



**ASIIN Seal**

## **Accreditation Report**

**Bachelor's Degree Programme**  
***Nutrition***

**Master's Degree Programmes**  
***Clinical Nutrition (Specialty)***  
***Nutrition***  
***Public Health***

Provided by  
**Universidad Autónoma de Nuevo León**

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## A About the Accreditation Process

| Name of the degree programme<br>(in original language)                                       | (Official) English translation of the name | Labels applied for <sup>1</sup> | Previous accreditation (issuing agency, validity) | Involved Technical Committees (TC) <sup>2</sup> |
|--|--|---------------------------------|---|---|
| Licenciatura en Nutrición  | Ba Nutrition                               | ASIIN                           | /   | 08  |
| Especialidad en Nutrición Clínica  | Ma Clinical Nutrition (Specialty)          | ASIIN                           | /   | 08  |
| Maestría en Ciencias en Nutrición  | Ma Nutrition                               | ASIIN                           | /   | 08  |
| Maestría en Ciencias en Salud Pública  | Ma Public Health                           | ASIIN                           | /   | 08, 10  |
| <b>Date of the contract:</b> 23.08.2015  |  |                                 |   |   |
| <b>Submission of the final version of the self-assessment report:</b> 14.06.2016             |  |                                 |   |   |
| <b>Date of the onsite visit:</b> 15.-17.11.2016  |  |                                 |   |   |
| <b>at:</b> Monterrey, Mexico   |  |                                 |   |   |
| <b>Peer panel:</b>   |  |                                 |   |   |
| Prof. Dr. Heiner Boeing, University of Potsdam;  |  |                                 |   |   |
| Gabi Börries, Hildegard-Grunow Foundation;   |  |                                 |   |   |
| Prof. Dr. Gerhard Flick, University of Applied Science Neubrandenburg;                       |  |                                 |   |   |
| Prof. Dr. Eva-Maria Bitzer, University of Education Freiburg;                                |  |                                 |   |   |
| Marina Núñez Durán, Student School of Dietetics and Nutrition, ISSSTE.                       |  |                                 |   |   |
| <b>Representative of the ASIIN headquarter:</b> Dr. Thomas Lichtenberg                       |  |                                 |   |   |
| <b>Responsible decision-making committee:</b> Accreditation Commission for Degree Programmes |  |                                 |   |   |

<sup>1</sup> ASIIN Seal for degree programmes;

<sup>2</sup> TC: Technical Committee for the following subject areas: TC 08 – Agronomy, Nutritional Sciences and Landscape Architecture.

**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

## B Characteristics of the Degree Programmes

| a) Name                           | Final degree (original/English translation) | b) Areas of Specialization | c) Corresponding level of the EQF <sup>3</sup> | d) Mode of Study | e) Double/Joint Degree | f) Duration | g) Credit points/unit | h) Intake rhythm & First time of offer |
|-----------------------------------|---|----------------------------|--|------------------|------------------------|-------------|-----------------------|--|
| Ba Nutrition                      | Bachelor of Nutrition                       |                            | Level 6  | Full time        | /                      | 10 Semester | 220 ECTS CP           | Half-yearly (Semester) / 01.12.2009    |
| Ma Clinical Nutrition (Specialty) | Specialty in Clinical Nutrition             |                            | Level 7  | Full time        | /                      | 4 Semester  | 102 ECTS CP           | Winter semester / 10.02.2003           |
| Ma Nutrition                      | Master of Science in Nutrition              |                            | Level 7  | Full time        | /                      | 4 Semester  | 80 ECTS CP            | Summer semester / 08.03.2009           |
| Ma Public Health                  | Master of Public Health                     |                            | Level 7  | Full time        | /                      | 4 Semester  | 84 ECTS CP            | Summer semester / 08.02.2010           |

For the Bachelor's degree program Nutrition the institution has presented the following profile on the subject specific website <http://www.faspyn.uanl.mx/academic-programs/bachelor-degree-in-nutrition/?lang=en> (accessed 20.11.2016):

