STUDIJŲ KOKYBĖS VERTINIMO CENTRAS

Kauno kolegijos

MAISTO TECHNOLOGIJOS PROGRAMOS (653E43001, 65305T103)

VERTINIMO IŠVADOS

EVALUATION REPORT

OF *FOOD TECHNOLOGY* (653E43001, 65305T13)

STUDY PROGRAMME

at Kaunas College

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DUOMENYS APIE ĮVERTINTĄ PROGRAMĄ

Studijų programos pavadinimas	***Maisto technologijos***
Valstybinis kodas	653E43001, 65305T103
Studijų sritis	Technologijos mokslai
Studijų kryptis	Maisto technologijos
Studijų programos rūšis	Koleginės studijos
Studijų pakopa	Pirmoji
Studijų forma (trukmė metais)	Nuolatinė (3), ištęstinė (4)
Studijų programos apimtis kreditais	180
Suteikiamas laipsnis ir (ar) profesinė kvalifikacija	Maisto technologijų profesinis bakalauras
Studijų programos įregistravimo data	2002-08-30

INFORMATION ON ASSESSED STUDY PROGRAMME

Name of the study programme	***Food technology***
State code	653E43001, 65305T103
Study area	Technological Sciences
Study field	Food Technology
Kind of the study programme	College studies
Level of studies	First
Study mode (length in years)	Full-time (3), part-time (4)
Scope of the study programme in credits	180
Degree and (or) professional qualifications awarded	Professional Bachelor of Food Technology
Date of registration of the study programme	30/08/2002

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I. INTRODUCTION

Programme evaluated

Kaunas College (hereinafter – KK) is one of the largest higher professional education institutions in Lithuania with a strong academic reputation. The initial target of the College is to ensure high quality of teaching and applied research. The graduates of the College are awarded Professional Bachelor degrees. The studies are practice orientated; students are able to apply their knowledge successfully in a real working environment.

In the 2011-2012 study year ca. 7600 students have been studying in KK; approximately 600 teachers and lecturers were employed.

The traditions of professional education in Food Technology in Kaunas date back to early 1950-ties when Kaunas Food Industry Technical School was founded. Nowadays, the Food Technology Study Programme (hereinafter – FT SP) at KK is provided by the Faculty of Technologies alongside programmes in different technical professions such as construction, mechanical engineering, geodesy, landscape design, informatics, road transport technologies, etc.

The FT SP (formerly named Food Product Technology) was approved and registered in August 2002. The FT SP was accredited by common procedure till 31 December, 2012 based on the Centre for Quality Assessment in Higher Education (hereinafter – SKVC) director's order No. 1-73 of 19 August, 2009.

Evaluation Team

The chairman of the team: Prof. Indrikis Muiznieks, Dr.habil.Biol., Vice-Rector of the University of Latvia, Latvia; team members: Professor in Food Chemistry Vieno Irene Piironen, PhD, University of Helsinki, Finland; Professor Frank McMahon, Emeritus Director of Academic Affairs, Dublin Institute of Technology, Ireland; Professor Marek Frankowicz, Dr.habil.Chem., Jagiellonian University, Krakow, Poland; Dr. Ingrida Bružaitė, Assoc.Professor of the Vilnius Gediminas Technical University, Lithuania, employers representative Mrs. Eglė Dilkienė, Executive Director of the Lithuanian Association of Hotels and Restaurants; student Mr. Tadas Juknius, University of Health Sciences, Kaunas, Lithuania.

The procedure of the evaluation

The Self Evaluation Report (hereinafter – SER) of the college FT SP was made available to the expert team in July 2012. All the members of the expert team examined the SER individually, preparing preliminary reports and indicating problem questions or discussion points. The experts obtained further information during the site visit in Kaunas on October 24 through interviews with Programme co-ordinators, Department heads, senior and junior

members of the teaching staff, students, graduates and employers. After the visit, on October 27 the expert group held a meeting, discussed the contents of the evaluation report and agreed upon the numerical evaluation of every section of the evaluation. The draft report was composed through electronic exchange of opinions within the expert team and forwarded to KK. After receipt of the comments from the KK the expert team members prepared final versions of their reports, which were integrated into one document by the chairman of the team.

II. PROGRAMME ANALYSIS

1. Programme aims and learning outcomes

The food industry is one of Lithuania's largest economic sectors. Growing exports show that the products of the Lithuanian food industry are internationally competitive. Employer and labour market surveys prove that the industry needs well trained specialists at all the levels of production.

The aim of study programme is to train a food industry specialist who is able to perform an independent analysis of situations and make independent decisions in the assessment of food raw materials, quality of auxiliary materials and foodstuffs, and of production infrastructure, in design of a technological process, management of foodstuffs production technological processes, and the organization of activities of a food handling entity.

The programme has been modernized in the result of joint activities with employers and regional government in 2009. New study learning outcomes are adopted that relate to the performance of industrial processes and the design of new products. The need for specialists is proven by the reports of the managers from food industry companies (placement reports, qualification board reports).

The FT SP implemented by KK stands out from similar study programmes provided in professional higher education institutions (hereinafter – HEIs) in Klaipeda, Utena and Vilnius by putting more focus on the animal and plant origin Food Technology and addressing Food Safety and Public Catering Technology issues, which are specialization modules within FT SP in other HEIs, by separate study programmes. The statement that KK FT SP is the only study programme in Lithuania that possesses practice and applied research facilities of technological profile (SER, p.8-9) does not seem to be well justified, since the facilities of technological profile are in operation also in other HEIs, which offer Food Technology studies.

Learning outcomes are specified and used in the design of the programme. They and relevant to study programme aims are achieved by teaching specific subjects included in the

curriculum. The Evaluation Team recognizes the efforts of the FT SP staff towards improving the structure of the learning outcomes of the programme and offers the following recommendations as a pathway to further improvement.

The learning outcomes of the FT SP are defined narrower than the principles of international recommendations[1] are suggesting and national regulations[2] are demanding (see Annex 2 of the SER). They concentrate on knowledge and knowledge application while research performance, special, social and personal abilities are to some extent neglected. Moreover, programme aims and outcomes are linked very mechanistically, through defining the outcomes just as the description of the aims in more detail (Annex 2). More substantial analysis and disclosing of the relationships among programme aims and outcomes could be suggested for further development of the FT SP. Special, social and personal abilities, to a large extent also the research competence as the components of the learning outcomes are addressed only in the description of the study subjects, albeit also here in quite a superficial manner.

Learning outcomes securing research performance, special, social and personal abilities should be defined more precisely. Once on the basis of the FT SP a new Food Safety study programme has been started recently, the study aims within Technology area can be defined in more detail while those reflecting Safety and Quality area may be reduced avoiding non-effective duplications between both programmes.

