester. Each semester, the faculty will also analyse the distribution of students' examination results and the evaluation of staff performance by students. There exist also a monitoring system in which experienced teachers are assigned to assist newer members of staff and an external person joins classes and collects feedback directly from the students. Through this system of reviews and evaluations, SHOU is capable to notice problems and fix them in a short amount of time. One indicator of the resulting quality of the degree programmes is the graduation rate of its students: 98,28% of all applying students to both degree programs finish their studies within the four-year timeframe, while 100% manage

to graduate after six years. Thus, the peers gain the impression that the Quality Assurance system at SHOU and especially within the two degree programmes to be accredited is well balanced and involves all relevant stakeholders.

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

The university refrains from providing a statement.

In conclusion, the peers considers this criterion to be fulfilled.

D Additional Documents

No additional documents needed.

E Comment of the Higher Education Institution (22.02.2021)

The institution refrains from providing a statement.

F Summary: Peer recommendations (22.02.2021)

The peers summarize their analysis and **final assessment** for the award of the seals as follows:

Degree Pro-gramme	ASIIN seal	Subject-spe-cific Label	Maximum duration of ac-creditation
Ba Food Quality and Safety	Without re-quirements	EQAS-Food La-bel	30.09.2026
Ba Food Science and Engineering	Without re-quirements	/	30.09.2026

Recommendations

For all degree programmes

E 1. (ASIIN 1.3) It is recommended to increase the communication and presentation skills as well as the leadership and organizational competences of the student, e.g. by offering specific elective modules or projects.

E 2. (ASIIN 1.3) It is recommended to include elective modules focusing on providing marketing, finance and management skills to the students.

E 3. (ASIIN 2.1) It is recommended to increase the English speaking ability of the students, e.g. by offering more language courses or modules taught in English.

E 4. (ASIIN 2.1) It is recommended to increase the contact with the industry e.g. by prolonging the mandatory internship or by offering seminars taught by alumni or industry representatives.

G Comment of the Technical Committee 08 – Agriculture, Nutritional Sciences and Landscape Architecture (05.03.2021)

Assessment and analysis for the award of the ASIIN seal:

The Technical Committee discusses the procedure and follows the assessment of the peers.

Assessment and analysis for the award of the EQAS-Food Label:

The Technical Committee deems that the IFA standards for the EQAS-Food Label are fulfilled

The TC 08 – Agriculture, Nutritional Science and Landscape Architecture recommends the award of the seals as follows:

Degree Programme	ASIIN seal	Subject-specific labels	Maximum duration of accreditation
Ba Food Quality and Safety	Without requirements	EQAS-Food Label	30.09.2026
Ba Food Science and Engineering	Without requirements	/	30.09.2026

H Decision of the Accreditation Commission (16.03.2021)

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

The Accreditation Commission discusses the procedure and follows the assessment of the peers and the technical committee.

Assessment and analysis for the award of the EQAS Food Label:

The Accreditation Commission deems that the IFA standards for the EQAS Food Label are fulfilled

The Accreditation Commission for Degree Programmes decides to award the following seals:

Degree Programme	ASIIN seal	Subject-specific labels	Maximum duration of accreditation
Ba Food Quality and Safety	Without requirements	EQAS-Food Label	30.09.2026
Ba Food Science and Engineering	Without requirements	/	30.09.2026

Recommendations

For all degree programmes

E 1.   (ASIIN 1.3) It is recommended to increase the communication and presentation skills as well as the leadership and organizational competences of the student, e.g. by offering specific elective modules or projects.

E 2.   (ASIIN 1.3) It is recommended to include elective modules focusing on providing marketing, finance and management skills to the students.

E 3.   (ASIIN 2.1) It is recommended to increase the English speaking ability of the students, e.g. by offering more language courses or modules taught in English.

E 4.   (ASIIN 2.1) It is recommended to increase the contact with the industry e.g. by prolonging the mandatory internship or by offering seminars taught by alumni or industry representatives.