„The objective of the Faculty of Public Health and Nutrition (faspyn) is to train professionals in Nutrition and Postgraduate students in the areas of Nutrition and Public Health, to be part of the different working fields of the region and the country. In relation to the Bachelor degree, it is given a special emphasis on the knowledge of facts, principles, processes and concepts of Nutrition, as well as nutritional attention of people and communities, assurance of the quality of the processes of food production for communities (level 6 according to the European qualification reference framework, EQF). Additionally, students are involved in the implementation of institutional development plans, identifying problems and proposing solutions with the use of technology from the field (Level 6 EQF).“

For the Specialty Clinical Nutrition the institution has presented the following profile on the website <http://www.faspyn.uanl.mx/postgraduate-programs/?lang=en> (accessed 20.11.2016):

„General Objective

<sup>3</sup> EQF = The European Qualifications Framework for lifelong learning

The objective of the Specialty in Clinical Nutrition of the Faculty of Public Health and Nutrition is to train specialists with knowledge, skills and attitudes that will allow for the professional practice and research in Clinical Nutrition.

### Specific Objectives

Provide high-level expertise in the area of Clinical Nutrition through experts on the subject.

Provide scenarios of clinical fields that are locally, nationally and internationally desirable for the development of abilities and skills that allow the practice of the academic and professional exercise.

Provide the platform for academic bodies of the Instituto de Educación Superior, particularly those established in the “Lines of Generation and Innovative Application of Knowledge” according to the objectives of the Public Education, linking to research and academic area along with the scenarios of clinical field, creating products of research and development to give a satisfactory response to a series of social, institutional and professional needs.

Meet the needs of the comprehensive training of the graduates of the Degree in Nutrition in the field of Clinical Nutrition, integrating the working fields, products of research and development that contribute to progress in scientific knowledge.

Strengthen the inpatient and ambulatory care with the integration in the health team of a Professional who is more skilled, highly specialized and trained to design and implement with greater precision the nutritional care process (NCP) in individuals with special nutritional conditions.”

For the Master’s degree program Nutrition the institution has presented the following profile on the subject specific website <http://www.faspyn.uanl.mx/postgraduate-programs/?lang=en> (accessed 20.11.2016):

### Specific Objectives

- Generate scientific knowledge of vanguard in the area of food and nutrition through the active participation of teachers and students in the program.
- Involve students in the lines of generation and application of knowledge for their development and consolidation.
- Enter and maintain the mastery of the National Register of Graduate Quality.

- Ensure the entry of professionals in the area of teaching that comply with the requirements of the program.
- Contribute to the efficiency and consolidation of the postgraduate systems from the FASPYN and the Autonomous University of Nuevo Leon.
- Be the basis for the creation of the Master Degree in Nutrition (professionalizing) and for the Doctorate in Science, considering the postgraduate system of the Faculty and the Autonomous University of Nuevo Leon.
- Implement the modality of Master in Sciences in a bi-national option with the Texas Woman's University.

For the Master's degree program Public Health the institution has presented the following profile on the subject specific website <http://www.faspyn.uanl.mx/postgraduate-programs/?lang=en> (accessed 20.11.2016):

### **“General Objective**

To provide a comprehensive university training with key focus on the solution of public health problems, through competencies in research, management, teaching and dissemination at a level of excellence; at the same time, develop in the individual, his/her innovative capacity and encourage critical attitude and autonomous learning.

### **Vision**

The Master of Science in Public Health program is recognized by the excellence of professors and students, and its social, humanistic and scientific relevance, as a superior educational program of the Autonomous University of Nuevo Leon (UANL) with the highest national prestige.

### **Mission**

To train teachers and public health science researchers, capable of development in knowledge-based society, with wide understanding of regional, national and international public health situation, demonstrating academic values and principles, committed with the improvement of public health. Creation of social, humanistic and scientific knowledge in the Public Health field as a permanent activity for the improvement of public health, contributing to the steady progress of quality postgraduate education.

### **Program**

The program is a cross-institution collaboration between the Faculty of Public Health and Nutrition, the Faculty of Odontology and Faculty of Psychology; and effective August

## **B Characteristics of the Degree Programmes**

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2015, the Faculty of Medicine and Faculty of Nursing. Studying is a full-time activity, and teaching events are scheduled on weekdays from 8:00 to 18:00 hrs. All courses require the presence of the students. The extent of studies is measured by credit units, which comply with Autonomous University of Nuevo Leon post-graduate guidelines. The student must complete in two years of full-time study a total of 84 ECTS according to the 2015-updated study plan.”