The aims and learning outcomes that are accessible at internet websites: www.kauko.lt, www.studijos.lt, www.studijos.balsas.lt, www.aikos.smm.lt., http://tf.kauko.lt are all in Lithuanian. Very limited information is available in English at http://www.kauko.lt/en/english-studies/english-study-programmes/. Other programme promotion activities, e.g. visits to secondary and vocational schools, public activities, etc. are directed exclusively to Lithuanian audience too, although at KK two study programmes are taught in English and international recruitment into FT SP could be considered when planning the further development of the programme.

The aims and learning outcomes of the FT SP are in compliance with the minimum requirements set for the first cycle higher education college studies providing the training of general erudition, the imparting of the theoretical basics of the study field, and the formation of professional skills that are prerequisites for the self-dependent work and entrepreneurial performance.

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[1] Dublin Descriptors, 2004; European Qualifications Framework for Lifelong Learning

[2] O r d e r of the Minister of Education and Science of the Republic of Lithuania On Approval of the Descriptor of Study Cycles, 21 November, 2011 no. v-2212

The conferred degree is said to grant students the possibility of studying in other HEIs, but it should be specified to which institutions and which programmes are the graduates eligible and what bridging requirements they may meet when applying for further studies in other HEIs. The Evaluation Team was surprised and disappointed at the long length of some bridging programmes from the college studies to the Master studies at the universities. The success of KK graduates in gaining access should inspire KK to seek to formalise the arrangements with the universities.

The name of the FT SP, its learning outcomes, content and the qualifications offered are compatible with each other. Graduates of the college are awarded professional Bachelor's degree of Food Technology.

2. Curriculum design

The legal requirements in Lithuania demand that the candidates for Professional Bachelor (first cycle) degrees must achieve at least 180 European Credit Transfer and Accumulation Scheme (ECTS) points. The FT SP in KK leads to award of a Professional Bachelor degree on the basis of 180 ECTS, which can be obtained during 6 semesters of full time or 8 semesters of part-time studies. The curriculum design meets the legal requirements in terms of volume of the programme, number of course units per semester (6-7; requirement not more than 7), volume of general subjects of the college level studies (15 ECTS; requirement not less than 15 ECTS), volume of subjects of study field (93 ECTS + professional activity practice 30 ECTS + deeper specialization subjects 21 ECTS + optional subjects 9 ECTS; requirement not less than 135 ECTS) and volume of the final thesis (12 ECTS; requirement not less than 9). The study subjects are spread over the study years so that subjects of each year provide 60 ECTS for full-time studies and 45 ECTS for part-time studies. Placement or other practical training, learning, observing, professional activity classes as well as professional placement hours provided by the FT SP comply to the regulations, which are set forth by the legal acts.

The volume of subjects is equal for full-time and part-time studies. Final examination or evaluation of individual work of students is used for each course unit. During the Technological Research and Final practices data for thesis are collected. The place for the last semester training is similar to real work place for which students are prepared.

The programme is composed of separate subject courses, which are not organized in modules, although their introduction may be recommended in developing specialization pathways in combinations with final semester practical placements as well as providing teaching

in basic science and general skill acquisition subjects. The module structure would help also in better linking the individual teaching units and the learning outcomes.

A somewhat confusing approach is used in the naming of the course units (subjects) in the FT SP. The names of the course units emphasize the application field in Food Technology, although the content may focus on basic science, e.g., Chemistry. However, these ambitions are not always justified, e.g., the syllabus of the course "Food Physics" covers typical topics of General Physics course with no reference towards food-related problems. Furthermore, essentials in chemistry, physics, biology does not seem to be covered well enough to give comprehensive basic knowledge, what may jeopardize the attainment of expected learning outcomes in technology studies.

The names of the study subjects are more relevant to the contents and study plans of the subjects in the Food Safety study programme study plan, which is provided by the same department, than in the FT SP. More consequence would help the students to orient themselves in respect to the expected learning outcomes.

The possibility of reaching study outcomes of the Microbiology, which is taught during the 2-nd semester of full time studies, course does not seem to be realistic. The microbiological processes in food can be hardly addressed without knowing fermentation basics, but the latter topic is mentioned only briefly at teaching General Foodstuffs Technology, which is taught in parallel with the Microbiology, and Chemistry of Technological Processes (3-rd semester), where an example of alcoholic fermentation is given. Lactic acid fermentation should be addressed here too.

The composition of the study plan is logic and it supports the attainment of study outcomes. During the first semester of full-time studies the focus is on general college studies (9 ECTS in the first semester); the subject studies (Food Chemistry and Analysis I and II, Chemical Engineering, Information Technology, Food Physics, Microbiology, Mechanics, Safety at Work, etc.) are provided within first three semesters. Later, more attention is paid to particulars of professional orientation. Such courses as Technological Research and Design, Quality and Safety, Equipment of Food of Plant (or Animal) Origin are studied and more general subjects, e.g. Enterprise Economics and Accounting or Production Line Design may be instrumental in supporting specialization tracks.

The study outcomes are developed starting from subject knowledge and cognitive abilities and finishing with practical skills. Most of the subjects are arranged in a logical sequence. The content of the subjects can be regarded as consistent with the type and level of the studies. The sequence of some courses is however not fully clear and some improvements can be

suggested, e.g., it is not clear why the Foreign Language course is provided comparatively late within the study plan, semesters 4 and 5, what may limit the possibilities of the students to participate in international mobility programmes.

The contents of the course units are relevant and based on appropriate, quite recent references. Ratio of lectures, practicals and self-study is good for each course unit. Novel learning methods have been introduced during the period of assessment aiming at bridging knowledge gaps, which are found at the beginning of studies, and promoting interdisciplinary approach and teamwork during the studies: the consultations during and after the academic classes; concept mapping, review of references; commenting on videos; case studies; problem-solving; integrated self-study work that covers the learning outcomes of several subjects. Students expressed willingness to devote more learning hours for English language.

The scope of the programme is sufficient to ensure the learning outcomes within the given time-frame. The evaluation expert team would like to urge the transformation of the FT SP into a module structure. That would further help the student to see the overall structure and aims of the programme.

As a Professional Bachelor programme, the FT SP focuses on applied topics and aims to train food technology specialists. The achievements in science are taken into account in a relevant way and applied research projects are carried out to support reflecting recent achievements in science.

3. Staff

FT SP is provided by 40 teachers: 13 assistants (32 %), 23 lecturers (57 %), and 4 docents (10 %). The SER states that 15 % of them are scientists (doctors of science), that would correspond to 6 persons, although 7 Ph.D. degree holders are listed in Annex 5, where the workload of teachers is reflected. According to the SER 82 % of teachers are holders of Master's or equivalent degree, although academic qualification is not specified for more than 20 people listed in Annex 5, but individual CV provided only for 31 teacher instead of 40.