Appendix: Programme Learning Outcomes and Curricula

According to the self-assessment report, the following **objectives** and **learning outcomes (intended qualifications profile)** shall be achieved by the Bachelor's degree programme Food Quality and Safety:

1) **Basic scientific knowledge and understanding**
   - The knowledge of natural sciences including chemistry, mathematics and physics, biology, which is the basis for professional capabilities
   - For general food industrial process, understanding involved technical requirements and engaging in relevant job positions
   - Knowing trends and promising applications of modern science and technology

2) **Professionalism and competences**
   - Having the professional knowledge in field of food quality and safety, and the ability to apply it
   - Having professional practical skills for job position
   - The ability to continue their studies, engage in scientific research and pursue graduate studies

3) **English and international communication skills**
   - Having sufficient professional English knowledge, abilities to communicate with foreign counterparts and study abroad
   - Having sufficient language and cultural background, ability to work and collaborate in foreign and multinational companies

4) **Application capacities of computer and information technology**
   - Capabilities of working with computer, using internet, effectively getting and applying information
   - Knowing general methods for literature, information and data retrieval

5) **Professional practice abilities**
   - Knowing the production process and operation of food industry
   - Command of the control technology of food quality and safety, abilities to innovate design and improve the quality and safety control of food products

- Abilities to operate, manage and maintain analytical instruments in accordance with specifications
- Abilities to conduct food safety supervision according to regulations

6) Teamwork and management competences

- Having a healthy mentality and personality
- Having good legal awareness and social responsibility
- Working efficiently as team member and having management competences
- Ability to work in a competitive and challenging environment

The following **curriculum** is presented:

Curriculum of Food Quality and Safety Program

Competence fields	Modules	Type	Chinese CP	ETC CP	Workload		S1	S2	S3	S4	S5	S6	S7	S8
Note: CP-Credit Point, S-Semester, L-Lecture, P-Practice, W-Week					Contact Hours	Self-study Hours	CP	CP	CP	CP	CP	CP	CP	CP
Chemistry and Mathematics	Basic Chemistry	L&P	5	6	96	84		6						
	Organic Chemistry	L&P	4	5	80	70			5					
	Biochemistry	L&P	4	5	80	70				5				
	Food Chemistry	L&P	2.5	3	48	42					3			
	Advanced Mathematics (1)	L	4	4	64	56	4							
	Advanced Mathematics (2)	L	4	4	64	56		4						
	Linear Algebra	L	2	2	32	28	2							
	Probability Theory	L	2	2	32	28				2				
	College Physics	L&P	4	5	80	70				5				
	Modern Engineering Graphics	L&P	3	4	64	56	4							
	Programming Language (Python II)	L&P	2	3	48	42		3						
			36.5	43										
Biology	Human Anatomy and Physiology	L	2	2	32	28			2					
	Food Microbiology	L&P	4	5	80	70					5			
	Fundamental Immunology	L	2	2	32	28				2				
	Food Toxicology	L&P	2.5	3	48	42						3		
	Genetic engineering	L&P	2.5	3	48	42						3		
			13	15										
Food Quality Management and Safety	Introduction to Food Science	L	1	1	16	14	1							
	Instrumental Analysis	L&P	3	4	64	56			4					
	Experimental Design and Statistics Analysis of Food Science	L	2	2	32	28				2				
	Principles of Food Engineering	L&P	3	4	56	64				4				
	Food Quality Inspection	L&P	3	4	56	64					4			
	Food Technology	L	2	2	32	28						2		