## C Peer Report for the ASIIN Seal

### 1. The Degree Programme: Concept, content & implementation

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

#### Evidence:

- Self-Assessment Report chapter 1.1
- Objectives and learning outcomes of the degree programs:
  - Ba Nutrition: <http://www.faspyn.uanl.mx/academic-programs/bachelor-degree-in-nutrition/?lang=en> (accessed 20.11.2016)
  - Specialty Clinical Nutrition: <http://www.faspyn.uanl.mx/postgraduate-programs/?lang=en> (accessed 20.11.2016)
  - Ma Nutrition: <http://www.faspyn.uanl.mx/postgraduate-programs/?lang=en> (accessed 20.11.2016)
  - Ma Public Health: <http://www.faspyn.uanl.mx/postgraduate-programs/?lang=en> (accessed 20.11.2016)
- Diploma Supplements, part of appendices provided by UANL
- Discussions with representatives of UANL management, program coordinators, lecturers, students

#### Preliminary assessment and analysis of the peers:

The Universidad Autónoma de Nuevo León (UANL) seeks accreditation for the Bachelor program Nutrition and the Master programs Ma Nutrition and Ma Public Health as well as for the Specialty Clinical Nutrition. UANL explained that a “Specialty” is equivalent to a Master but it is more practical and applied while a Master is more theoretical and academic. The peers comprehended the distinction between a more applied and a more theoretical degree and concluded that it is plausible to make this differentiation. The peers welcomed that each degree program has its own website in Spanish and in English providing information on the general objectives, specific objectives, and learning outcomes. Additionally, the study plans are being made available for each study program. The peers

praised the full transparency in English and Spanish of all degree programs. They positively noted that Diploma Supplements are being issued automatically for all degree programs; however, the Diploma Supplements do not contain the learning objectives and outcomes. Therefore it was not clear to the peers in which official and legally binding document the learning objectives are constituted. The peers underlined that the learning objectives need to be documented in any authoritative form to give students an opportunity to refer to it.

The peers referred to the **Subject-Specific Criteria (SSC)** of the Technical Committee Agronomy, Nutritional Sciences and Landscape Architecture as a basis for judging whether the intended learning outcomes of the Bachelor program and the three Master programs as defined by UANL correspond to the exemplary constituted learning outcomes of this Technical Committee. The auditors examined the areas of competence as set forth by the *Subject-Specific Criteria (SSC)* for degree programs and came to the following conclusions:

Looking at the program objectives of the Bachelor Degree in Nutrition, the peers confirmed that the brief and concise description of the objectives as presented on the subject specific website outlines the core objectives in a clear and concise manner. The more general program objectives are underpinned by 24 fairly detailed learning objectives plus 15 more general skills. The peers underlined that the learning outcomes provide a very complex and detailed picture of the intended competences of the graduates; however, the learning outcomes start with very specific ones like e.g. the “evaluation of the nutritional status of people”. The peers suggest that the sorting of learning outcomes should start with a more general understanding of the principles of natural sciences, social sciences, mathematics, and medical science that provides the foundation for the more advanced competences that are closely connected to the core objective of the bachelor program. From their point of view such a sorting would indicate that the students obtain more fundamental knowledge in natural sciences, social science, mathematics, and medical science. Looking at the competences from the field “engineering analysis” (compare SSC of ASIIN) the peers understood that the learning outcomes put a strong emphasis on knowledge and understanding to identify and formulate problems arising in nutrition science. The students shall be enabled to evaluate the nutritional status of people, to identify risks and pathologies of people through interpretation of the anthropometric, biochemical, clinical and dietary indicators. The peers could see that the students apply different methods using fundamentals such as statistical and experimental analysis. The peers confirmed that competences in the field of engineering analysis are well described. Furthermore, the peers understood that the students shall be versed in modern forms of investigation as graduates shall be able to manage the information and communication