68% of teachers (27) working in the study programme are employed on a permanent basis, 13 are qualified as being invited from the corresponding sector of professional activity, although at least some of them are academicians at Kaunas University of Technology. More than 10% (in fact, close to 50%, according to SER) of the subjects in the field of studies are taught by scientists. More than half of the teachers in the study programme have more than three years practical work experience in the field of the subject taught, which supports implementation of the professional programme. KK has an active programme of assisting staff to develop their qualifications and competences in their discipline, pedagogy and in foreign languages. Mobility

programmes, which are actively used by the staff involved in FT SP and participation in scientific conferences contribute to the qualification upgrading and add an international dimension to the staff development activities. Since 2007 the FT SP staff has participated in 23 exchange programme activities, in 9 international practical placements, 15 international courses, seminars and conferences. 53% of the teachers have *European Computer Drivers Licence* certificate and taking foreign language courses is a frequent practice, which is supported by the KK administration. The SER indicates that 24 projects of applied research were implemented by the teachers working in FT SP, but the amount of modest funding is specified just for one of them, while the others have been without financial reward. In the same time Annex 6 names four funded and implemented and three prepared international projects. The research activities of FT SP teachers are reflected on the website of KK. Clear, positive results are outlined in the SER.

The specialists with core specialization in Food Technology related fields are well represented within the teaching staff of FT SP. At least 18 persons, among them 6 scientists, can be regarded as teachers in core subject oriented fields. The qualification of the teaching staff, including their professional experience, is adequate to ensure learning outcomes and meet the requirements set forth by the Lithuanian legislation. CVs indicate the qualifications of staff in their disciplines. The requirements set forth by national regulations are met, but there is room for improvement.

The largest research projects implemented and planned at the Department of Food technology have a strong focus on fish product technologies or food safety (Annex 6, SER) and, the installing of a fish bioactive product manufacturing line is planned. Meanwhile, the Food Technology of the Products of Fish Origin is not addressed in FT SP by a single study course. The evaluation team would like to bring the attention of FT SP management to the need to coordinate teaching and research activities. The information on the number of the publications of the FT SP teachers differs in the text and in the table 2.3.3.1 of the SER. At closer inspection of the staff CV data provided by the KK, the evaluation team found that even the permanent staff senior lecturers with Ph.D. degree have only one or even no paper published in the journals, which are cited in the *Scopus* database during the last five years (regretfully not in the highly ranked ones). Only one of the *Scopus* papers published by the FT SP teacher's admits the affiliation to KK. All the others, which are co-authored by permanent staff of the KK, refer only to the Kaunas University of Technologies (KTU) in the address line. Noticeably, most scientific papers of the staff involved in FT SP are published in the national conference proceedings only in Lithuanian. Such contributions can hardly be considered as being of serious research importance, although they help their authors to meet legal requirements on publishing performance. Naming of the person whose responsibility is physical activity classes among the

programme teachers may be somehow misleading since no credit points are awarded for this subject. The English language command of the teachers needs improvements.

The turnover of teaching staff ensures an adequate provision of the programme. Since 2007 the number of permanently employed lecturers has increased from 24 to 27, while the number of temporarily contracted academic staff decreased from 20 to 13.

The student / teacher ratio has increased, in 2007 there has been in average 13 students per one full time equivalent teacher, in 2011/2012 the average was 18 students, i.e. 14 in full-time studies, 21 – in part-time studies. The student/ teacher ratio depends on the subjects' learning outcomes and the class form. The number of contact hours of teachers depends on the position held: the docents have about 600, lecturers – about 720-800, and assistants – about 800-1000 contact hours. At present the motivation of the college staff remains high; therefore the main causes for the turnover of the teachers are either the promotion to higher positions or the retirement, or maternity leaves. Cases of changing job affiliation are rare.

The number of the teaching staff is adequate to ensure learning outcomes. The number of 6 to 8 final theses supervised by one teacher might appear somewhat large, but this is a common situation in Lithuanian colleges. The ratio of permanent teachers/students ca. 1:8 – 1:10 seems to be good to ensure learning outcomes when viewed in the frame of Food Technology Department, but it has to be considered that about the half of the teachers have teaching assignments also in the other study programmes in KK. Noticeably, there are only three members of the ancillary staff, secretariat and technical assistants, in the Food Technology Department which in some instances may impede providing operative practical advice and support to the students.

Extended periods, up to one academic year, of upgrading and sabbatical leave are not established within the regular schemes of professional development in KK.

4. Facilities and learning resources

The Food Technology Department has at its disposal a sufficient number of classrooms, offices, and laboratories to support the main study process activities. Seeking to create maximum comfort conditions for the implementation of the study process, the premises were under constant renovation during years 2008-2012. There has been substantial influx of new equipment and laboratory supplies, which is comprehensively reflected in funding terms in the Table 2.4.2.1. Nearly 100 000 EUR have been invested in the fixed assets (laboratory equipment, furniture, computers and other hardware) in 2007 – 2011, other ca. 150 000 EUR worth projects are implemented in 2012. Substantial resources, 5 000 to 10 000 EUR per year, are invested also in laboratory materials and chemicals.

The lectures are delivered in 20 classrooms of different size (4 classrooms seating 44-64 students, 11 classrooms seating 21-30 students, 5 classrooms seating 15-20 students, and one classroom for distance studies, seating 120 students).

Food Technology Department operates the laboratories of Chemical Analysis, Physical-Chemical analysis, Microbiology, Food Quality analysis and Sensory Evaluation, Practical Training Base in technologies with the Fermentation laboratory and laboratories for the production of bread, confectionery, meat, and dairy products. The equipment at the analytical laboratories and at the laboratory for Microbiology is newly purchased and largely not yet installed, but it may be anticipated that these assets will substantially increase possibilities of providing practical training at FT SP. The improvements in lab safety and environment protection procedures, e.g., the disposal of chemical waste, should be considered to ensure the development of the relevant skills and working practices among the students, which will be demanded in the food processing enterprises.

The Training Base in Technologies is well equipped with instruments and devices used in typical small food processing businesses; students are enthusiastic about having classes in doing projects using these utilities. The possibilities to strengthen the research profile of the Training Base in Technologies have to be considered so that the implemented processes can be evaluated on the basis of scientific evidence. The mobile fish bioactive products manufacturing line will be introduced in year 2012-2013. It is a major investment in the infrastructure of the Department with the budget more than 0,5 million LTL (ca. 140 000 EUR). The possibilities have to be explored towards developing new specialization profiles within the FT SP creating choices to model the technologies of fish processing by using the new manufacturing line.

The facilities, which are at the disposal of FS SP, support providing four practical courses (Basics of Laboratory practice, Practice of Computer Graphics, Food Quality and Safety Practice, Technological practice, altogether 15 credits) in house; another three practical courses (Introductory Practice, Practice at Company‘s Analytical Laboratory, and Final Practice, altogether 15 credits) are organized in business enterprises, surveillance or research institutions. Cooperation with Food Centre of KTU has been established and the students are aware of the research possibilities in the Food Competence center and Food Institute of KTU.