Group	Course	Type														
Control	Food Nutrition	L&P	2	2	32	28								2		
	Food Quality Control	L	1.5	1	24	6								1		
	Food Safety	L&P	3	3	53	37								3		
	Food Standard and Regualtion	L	1.5	1	24	6									1	
			22	24												
Electives	Electives for General Course	L	10	10	160	140								10		
	Physical Chemistry	L&P	3.5	4	72	48										
	General Biology	L	2	2	32	28										
	Animal and Plant Quarantine	L	2	2	32	28										
	Sensory Evaluation of Food	L&P	2	2	32	28										
	Management	L	2	2	32	28										
	Food Safety Risk Assessment	L	1.5	1	24	6										
	Public Relations	L	2	2	32	28										
	Document Retrieval	L	1	1	16	14										
	Fundamentals and Application of DBMS	L&P	2	2	32	28										
	Environmental epidemiology	L	1.5	1	24	6					3 (1-3 modules)	8 (4-6 modules)	5 (3-4 modules)	4 (2-4 modules)	4 (2-4 modules)		
	Introduction to Food industry system	L	1.5	1	24	6										
	Project Management	L	2	2	32	28										
	Inspection of Food Adulteration	L&P	2	2	37	23										
	Food Materials	L	2	2	32	28										
	Technology of Food Storage	L	1.5	1	24	6										
	Food Packaging	L&P	2	2	32	28										
	Food Processing Equipment	L	2	2	32	28										
	Technology of Food Cold Chain	L	1.5	1	24	6										
	Food Additives	L	2	2	32	28										
	Food Manufactory Design	L	2	2	32	28										
	Functional Food	L	1.5	1	24	6										
	New Food Product Development	L&P	2	2	32	28										
	Brief Introduction of Fermentation Technology	L	2	2	32	28										
			45	42	Note: 24 CP is the minimum CP for professional electives											
	College English I	L	4	4	64	56	4									
	College English II	L	4	4	64	56			2	2						

Category	Course	Type												
Foreign Language	English Viewing, Listening and Speaking (elective)	L	2	2	32	28								
	Academic English: Reading and Writing (elective)	L	2	2	32	28								
	Interpretation and Translation (elective)	L	1	1	16	14								
	Cultural Communication (elective)	L	1	1	16	14								
	Applied Skills (elective)	L	2	2	32	28								
	Specialized English (elective)	L	1.5	1	24	6								
			8	8										
General Courses	Conspectus of Basic Principles of Marxism	L	3	3	48	42	3							
	Education of Morality and Fundamentals of Law	L	2	2	32	28		2						
	Compendium of Chinese Neoteric & Modern History	L	2	2	32	28		2						
	Introduction to Mao Zedong Thoughts and the Theoretical System of Socialism with Chinese Characteristics	L&P	5	5	80	70				5				
	Situation and Policy	L	2	2	32	28						2		
	Foundations of Computer Application	L&P	1	1	16	14	1							
	Military Theory and Training (2W Training)	L&P	2	2	32	28	1	1						
	Physical Education and Health	L&P	4	4	64	56	1	1	1	1				
	Competences and Basic Skills (Career Development and Employment Guidance, Social Practice, Mental Health Education, Innovation and Entrepreneurial Education, Reading Activity)	L&P	6	6	96	84	1	1						4
			27	27										
Practice Training	Professional Basic Training and Frontier Lectures	P	2	2	2 W			2						
	Cognition Practice	P	2	2	2 W				2					
	Food Processing Practice	P	1	1	1 W								1	
	Food quality evaluation	P	1	1	1 W								1	

	Internship	P	7	7	7 W									7	
			13	13											
Bachelor Thesis	Bachelor Thesis	P	16	16	16 W										16
SUM=180	ETCS PER SEMESTER		169.5	180			22	24	21	19	14	18	18	20	

According to the self-assessment report, the following **objectives** and **learning outcomes (intended qualifications profile)** shall be achieved by the Bachelor's degree programme Food Science and Engineering:

1) Basic scientific knowledge and understanding
    - Having the knowledge of mathematics, physics, chemistry and other natural sciences required for food science and engineering, as well as economic management knowledge related to work in the field of engineering
    - Understanding the policies, laws, and regulations of related profession and industry; having a strong awareness of safety, environmental protection and sustainable development; abilities to understand and evaluate the impact of the practice of complex food science and engineering on the environmental and social sustainable development
    - Having humanities and social science literacy and sense of social responsibility, understanding and abiding by professional ethics and norms in the field of food science and engineering and its relevant practice, and having the sports skills and physical and mental qualities to engage in relevant work in the food industry
2) Professionalism and competences
    - Knowing the basic theories, professional and basic skills of food science and engineering
    - Having basic theoretical knowledge in the fields of chemistry, microbiology, nutrition and hygiene, food processing, food preservation, food engineering, and low temperature storage engineering, and having strong theoretical and applying abilities in jobs
    - Understanding the basic methods and means of food science and engineering research and having the ability to engage in scientific research and graduate studies
    - Having the awareness of independent learning and lifelong learning, abilities to adapt to the needs of scientific, economic and social development, and ability to continuously learn and adapt to development
3) English and international communication skills
    - Having sufficient professional English knowledge, being able to read and translate professional English literature, and communicate effectively with counterparts and the public
    - Having an international perspective, being able to communicate in cross-cultural backgrounds, and work and collaborate in foreign or multinational companies