technologies as tools for the access to information and its transformation into knowledge. Looking at the practical competences of the students, the peers were impressed by the long list and well elaborated description of the practical competences that the students are supposed to achieve. The peers underlined that the practical competences are described meticulously and divided into small sections. They understood that the students can specialize in the course of the bachelor program according to their specific interests; the students highlighted this option as a considerable advantage of the bachelor degree program. The peers confirmed that the students shall be able to apply theoretical knowledge to solve subject-specific problems by using suitable devices, processes, and methods. Furthermore, the students shall obtain social competences that enable them to use the logical, formal, iconic, verbal and nonverbal languages according to the student's stage of life. The students shall be competent in preparing inter-, multi- and trans-disciplinary academic and professional proposals and use logical, critical and purposeful thinking to analyze natural and social phenomena. In summary, the peers praised the thoroughness with which the learning outcomes had been developed, however, in order to make the long list of intended learning outcomes more understandable to interested stakeholders the peers pointed out that the learning outcomes should be structured according to the specific field of competence that the students want to acquire.

The analysis of the educational aims and intended learning outcomes of the Specialty Clinical Nutrition shows that there is a differentiation on the website between specific objectives of the program and specific competencies that shall be obtained by the students. When looking at the specific objectives the peers were unable to identify objectives of the Specialty; it seemed to them as if strategic goals of the Facultad de Salud Pública y Nutrición with regard to the development of the program had been stipulated like "strengthen the inpatient and ambulatory care...", "provide scenarios of clinical fields that are locally, nationally and internationally desirable...", or "meet the needs of the comprehensive training of the graduates of the Degree in Nutrition". The peers underlined that the specific objectives should describe the academic, subject-specific and professional classification of the qualifications gained in the degree program. When comparing the specific competencies that the graduates shall acquire in the degree program Specialty in Clinical Nutrition with the exemplary learning outcomes as defined in the subject-specific criteria of ASIIN, the peers gained the impression that key competences in the field of "Knowledge and understanding" like "differentiated knowledge and critical awareness of the latest findings in the discipline" or "profound knowledge and understanding of their technical specialization and the further scientific context" are not represented in the learning outcomes. The learning outcomes somehow imply that this knowledge and understanding of the specialty is available and applied practically. The peers pointed out

that the learning outcomes should also indicate that the knowledge obtained in the preceding bachelor degree are further developed as a basis for more practical applications. The peers confirmed that competences of analysis and problem solving in clinical nutrition are properly and extensively described including the qualification to plan, conduct, and evaluate field and laboratory experiments. The peers also understood that competences in the field of investigation are aimed at as expressed in the learning outcome that graduates shall have “skills of search and analysis of current scientific information, with the technological tool” and they shall be able to “develop and disseminate clinical and applied research”. The peers also understood that the graduates are able to use their knowledge and understanding to develop solutions for unusual problems like the “implementation of nutritional intervention strategies based on evidence” or the “design and use of polymeric mixtures on the basis of nutrient modules”. Especially the practical education plays an important role in this program as students have to “demonstrate proficiency in the use of state-of-the-art equipment and techniques for the screening and full nutritional assessment” or “apply advanced knowledge in the therapy of nutritional support in critically ill patients”. Finally, the peers recognized that social competences are also part of the program as students shall be able to “discuss clinical and nutritional information with a health team through the participation of clinical sessions and bibliographic database” and “demonstrate proficiency in oral and written communication”. Except from the more advanced knowledge and understanding of the proficiency the peers concluded that the intended learning outcomes are largely in line with the parameters provided by subject-specific criteria of ASIIN.

With regard to the Master of Nutrition the peers observed the same issue like in the Specialty Clinical Nutrition, namely that the specific objectives of the program describe strategic objectives of the faculty like e.g. “implement the modality of Master in Sciences in a bi-national option with the Texas Woman’s University”. The peers are lacking program specific objectives. Analyzing the learning outcomes the peers understood that competences in the field of knowledge and understanding shall be obtained as the graduates are supposed to obtain border, multi- and interdisciplinary knowledge with a critical attitude to analyze biochemical, metabolic and molecular nutrition processes. Furthermore, the students shall know and be able to apply the methods used to evaluate the condition of nutritional status of patients, with the best techniques to establish a diagnosis and appropriate nutritional care”. Additionally, the students shall “apply scientific research methods in a critical way for the resolution of nutritional problems” which proved that the program wants to develop competences in the field of Engineering Analysis. The fact that students are supposed to “use leading-edge knowledge in the area of nutrition” is an indication to the peers that the students shall be enabled to investigate on the application