KK library consists of the Central Library of KK and a Self-study Centre that has 166 workplaces, 38 of which have computers. Wireless Internet is available in the premises of Faculty of Technologies and in the library. The access to the subscribed international scientific databases, the printing and copying services are available. The number of the teaching materials (course books, educational methodical materials) prepared originally at KK has grown by 46%

since 2007. The materials for 1 640 taught subjects are placed in the virtual learning environment *Moodle* and more than 11 690 KK users have been using them during the autumn semester, 2012. Meanwhile the Evaluation Team learned that at present KK is relying mostly on self developed e-learning resources, which indicates the possibilities of developing cooperation, possibly supported by appropriate agreements, with the institutions providing similar study programmes in Lithuania aiming at increasing the efficiency of the use of the resources and avoiding unnecessary duplications.

The local Library at the Food Technology department has 20 regular and 3 computerized workplaces for the search of electronic books. There are 8 workplaces for the Internet in the Internet Room. Wireless Internet is available in the Library and at the Independent Study Centre. Some of newly purchased books which are available in the local Library at the Food Technology department are the only hard copies available in Lithuania, they are demanded also by the academicians and students from other HEIs and research institutions.

5. Study process and student assessment

Admission is organized according to the rules for general admission to undergraduate and integrated studies at Lithuanian higher education institutions (LAMA BPO). Requirements for admission are clearly formulated and accessible on the internet webpage of KK. Candidates having at least secondary or equivalent education can participate in the competition. The main admission criterion is a competition score (*numerus clausus*) calculated from secondary school final examinations (Mathematics, Chemistry, Lithuanian language) or grades (Foreign language). The admission scores vary in high amplitude (ca. 2,5 – 19,0) what implies highly variable knowledge base in every new class and demand special teaching approaches to eliminate gross disparities and to help the weakest students to catch up the progress of their stronger classmates. In 2010, a procedure for assessment and recognition of learning achievements acquired through non-formal, informal and self-education was approved by the administration of KK, which facilitates the studies of the persons, who have an extensive employment background.

In 2007-2011, 367 students were admitted to the full time studies, 105 – 102 students in the first three years and just 60 students in the year 2010. In the same period 209 students were admitted to the part-time studies; the highest number in 2008 – 65, and the lowest number in 2007 – 42 students, no decline in 2010 – 64 students.

The average student drop-out rate at FT SP is high. The total number of graduates in full time studies over the years 2007-2011 has been 180, indicating ca. 50% dropout rate. The total number of graduates in part-time studies over the years 2007-2011 has been 107, indicating ca. 40% dropout rate. The number of the total FT SP graduates given in tables 2.5.1.2 and 2.5.6.1 do

not coincide, but the tendency of decrease is clear in both data sets. According to the interviews reflected in the SER ca. 64% of the graduates work or continue studies in the branch which is relevant to the Food Technology specialization.

A bigger number of drop-out students is observed during the first year of studies. The interviews with the drop-out students reveal various reasons for under-performing, e.g., poor financial situation, inflexible attitude of employers towards the part-time studying employees, emigration of students, and also inadequate professional career planning. Since 2008 the plan to reduce the drop-out rate is implemented, including providing the students the possibilities to repeat separate subjects or a course; prolongation of the examination sessions; individual interviews and counselling; providing the possibilities to take an academic leave. As a result of these activities, student dropout rate in 2011 has reduced nearly 3-fold in comparison to the year 2008.

The communication between lecturers and students is friendly and democratic; teachers are open for discussions and consultations.

Theoretical lectures are delivered to the whole groups (up to 100 students), while during seminars and practical training classes students are divided into sub-groups (15-30 students) to assure the quality teaching and provide more contact with the lecturer and the lab staff.

The variety of study methods used reveals active cooperation between the teacher and student, which aims to develop students' abilities to analyse, assess, solve practical problems, discuss, draw conclusions, and work in a team. Final work is prepared according to the methodical guidelines, which are renewed every year. Final theses of students cover mostly following topics as the Expansion of the Assortment, Modernisation and Reconstruction of Food Technology processes, Introducing of new Products, lines, design, etc. Nearly no Theses using an experimental approach to characterize the technology have been presented. The literature reference lists in most of the Theses comprise legal documents, production norms and textbooks, citing research literature is rare.

The annual budget is allocated for the realization of the whole study process including the funding for the preparation of the Final Thesis of students. However, during the interview a few complaints were heard from students that the funding for the preparation of their Final Thesis might not be sufficient and collateral payments for the research materials are demanded if the students want to select some specific research topics, which involve experimental work. This situation should be rectified by introducing transparent regulations on the principles of financial support for the Final Thesis project. On the other hand, the research activities of the students are supported by offering applied research-related topics, which are frequently proposed by food processing businesses for elaboration in the Final Thesis. There have been 2 – 3 such topics per

annum elaborated in the years 2007-2010, the number increased to 11 in 2011/12. Student research conferences are organized since 2007.

Student achievement assessment system is regulated by KK study order. The assessment should be purposeful, constructive, informative, and comprehensive. Student achievement is recorded in terms of ECTS. To all the graduates a Diploma Supplement is issued automatically and free of charge according to a template developed by the EC, Council of Europe and UNESCO.

Established system of organizing practical placements is flexible and allows the students to adjust their specialization to labour market demands. Practical tasks are prepared in a way that allows students to apply theoretical knowledge, cognitive and practical skills. The extension and consolidation of the time of practical placements within the curriculum would be in line with the expectations of the students and employers. Students are consulted about career opportunities during the events of professional Food Technologist's Day, during the defence of speciality practice, maintaining direct contact with employers, and posting information about available places for practice or other job offers on the Department's Information Board. Most of the teachers at the Department also cooperate with social partners, thus they mediate the employment of the students. Practice managers are assigned in the student groups; they take responsibility for practice organization, collecting feedback, helping to find the practice places for the students. More active involvement of the Career Centre of the KK in the process of arranging practical placements and providing support in employment seeking process can be recommended. The SER indicates the existence of the Career Centre within KK, but neither students nor employers seemed to be aware of its services.

Nine student mobility agreements involving Food Technology Department are signed and implemented within the Erasmus programme. Every year ca. 4,1 % of the students take a semester of studies abroad. 29 students of the FT SP have been at the partner universities in Denmark, Greece, Belgium, Hungary, Cyprus between 2007 and 2011; 18 students from Portugal, Romania, and Turkey have participated at FT SP at KK.

The teaching and training facilities are situated close to each other. Thus, rational timetables of lectures and practical training are drawn up.

Student self-governance is implemented through the Students' Union. Students take part in the College self-governance: their representatives are members of the College Council, College and Department academic councils and study programme self-analysis work group.

Regular scholarships are granted to 10% of students in the state–funded student places whose leveraged average of semester academic performance is not lower than 7,5. The evaluation team did not meet scholarship receiving students among FT SP participants. Students

may make use of the KK swimming pool and fitness hall. Various cultural events are organised: conferences, speciality days, the day of young wine, etc. Students may choose living in the dormitory with 242 places, but clear rules for the access to the dormitories have to be provided. Specialised psychological assistance is not provided.