4) Application capabilities of computer and information technology

- Abilities to work with computer, and use internet and information technology, being able to acquire, process and apply relevant information of food science and engineering; having the ability to apply computer for data processing, information acquisition, analysis and utilization

- Knowing general methods of literature, information and data retrieval, being able to select and use appropriate resources, modern technology tools of engineering and information, and having the ability to combining computer with professional knowledge, such as forecasting and simulation of complex engineering problems or engineering unit.

5) Professional practice and application abilities

- Knowing the principles and methods of formula design, process, quality analysis and quality management of food raw materials, production and processing, and being able to carry out innovative design and improvement for unit processing or formulas

- Knowing new technologies and techniques for food processing and preservation, and be able to apply professional knowledge such as the basic principles, analysis methods and quality evaluation of food processing to design and develop products

- Knowing the general steps and methods of design and calculation of operating equipment of food engineering unit, being able to draw flow charts of food process, and analyse complex food engineering and cold chain logistics engineering problems based on food science principles, and design systems, units (components) or processes required for raw materials, production, processing and preservation

- Understanding the general process and basic knowledge of food manufacturing, having the basic knowledge of food production units, machinery and equipment, and having the ability to select processing methods for simple parts or engineering parts

6) Teamwork and management competences

- Having strong learning, expression, communication and coordination skills, and can play the roles of individual, team member and person in charge in projects or research teams on food science, food engineering, product design and development

- Having a healthy mentality and personality, and good organizational management and teamwork competences

- Having good legal awareness and sense of social responsibility

Curriculum of Food Science and Engineering Program														
Note: CP-Credit Point, S-Semester, L-Lecture,P-Practice, W-Week		Type	Chinese CP	ETC CP	Workload		S1	S2	S3	S4	S5	S6	S7	S8
Competence fields	Modules				Contact Hours	Self-study Hours	CP	CP	CP	CP	CP	CP	CP	CP
Natural Sciences	Advanced Mathematics (1)	L	4	4	64	56	4							
	Advanced Mathematics (2)	L	4	4	64	56		4						
	Linear Algebra	L	2	2	32	28	2							
	Probability Theory	L	2	2	32	28			2					
	Programming Language (Python II)	L&P	2	3	48	42		3						
	College Physics	L&P	4	5	80	70			5					
	Basic Chemistry	L&P	5	6	96	84		6						
	Organic Chemistry	L&P	4	5	80	70			5					
	Biochemistry	L&P	4	5	80	70			5					
	Physical Chemistry	L&P	3.5	4	72	48				4				
			34.5	40										
Food Science	Introduction to Food Science	L	1	1	16	14	1							
	Food Chemistry	L&P	2.5	3	48	42				3				
	General Biology	L	2	2	32	28				2				
	Food Nutriology	L&P	2	2	32	28					2			
	Food Micorobiology	L&P	3	4	58	62					4			
	Food Analysis	L&P	3	4	58	62						4		
	Food Processing Technology	L&P	4	5	80	70						5		
	Food Safety	L	1.5	1	24	6						1		
			19	22										
Food Engineering	Modern Engineering Graphics	L&P	3	4	64	56	4							
	Electrotechnical Basis	L&P	3	3	48	42			3					
	Fundamentals of Mechanical Manufacturing	L	2	2	32	28				2				
	Food Engineering Fundamentals	L&P	4	5	80	70				3	2			
	Food Engineering Test	L&P	1.5	2	32	28						2		