of new emerging technologies in their scientific discipline. With regard to competences in the field of engineering design and problem resolution the peers could comprehend that this is properly covered in the intended learning outcome to “develop intervention strategies in food, nutrition and nutritional care, with ethics and social commitment for the resolution of food and nutritional problems”. Engineering practice is clearly outlined in the learning objective that students can “apply the knowledge of nutrition to depth, research skills and the capacity of resolution of problems with concrete proposals for a better performance of his/her profession” as the peers confirmed. Finally, the important social skills in that profession are outlined in the learning objectives that students are able to “present and publish the results of his/her research to the scientific community” and that they can “disseminate advances in nutrition science to the general population”. Students shall also be capacitated to interact with the different sectors of society, involved in the field of food and nutrition”. The peers confirmed that the learning outcomes are, except for the above mentioned limitation, fully in line with the subject-specific criteria as defined by ASIIN.

Based on the information provided on the website for the Master Public Health, the peers noted that the “general objective”, the “vision” and the “mission” of the program are comparatively concise and focused and provide a comprehensible picture of the overall objective of the program. Contrary to the other programs the peers could not see that strategic goals of the faculty are involved here. Regarding the subject-specific criteria, the peers once again could not see that the learning outcomes make appropriate reference to obtaining more advanced knowledge in the field of the specialization, namely Public Health. The learning outcomes outline that students shall be able to “prioritize problems and health needs from different public health perspective areas in order to provide an organized social response” which covers engineering analysis competences as the peers confirmed. The students shall also be capacitated to “apply epistemological, theoretical, methodological and technical foundations of qualitative and quantitative research to analyze the health-disease process of a globalized society”. The peers comprehended that this implies the practical application of engineering knowledge and also refers to the competence to apply the appropriate tools of research investigation. The students shall also be competent to “design educational programs to satisfy the educational program needs of different society sectors”. The peers concluded from this learning outcome that the graduates shall obtain design competences. The practical application of theoretical subject-specific knowledge is covered in the learning objective to “evaluate health services, implementation of health policies and financial resources management for the solution of health problems”. The peers could also understand that social competences shall be acquired as students shall be able to “publish research results to encourage the dis-

semination of knowledge using oral and written formats for the scientific community, decision-makers, interested groups and general population”.

In summary, the peers concluded that the specific program objectives (apart from Ma Public Health) need to describe the academic, subject-specific and professional classification of the qualifications gained in the degree programs. Looking at the learning outcomes, the peers confirmed that by and large they correspond well with the subject – specific criteria as defined by ASIIN except from competences in the field of “knowledge and understanding” (apart from Ma Nutrition) which need to be outlined more clearly in the learning outcomes. Regarding the Bachelor Degree in Nutrition, the peers highlighted that the learning outcomes need to be structured more clearly according to the specific fields of competence that are offered in the bachelor program.

UANL explained that the curriculum of degree programs is being revised systematically every year. Minor changes are done when need arises. The key modules normally remain the same for the duration of five years but elective modules can be changed flexibly if particular topics or interests are being brought forward by students, alumni or business partners. Every year UANL conducts an employer survey to systematically collect feedback on the different degree programs. Even though the response rate is comparatively low as the program coordinators complained, they collect feasible and relevant data from employers and potential employers that help to critically reflect on the programs and make changes, if necessary. When revising the curriculum, also other stakeholders like alumni are involved to get their feedback. The program coordinators added that they would even like to extend their initiative and offer “business breakfasts” to have regular reunions with representatives from the business world. The peers praised that relevant stakeholders were systematically included in the process of further developing the objectives and learning outcomes and the curricula of the degree programs.