6. Programme management

The administrative organisation of the KK is adequate to assure the implementation and monitoring of the programme. The responsibilities of study programme providers are listed in the Staff Regulations, approved by the orders of KK Director. The responsibilities are clear, distributed according to competences and abilities required for the implementation of the assigned work.

FT SP at KK has collected and analysed data on labour market requirements and on student performance on the programme (see SER section 2.1.3). The collection of relevant data and the existence of appropriate processes and management structures are impressive. During the assessed period (2007-2012) the quality of the cooperation with stakeholders is measured based on the qualitative and quantitative criteria. The students have possibilities to voice their opinion about the quality of the study programme; food company specialists take part in the process of updating study programmes, in the Final Thesis qualification commission, they offer proposals and comments on the organisation, contents and assessment of Final Theses.

Internal quality assurance system at KK functions according to the Total Quality Management model (SER, p.31). Meanwhile, the structure and contents of FT SP SER is said to be prepared guiding on the provisions of international standard ISO 9001, which focuses on the process approach in the development, implementation, and improvement of study process efficiency (SER, p.5), although it is clear that the structure of the SER is provided by the regulations from national SKVC. The influence of ISO principles probably is reflected by numerous (96) references to the external and internal regulations, which are provided in the SER. As for the contents of the SER, the Evaluation Team assumes that the implementation of ISO principles has not been strong enough to secure the relevance of all provided data as well as to avoid misprints and internal discrepancies within the text, the unjustified “copy / paste” duplications of the paragraphs from FT SP SER in the report on Food Safety Study Programme, which has been prepared in parallel.

The internal analysis and improvement of the programme is primarily the responsibility of the Faculty. The internal quality assurance measures are enabling monitoring of important aspects of teaching process and study programme. Mechanisms to improve the teaching quality are in place. The FT Study Programme Committee (hereinafter – SPC) includes, besides the

teachers, also the students and external members – practitioners. The information on achievement of students in different subjects is regularly analysed.

The quality assurance measures should be further developed to assist the strategic development of the curriculum, The Evaluation Team would like to encourage the increased use of the external members of SPC in the development and modernization of the programme, as well as in monitoring the results of introduced novelties, adjusting the programme aims and learning outcomes to the needs of the changing labour market, e.g., introduction of new approaches into teaching processes and changes in curriculum structure. For this purpose the FT SP administration may consider introduction of additional approaches, e.g. international benchmarking of programme learning outcomes, to increase the credibility of the annual verification of the programme implementation with the social partners. Too high concentration on the individual components of the programme taken alone may be less productive. The tendency of decreasing enrolment and relatively poor graduation and employment rates in comparison to other colleges in Lithuania who provide Food Technology and related programmes has to be seriously addressed.

The communication of the FT SP results; the information about the activities and applied measures for the improvement of the quality of the studies are publicly available in KK website and in journals: ”Admission to Lithuanian Higher Education Schools”, “Siena”; at KK “Open Doors” days, also during the Department’s staff visits to Kaunas County schools, vocational schools, etc. The outcomes of internal and external evaluations of the programme have been used for the improvement of the programme.

Assessment of FT SP outcomes has involved the participation of social partners. During the reporting period the Department surveyed employers about the implementation of the FT SP. In the result four specializations were combined and the specializations of Technology of Food of Plant and Animal Origin were launched (2006), study learning outcomes were renewed (2011), certification of study subjects was carried out (2008 - 2010); Final Theses’ quality are revised and validated every year. The suggestions from the employers have been instrumental in the development of qualification courses for food industry workers and organization of courses for people registered at Labour Exchange. Contracted research agreements on Food Technology related topics also are concluded in Food Technology Department on the initiative of food processing companies.

The quality assurance measures should be used to assist the strategic development of the curriculum according to the needs of a changing world, e.g., introduction of new approaches into the teaching process and changes in curriculum structure. Too high concentration on the individual components of the programme (processes) taken alone may be less productive.

III. RECOMMENDATIONS

Having regard to the goals of the development of the Professional Bachelor's Study Programme in Food Technology at the KK towards national and international recognition, the expert team would like to recommend the SPC, the SER preparation team and the administration of the KK to consider the following activities:

3.1. to concentrate efforts in cooperation with the employers on exploring the reasons of decreasing recruitment into the FT SP, seeking to increase the appeal of the programme for high school graduates and for continuous education, to promote the employment success of the graduates since the long-term viability of the FT SP would be helped only by making it more attractive to school leavers and to those currently employed in the food industry, not by the administrative decisions setting up limits for the student intake;

3.2. to increase the accessibility and visibility of the programme by publishing its SER and description on KK website in English, using target-oriented advertising of the programme to increase the student uptake and motivation;

3.3. to reconsider the learning outcome structure of the programme providing complete coverage of the spectrum of knowledge, skills, and abilities as proposed by international recommendations and national regulations;

3.4. to reflect and specify subject-embedded development of personal, social and communication abilities throughout curriculum;

3.5. to continue the move towards increased horizontal and vertical integration of the subjects including reconsidering the succession of some subjects within the SP with a view to developing a fully modular approach to the delivery of the programme;

3.6. to seek for the possibilities of facilitating the development of a specialisation pathway in Fish Product Technology, in which KK might attain national leadership, on the basis of the of newly established unique research facilities;

3.7. to support the internationally relevant research of the staff in order to strengthen the concept of applied research based training, to explore possibilities of using sabbatical leave to foster staff engagement in international research cooperation as the basis for its professional development at KK;

3.8. to consider the possibilities of strengthening the research profile of the fermentation laboratory and laboratories for the production of bread, confectionery, meat, and dairy products so that the implemented experimental technological processes can be evaluated on the basis of scientific evidence on the physical, chemical and microbiological properties of the obtained products;

3.9. to improve the laboratory safety and environment protection procedures, e.g., as regards the disposal of chemical waste, bringing them in full compliance with national and international regulations since decent execution of these requirements will feed into the development of the practices of labour and production safety, which are fundamentally important components in every industry;

3.10. to strengthen experimental approaches and use of modern teaching and research literature, to develop more transparent terms of funding regarding the purchase of materials providing laboratory support at preparation of the Final Thesis projects;

3.11. to conclude agreements on cooperation with other colleges in Lithuania who provide teaching in FT area aiming at sharing the resources and avoiding duplications;

3.12. to conclude agreements on cooperation with universities, which provide Master Studies in Food Technology or related areas aiming at providing clear bridging requirements for the further studies of programme graduates;

3.13. to diversify the tools supporting innovation and development of the study programme according to the changing needs of labour market in food processing technologies.

IV. SUMMARY

The aims and learning outcomes of the FT SP at KK meet the minimum national and international regulations set forth for the first cycle vocational study programmes. It is consistent with national regulations on Professional Bachelor training, providing a solid, practice-oriented education on sound basis of theory. The course syllabi reflect the relevance of specialist topics to the learning outcomes of the studies. The programme focuses on the studies along two specialisation tracks: Food Technology of the Meat Products, Food Technology of the Plant Products. FT SP is carrying on the tradition of vocational studies in food processing that has been long established in Kaunas, the graduates are able to start professional activities immediately after studies.