Category	Course	Type	Credit		Total hrs	Lecture hrs	S1	S2	S3	S4	S5	S6	S7	S8
	Food Processing Equipment	L	2	2	32	28							2	
	Food Manufactory Design	L	2	2	32	28							2	
			17.5	20										
Electives	Electives for General Course	L	10	10	160	140							10	
	Experimental Design and Statistics Analysis of Food Science	L	2	2	32	28								
	Food Sensory Evaluation	L&P	1.5	2	32	28								
	Food Materials	L&P	2	2	32	28								
	Principle and Technology of Food Freezing and Refrigeration	L&P	2.5	2	40	20								
	Pyrology Foundation	L&P	2.5	2	40	20								
	Fermentation Engineering	L	2	2	32	28								
	Aquatic Resources Utilization	L&P	2.5	2	40	20				2 (1-2 modules)	9 (5-8 modules)	4 (2-4 modules)	3 (2-3 modules)	3 (2-3 modules)
	Technology of Food Storage in Low Temperature	L	2.5	2	40	20								
	Technology of Food Cold Chain	L	2	2	32	28								
	Food Logistics Information Technology	L	1	1	16	14								
	New Food Product Development	L	2	2	32	28								
	Food Standards and Law	L	2	2	32	28								
	Software of Engineering Applications	L&P	1.5	1	24	6								
	Introduction to Food industry system	L	1.5	1	24	6								
	Document Retrieval	L	1	1	16	14								
	Food Sterilization	L	2	2	32	28								
	Food Additives	L	1.5	1	24	6								
	Food Quality Control	L	2	2	32	28								
	Physical Properties of Food	L	1.5	1	24	6								
	Food Packaging	L&P	2	2	32	28								
	Recycling and Utilization of Food Resources	L	2	2	32	28								
			39.5	36	Note: 21 CP is the minimum CP for professional electives									
	College English Ⅰ	L	4	4	64	56	4							
	College English Ⅱ	L	4	4	64	56		2	2					
	Professional English for Food Specialty	L	2	2	32	28							2	

Category	Course	Type					1	2	3	4	5	6	7	8
Foreign Language	English Viewing, Listening and Speaking (elective)	L	2	2	32	28								
	Academic English: Reading and Writing (elective)	L	2	2	32	28								
	Interpretation and Translation (elective)	L	1	1	16	14								
	Cultural Communication (elective)	L	1	1	16	14								
	Applied Skills (elective)	L	2	2	32	28								
			10	10										
General Courses	Conspectus of Basic Principles of Marxism	L	3	3	48	42	3							
	Education of Morality and Fundamentals of Law	L	2	2	32	28		2						
	Compendium of Chinese Neoteric & Modern History	L	2	2	32	28		2						
	Introduction to Mao Zedong Thoughts and the Theoretical System of Socialism with Chinese Characteristics	L&P	5	5	80	70					5			
	Situation and Policy	L	2	2	32	28							2	
	Fundations of Computer Application	L&P	1	1	16	14	1							
	Military Theory and Training (2W Training)	L	2	2	32	28	1	1						
	Physical Education and Health	L&P	4	4	64	56	1	1	1	1				
	Competences and Basic Skills (Career Development and Employment Guidance, Social Practice, Mental Health Education, Innovation and Entrepreneurial Education, Reading Activity)	L&P	6	6	96	84	1	1						4
			27	27										
Practice Training	Professional PBL Training 1	P	2	2	2 W			2						
	Metalworking Practice/Cognition Practice (Professional PBL Training 2)	P	2	2	2 W					2				
	Innovation/Research Practical Training	P	2	2	2 W							2		
	Production Practice	P	2	2	2 W								2	

	Principle Fundamentals of Food Engineering Course Design	P	2	2	2 W								2		
	Internship	P	4	4	4 W									4	
			14	14											
Bachelor Thesis	Bachelor Thesis	P	16	16	16W										16
SUM=180	**ECTS PER SEMESTER**		168	180			22	24	23	22	12	18	18	20