However, despite the very intense links to the labor market, the job market in the field of nutrition is difficult as was admitted by teachers as well as students. For bachelor graduates it is particularly important to have developed very specific skills which are being sought for on the labor market. The peers understood the importance of offering and developing specific fields of competence. The students emphasized that the competence of nutritionists was not fully acknowledged on the labor market and that particularly medical doctors saw nutritionists as “cooks” who need to be told what to do. Also with regard to salaries, there was a tremendous gap between medical doctors and nutritionists. However, the overall image of nutritionists was improving as the students pointed out. The students confirmed that professors and teachers provided all possible support to help graduates to gain a foothold on the labor market. Additionally, there is a coordination center that provides support to graduates to find job opportunities. Nevertheless, a

great number of graduates have to leave the state and move elsewhere in the country to find adequate employment. Regarding the postgraduate students, the job perspectives were also difficult. In the field of public health, the job opportunities were expanding as the specific competences of the graduates become known but for the other postgraduate students the additional benefit of a master degree was not well known on the labor market. In many cases, master graduates were forced to start their working career on the same level like bachelor graduates. Therefore, most graduates in the master programs pursue an academic career which is in line with the strong selection process for admission to the program. The peers understood that working opportunities in the field of nutrition for those who decide against an academic carrier were difficult to find and that UANL maintained very close links to business representatives to make sure to provide modules that improve the changes and employability on the labor market. The peers also welcomed the fact that UANL was working on improving the image of nutritionists and tried to respond to the specific requirements of the labor market by providing very specialized competences. In summary, the peers could see that UANL consistently monitored the intended qualifications profile to support students to take up an occupation which corresponds to their qualification.

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| <b>Criterion 1.2 Name of the degree programme</b> |
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**Evidence:**

- Self-Assessment Report chapter 1.2
- The names of the degree programs are published on the subject-specific websites:
  - Ba Nutrition: <http://www.faspyn.uanl.mx/academic-programs/bachelor-degree-in-nutrition/?lang=en> (accessed 20.11.2016)
  - Specialty Clinical Nutrition: <http://www.faspyn.uanl.mx/postgraduate-programs/?lang=en> (accessed 20.11.2016)
  - Ma Nutrition: <http://www.faspyn.uanl.mx/postgraduate-programs/?lang=en> (accessed 20.11.2016)
  - Ma Public Health: <http://www.faspyn.uanl.mx/postgraduate-programs/?lang=en> (accessed 20.11.2016)

**Preliminary assessment and analysis of the peers:**

The peers discussed the names of different degree programmes Ba and Ma Nutrition, Clinical Nutrition (Specialty), and Ma Public Health and confirmed that the names reflect the program objectives and intended learning outcomes appropriately.

|                                 |
|---------------------------------|
| <b>Criterion 1.3 Curriculum</b> |
|---------------------------------|

**Evidence:**

- Self-Assessment Report chapter 1.3
- Appendix E- Objective Module-Matrix for the Degree Program
- Study Plans of the degree programs:
  - Ba Nutrition: <http://www.faspyn.uanl.mx/wp-content/uploads/2016/11/Nutrition-Bachelor-Degree-Program.pdf> (accessed 20.11.2016)
  - Specialty Clinical Nutrition: <http://www.faspyn.uanl.mx/wp-content/uploads/2016/11/Study-Plan-of-the-Specialty-in-Clinical-Nutrition.pdf> (accessed 20.11.2016)
  - Ma Nutrition: <http://www.faspyn.uanl.mx/wp-content/uploads/2016/11/Study-Plan-Master-of-Science-in-Nutrition.pdf> (accessed 20.11.2016)
  - Ma Public Health: <http://www.faspyn.uanl.mx/wp-content/uploads/2016/11/Study-Plan-Master-of-Science-in-Public-Health.pdf> (accessed 20.11.2016)
- Appendix C - Module descriptions for all degree programs
- Discussions with representatives of UANL management, program coordinators, lecturers, students

**Preliminary assessment and analysis of the peers:**

On the webpage of the Faculty of Public Health and Nutrition all four degree programmes under review are published. The peers welcomed that each subject-specific webpage entails the description of the curriculum and the study plans. However, the peers could not identify the module descriptions on the website which is an important piece of information for external stakeholders to comprehend the study programs. The peers pointed out that the module handbook should be published on the website of UANL.