Meanwhile, the learning outcomes, which characterize the research skills, personal, social and communication abilities of the graduates from the FT SP, are not defined in sufficient detail and clarity. Specialists of Food Technology in Lithuania generally are in demand; meanwhile only about 55% of the graduates enjoy employment by the profession for which they qualified. According to the combined (full-time plus part-time) enrolment data the study programme since 2007 steadily loses popularity within the regional high-school graduates. The reasons of this unfortunate development have to be addressed by the FT SP management immediately and seriously in cooperation with the employers, students and KK central administration.

The FT SP at KK stands out from similar programmes in Lithuania by having introduced clear rules for recognizing previous informal and non-formal education, practical experience; by developing upgrading or re-qualification courses for unemployed who are registered in the Labour Exchange; by paying special attention to bridging the gaps in the knowledge of freshmen who are enrolled without having sufficient training in Science and Maths. Further study options for the FT SP graduates should be defined and relevant agreements with the universities, which provide Master Programmes in Food Technology or Safety have to be concluded. The Evaluation Team was surprised and disappointed at the long length of some bridging programmes from the college studies to the Master studies at the universities. The success of KK graduates in gaining access should inspire KK to seek to formalise the arrangements with the universities.

The curriculum is subject-based; further integration between the disciplines should be encouraged in modules and the practical part of the programme should be strengthened and disclosed in more detail. The syllabi with mostly Basic Science contents are included in the curriculum under names, which emphasize the applied aspect of the subject, e.g. “Food Physics”

instead of “General Physics”, thus exposing misleading information and sometimes creating doubts about the provision of the needed basic knowledge for entering specialization tracks. The scope and quality of the Final Thesis is highly variable, most of them do involve references from textbooks and normative or legislative acts only, therefore achieving the learning outcomes for research performance are not always realistic. The conditions for the financial support allocated for the preparation of the Final Thesis is not transparent enough, in majority of cases the Thesis do not include experimental work. The time devoted to the English language training within general study subjects in the 4-th and 5-th semester of full time studies cannot secure the achievement of the learning outcomes for social and personal abilities. The support for training in foreign languages, first of all English, should be enhanced.

The staff cohort involved in the realisation of FT SP meets the legal qualification requirements; their experience is adequate to ensure learning outcomes, the number of Ph.D. degree holders in the permanent and invited staff is high. The improvement of the staff professional skills and qualifications is performed on regular basis. Meanwhile, the level of the research of the staff should be improved seeking for the higher international standards.

The developing FT SP within the Faculty of Technologies of KK and in cooperation with Kaunas University of Technology provides possibilities for versatile employment of existing study resources. Multiple international and local funding sources, including the Structural Funds of the EU, have been successfully combined to improve the quality of premises and to obtain modern research and study equipment. The Practical Centres for training in various food product technologies (e.g., Meat, Grain, Fermentation) stand out for providing possibilities to model full cycle of small scale production in respective food processing branch, while the analytical base for scientific evaluation of the products and materials still needs to be upgraded, as well as the laboratories for general science subject teaching (e.g., Chemistry, Microbiology). Serious attention should be paid also to the laboratory safety and environment protection issues, providing that they fully meet national and international standards.

FT SP has established clear and adequate assessment principles and criteria. FT SP students receive adequate academic support, versatile assessment methods, including the electronic ones are used. Student research conferences are organized since 2007. The teaching and training facilities are well equipped and maintained, located close to each other.

29 students of the FT SP have participated in the ERASMUS exchange programme during 2007 - 2011, which comprises 4,1% of the total student number within the programme. This participation rate is relatively higher than the FT programme student mobility in other Lithuanian colleges, nevertheless it is still much effort needed to reach the 20% target, which is set by the Bologna Process.

Adequate organisational structure to assure the implementation and monitoring of the study programme is in place at the College and Faculty level. The feed-back information from the students and graduates and self-evaluation of the programme at the Faculty level takes place on regular basis. FT SP at KK has collected and analysed data on labour market requirements and on student performance on the programme. The collection of relevant data and the existence of appropriate processes and management structures are impressive. The suggestions of employers and social partners have been converted into practical improvements of the organization and structure of the FT SP. The quality of the cooperation with stakeholders is measured on the bases of qualitative and quantitative criteria.

The quality assurance measures should be further developed to assist the strategic development of the curriculum according to the needs of a changing world, e.g., introduction of new approaches into teaching processes and changes in curriculum structure. For this purpose the FT SP administration may consider introduction of additional approaches, e.g. international benchmarking of programme learning outcomes, to increase the credibility of the annual verification process of the programme implementation process with the social partners. Too high concentration on the individual components of the programme (processes) taken alone may be less productive.

The evaluation team is urging SER group to consider more thorough selection and critical analysis of the information, which is included in the report, concentrating on the data, which provide essential information on the programme, justifying assumptions, which are used in data analysis and avoiding internal numeric discrepancies in the text and tables characterizing the programme.

V. GENERAL ASSESSMENT

The study programme *Food technology* (state code – 653E40002, 65305T101) at Kaunas College is given **positive** evaluation.

Study programme assessment in points by fields of assessment.

No.	Evaluation Area	Evaluation Area in Points*
1.	Programme aims and learning outcomes	2
2.	Curriculum design	2
3.	Staff	3
4.	Material resources	3
5.	Study process and assessment (student admission, study process student support, achievement assessment)	3
6.	Programme management (programme administration, internal quality assurance)	3
	Total:	**16**

*1 (unsatisfactory) - there are essential shortcomings that must be eliminated;

2 (satisfactory) - meets the established minimum requirements, needs improvement;

3 (good) - the field develops systematically, has distinctive features;

4 (very good) - the field is exceptionally good.

Grupės vadovas: Team Leader:	Prof. Indrikis Muiznieks
Grupės nariai: Team members:	Prof. Frank McMahon Prof. Marek Frankowicz Prof. Vieno Irene Piironen Doc. dr. Ingrida Bružaitė Eglė Dilkienė Tadas Juknius

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V. APIBENDRINAMASIS ĮVERTINIMAS

Kauno kolegijos studijų programa *Maisto technologija* (valstybinis kodas – 653E43001, 65305T103) vertinama **teigiamai**.

Eil. Nr.	Vertinimo sritis	Srities įvertinimas, balais*
1.	Programos tikslai ir numatomi studijų rezultatai	2
2.	Programos sandara	2
3.	Personalas	3
4.	Materialieji ištekliai	3
5.	Studijų eiga ir jos vertinimas	3
6.	Programos vadyba	3
	Iš viso:	**16**

* 1 - Nepatenkinamai (yra esminių trūkumų, kuriuos būtina pašalinti)

2 - Patenkinamai (tenkina minimalius reikalavimus, reikia tobulinti)

3 - Gerai (sistemiškai plėtojama sritis, turi savitų bruožų)

4 - Labai gerai (sritis yra išskirtinė)

IV. SANTRAUKA

Maisto technologijos studijų programos Kauno kolegijoje tikslai ir studijų rezultatai tenkina minimalius nacionalinius ir tarptautinius reikalavimus, nustatytus pirmosios pakopos profesinėms studijų programoms. Programa tenkina nacionalinius reikalavimus, keliamus profesinėms bakalauro studijoms, suteikiant į praktiką orientuotą mokymą. Studijų dalykų aprašai atspindi specialybės temų aktualumą studijų rezultatams. Programoje akcentuojamos dviejų specializacijų studijos: Mėsos produktų maisto technologija ir Augalinių produktų maisto technologija. Maisto technologijos studijų programa tęsia maisto apdirbimo profesinių studijų tradiciją, kuri gyvuoja Kaune jau seniai, absolventai gali iš karto baigę studijas pradėti profesinę veiklą.

Studijų rezultatai apibūdinantys Maisto technologijos studijų programos absolventų mokslinės veiklos įgūdžius, asmeninius, socialinius ir komunikacinius gebėjimus yra nepakankamai išsamiai ir aiškiai apibrėžti. Maisto technologijos specialistai Lietuvoje paprastai yra paklausūs, tačiau tik apie 55 % absolventų dirba pagal įgytą profesiją. Remiantis konsoliduotais (nuolatinių ir ištęstinių studijų) priėmimo duomenimis, nuo 2007 m. pastoviai mažėja studijų programos populiarumas regiono mokyklų abiturientų tarpe. Maisto technologijos studijų programos vykdytojai turi nedelsiant ir rimtai išnagrinėti tokio neigiamo pokyčio priežastis bendradarbiaujant su darbdaviais, studentais ir Kauno kolegijos administracija.

Kauno kolegijos Maisto technologijos studijų programa išsiskiria iš kitų panašių studijų programų Lietuvoje dėl nustatytų aiškių taisyklių dėl ankstesnio neformalaus ugdymo ir savišvietos, praktinės patirties pripažinimo, dėl parengtų kvalifikacijos kėlimo ar perkvalifikavimo kursų darbo biržoje registruotiems bedarbiams, dėl skiriamo ypatingo dėmesio studijuoti pradėjusių asmenų, kurie įstojo neturėdami pakankamo išsilavinimo mokslo ir matematikos srityse, žinių spragoms užpildyti. Reikėtų apibrėžti tolesnes studijavimo galimybes Maisto technologijos studijų programos absolventams ir pasirašyti atitinkamas sutartis su universitetais, kuriuose dėstomos magistro laipsnio maisto technologijos ar saugos studijų programos. Ekspertų grupę nustebino ir nuvylė kai kurių išlyginamųjų programų tarp kolegijos studijų ir magistro laipsnio studijų ilga trukmė. Kauno kolegijos absolventų sėkmė stojant turėtų įkvėpti Kauno kolegiją ieškoti būtų, kaip įforminti susitarimus su universitetais.

Mokymo programa yra pagrįsta studijų dalykais. Reikėtų skatinti tolesnę dalykų integraciją moduliuose, o praktinę studijų programos dalį reiktų sustiprinti ir išsamiau aprašyti. Bendrieji studijų dalykai, apimantys daugiausia fundamentaliųjų mokslų turinį, į dalykų programą yra įtraukti tokiais pavadinimais, kuriuose akcentuojamas dalyko taikomasis aspektas, pvz., Maisto fizika, o ne Bendroji fizika, tokiu būdu suteikiama klaidinanti informacija ir kartais sukeliamos abejonės dėl reikiamų elementariųjų žinių norint studijuoti specializaciją suteikimo. Baigiamųjų darbų apimtis ir kokybė labai skiriasi, daugumoje jų yra nuorodos tik į vadovėlius ir norminius ar teisinius dokumentus, todėl su moksline taikomąja veikla susijusių studijų rezultatų pasiekimas ne visuomet yra realistiškas Finansinės paramos, skiriamos baigiamajam darbui rengti, sąlygos nėra pakankamai skaidrios, dažniausiai baigiamieji darbai neapima eksperimentinės veiklos. Anglų kalbos mokymui bendruosiuose studijų dalykuose 4-ame ir 5-ame nuolatinių studijų semestre skiriamo laiko nepakanka su socialiniais ir asmeniniais gebėjimais susijusiems studijų rezultatams pasiekti. Reikėtų padidinti paramą užsienio kalbos ir pirmiausia anglų mokymui.

Personalas, vykdantis Maisto technologijos studijų programą, tenkina teisinius kvalifikacijos reikalavimus, jų patirtis yra pakankama studijų rezultatams pasiekti, daktaro

mokslo laipsnį turinčių tiek nuolatinių, tiek kviestinių dėstytojų skaičius yra didelis. Personalo profesiniai įgūdžiai ir kvalifikacija yra nuolat gerinami. Tuo tarpu personalo mokslinės taikomosios veiklos lygį reiktų didinti siekiant aukštesnių tarptautinių standartų.

Maisto technologijos studijų programos vykdymas Kauno kolegijos Technologijų fakultete ir bendradarbiaujant su Kauno technologijos universitetu suteikia galimybes visapusiškai išnaudoti turimus studijų išteklius. Gausybė tarptautinių ir nacionalinių finansavimo šaltinių, įskaitant ES struktūrinius fondus, buvo sėkmingai apjungti siekiant pagerinti patalpų kokybę ir įsigyti šiuolaikinės mokslinių tyrimų vykdymo ir studijų įrangos. Išsiskiria įvairių maisto produktų technologijų (pvz., mėsos, grūdų, fermentacijos) Praktinio mokymo centrai, nes juose sudarytos galimybės sumodeliuoti visą mažos apimties gamybos ciklą atitinkamoje maisto apdirbimo srityje. Tiesa, mokslinio produktų ir medžiagų vertinimo analitinę bazę reikia modernizuoti, kaip ir bendrųjų mokslo dalykų dėstymui (pvz., chemijos, mikrobiologijos) skirtas laboratorijas. Reiktų skirti ypatingą dėmesį laboratorinių darbų saugos ir aplinkosaugos klausimams, kad laboratorinių darbų sauga ir aplinkosauga visiškai tenkintų nacionalinius ir tarptautinius standartus.

Maisto technologijos studijų programoje nustatyti aiškūs ir tinkami vertinimo principai ir kriterijai. Maisto technologijos studijų programos studentai gauna tinkamą akademinę paramą, taikomi įvairiapusiai vertinimo metodai, įskaitant elektroninius. Studentų mokslinės konferencijos organizuojamos nuo 2007 m. Mokymo ir mokymosi patalpos yra gerai įrengtos ir prižiūrimos, yra netoli viena kitos.

Nuo 2007 iki 2011 m. ERASMUS mainų programoje dalyvavo 29 Maisto technologijos studijų programos studentai, o tai yra 4,1 % visų programą studijuojančių studentų. Šis studentų dalyvavimo rodiklis yra sąlyginai aukštesnis nei maisto technologijos studijų programų kitose Lietuvos kolegijose studentų judumo rodiklis, tačiau vis tiek dar reikia įdėti labai daug pastangų, kad būtų pasiektas Bolonijos procese nustatytas 20 % tikslas.

Kolegijos ir fakulteto lygmeniu yra tinkama organizacinė struktūra užtikrinanti studijų programos įgyvendinimą ir stebėseną. Fakulteto lygmeniu reguliariai renkami studentų ir absolventų atsiliepimai bei rengiama programos savianalizė. Kauno kolegijos Maisto technologijos studijų programa renka ir analizuoja duomenis apie darbo rinkos poreikius ir programos studentų pažangumą. Renkami aktualūs duomenys ir tinkami procesai bei vadybos struktūros sudaro tikrai puikų įspūdį. Darbdavių ir socialinių partnerių pasiūlymai buvo perkelti į praktinius Maisto technologijos programos organizavimo ir sandaros patobulinimus. Bendradarbiavimo su socialiniais partneriais kokybė vertinama kokybiniais ir kiekybiniais kriterijais.

Reiktų toliau vystyti kokybės užtikrinimo priemones siekiant strateginio studijų programos sandaros rengimo pagal besikeičiančio pasaulio poreikius, pvz., mokymo procesuose taikyti naujus požiūrius, atlikti programos sandaros pakeitimus. Šiam tikslui įgyvendinti Maisto technologijos studijų programos vykdytojai galėtų apsvarstyti galimybę įvesti papildomą požiūrį, pvz., programos studijų rezultatus palyginti su tarptautiniais standartais, padidinti metinio programos vykdymo vertinimo patikimumą tarp socialinių partnerių. Per didelė atskirai paimtų pavienių programos (procesų) komponentų koncentracija gali būti ne tokia produktyvi.

Ekspertų grupė ragina savianalizės suvestinės rengimo komandą kruopščiau panagrinėti į suvestinę įtraukiamos informacijos atranką ir kritinę analizę ir susitekti ties duomenimis, kurie suteikia esminės informacijos apie programą, pagrįsti duomenų analizėje daromas prielaidas, taip pat vengti skaičių nesutapimų tekste bei programą apibūdinančiose lentelėse.

III. REKOMENDACIJOS

Atsižvelgiant į bakalauro profesinės kvalifikacijos Maisto technologijos studijų programos Kauno kolegijoje vykdymo tikslus siekiant nacionalinio ir tarptautinio pripažinimo, ekspertų grupė norėtų rekomenduoti Studijų programos komitetui bei savianalizės suvestinės rengimo grupei ir Kauno kolegijos administracijai apsvarstyti toliau nurodomą veiklą.

3.1. Bendradarbiaujant su darbdaviais dėti visas pastangas išsiaiškinti mažėjančio norinčiųjų studijuoti Maisto technologijos studijų programą skaičiaus priežastis, padidinti programos patrauklumą mokyklų abiturientams ir kaip tolesnių studijų galimybę, skatinti absolventų profesinį užimtumą, kadangi ilgalaikis Maisto technologijos studijų programos gyvavimas galėtų būti užtikrintas tik padarius programą patrauklesne abiturientams ir šiuo metu maisto pramonėje dirbantiems asmenims, o ne priimant administracinius sprendimus riboti studentų priėmimą.

3.2. Padidinti programos prieinamumą ir matomumą paskelbiant programos savianalizės suvestinę ir programos aprašą Kauno kolegijos tinklalapyje anglų kalba, naudoti į tikslinę grupę orientuotą programos viešinimą siekiant padidinti studentų susidomėjimą ir motyvaciją.

3.3. Peržiūrėti programos studijų rezultatų struktūrą apimant platų žinių, įgūdžių ir gebėjimų spektrą, kaip siūloma tarptautinėse rekomendacijose ir nacionalinėse nuostatose.

3.4. Apsvarstyti ir sukonkretinti studijų dalykams būdingų asmeninių, socialinių ir komunikacinių gebėjimų ugdymą studijų programos sandaroje.

3.5. Toliau tęsti didesnę horizontaliąją ir vertikaliąją studijų dalykų integraciją, taip pat peržiūrėti kai kurių studijų programos dalykų eiliškumą siekiant visiškai modulinio programos vykdymo.

3.6. Ieškoti galimybių palengvinti Žuvies gamybos technologijos specializacijos vystymą, kurią pasiūlius Kauno kolegija galėtų tapti nacionaliniu lyderiu, pasitelkiant naujai įrengtas unikalias mokslinių tyrimų laboratorijas.

3.7. Remti tarptautiniu mastu aktualią personalo mokslinių tyrimų veiklą siekiant sustiprinti taikomųjų tyrimų veikla grįsto mokymo koncepciją, išnagrinėti galimybes išnaudoti mokslininko atostogas personalo dalyvavimui tarptautinėje mokslinių tyrimų veikloje, kuri taptų profesinio tobulėjimo pagrindu Kauno kolegijoje.

3.8. Apsvarstyti galimybę sustiprinti fermentacijos laboratorijos ir duonos, konditerijos gaminių, mėsos ir pieno produktų gamybos laboratorijų mokslinį profilį, kad įgyvendintus eksperimentinius technologinius procesus būtų galima įvertinti remiantis moksliniais įrodymais apie fizines, chemines ir mikrobiologines gautų produktų savybes.

3.9. Pagerinti laboratorinių darbų saugos ir aplinkosaugos procedūras, pvz., cheminių atliekų tvarkymo, kad šios visiškai atitiktų nacionalinius ir tarptautinius reglamentus, kadangi tinkamas šių reikalavimų įgyvendinimas prisidės prie darbo ir gamybos saugos praktikos, kuri yra labai svarbus kiekvienos pramonės elementas, plėtojimo.

3.10. Sustiprinti eksperimentinį požiūrį ir šiuolaikinės mokymo ir mokslinių tyrimų literatūros naudojimą, parengti skaidresnes laboratorijoje naudojamų medžiagų baigiamojo darbo projektui atlikti įsigijimo finansavimo sąlygas.

3.11. Sudaryti bendradarbiavimo sutartis su kitomis Lietuvos kolegijomis, kuriose dėstomos maisto technologijos srities programos, siekiant pasidalyti ištekliais ir išvengti dubliavimosi.

3.12. Sudaryti bendradarbiavimo sutartis su universitetais, kuriuose dėstomos maisto technologijos magistro laipsnio studijų programos arba susijusių sričių programos, siekiant parengti aiškius išlyginamuosius reikalavimus toliau studijuoti norintiems studijų programos absolventams.

3.13. Diversifikuoti inovacijas ir studijų programos vystymą remiančias priemones pagal besikeičiančius darbo rinkos poreikius maisto apdirbimo technologijų srityje.

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