The curriculum of the undergraduate bachelor program comprises 10 semesters and of the graduate master programs 4 semesters. The peers confirmed that the overall objectives and intended learning outcomes for the degree programs were systematically substantiated in individual modules. The peers could comprehend which knowledge, skills and competences students are supposed to acquire in each module.

As outlined under criterion 1.1, the auditors could see that the intended learning outcomes are with some limitations in line with the Subject-Specific Criteria (SSC) of the

Technical Committee Agronomy, Nutritional Sciences and Landscape Architecture. The peers based their assessment as to whether the curricula of the different degree programs are designed in a way to achieve the intended learning outcomes on the module descriptions, the study plans, and the Objective Module-Matrix. UANL provided study plans for each degree program depicting e.g. for the bachelor which module contributes to the fulfilment of which learning outcome by clustering them according to “General Training”, “Basic Training”, “Vocational Training”, “Free Election”, and “Social Service”; the clustering for the master programs is being done in an analogue manner. The analysis of the peers came to the following conclusions:

For the Bachelor Degree in Nutrition modules from the field of “General Training” are mandatory and the objective of these modules is to provide, along with the specific competencies of a profession, cognitive, axiological, social and human competences that complement the professional performance within the labour and social areas. According to the subject-specific criteria of ASIIN, these complementary competences fall into the category of “Social Competences”. The peers could comprehend that modules like “Regional culture”, “Communicative competence”, “Arts appreciation”, “Bioethics”, “Social context of the profession” or “Management, leadership and citizenship” foster social competences as defined in the subject-specific criteria like communication skills, managerial skills as well as embedding the professional competences into a broader and societal context. Additionally, it became clear to the peers that principles of natural sciences, mathematics, medical science and specific competences in the field of nutrition can be gained in modules like “Anatomy and physiology I+II”, “Chemical analysis of food”, “Structural Biochemistry”, “Principles of Nutrition” or “Human genetics”. It was also plausible to the peers that the students shall be able to apply different methods orientated on fundamentals and have an understanding to identify and formulate problems. According to the peers, modules that would be appropriate to develop these competences are “Epidemiology applied to nutrition”, “Preventive nutrition”, “Sanitary analysis”, “Anthropometry and body composition”, or “Nutritional assessment I+II”. The peers also understood that competences in the field of investigation and application of research methods shall be obtained in modules like “Application of information technologies”, “Research in nutrition” or “Applied research”. Finally, the peers also comprehended that practical components are an integral part of the curriculum; the peers saw that practical and problem solving competences can be achieved through modules like “Laboratory of applied dietary”, “Nutrition intervention I+II”, “Pathology and medical therapy I+II” and “Professional supervised practice in population nutrition”, and “Supervised professional clinical practice”. Additionally, in the light of the long list of elective courses the peers could under-

stand that the students develop their specific field of competence following the particular interests of the students.

The peers analyzed the curriculum of the Specialty of Clinical Nutrition and concluded that elective modules like “Physiopathology and bases for nutrition”, “Immunonutrition”, “Nutrition and nephrology”, “Nutrition in oncology”, Human nutrition and disease”, “Nutrition and paediatrics”, “Nutrition in geriatrics”, “Nutrition in the first year of life” or “Nutrition in the critical patient” develop profound knowledge and understanding of the technical specialization and the further scientific context. The broad range of electives allowed the students to set a focus on their specific specialization. The peers could also comprehend that the students learn to design and apply different methods and plan, conduct, and evaluate field and laboratory experiments. The peers came to the conviction that especially the modules “Nutritional care project I, II, III and IV” were designed to achieve that goal. The peers also understood that students shall be able to apply suitable methods to pursue investigations or detailed research as to technical-scientific issues in accordance with the status of their knowledge and understanding; especially the module on “Scientific research” as well as the “Research seminar I, II and III” are suitable to obtain these competences. Modules like “Surgery and nutritional Support” or “Functional nutritional therapy” enable the students to be qualified to apply innovative methods to problem solving processes. The peers also comprehended that modules like “Nutritional care project I, II, III and IV” or the “Research seminar I, II and III” enabled the students to combine theory and practice to achieve quality of structures, processes, and results and to gain a comprehensive understanding of applicable theories and methods and their limitations. Finally, social skills as needed in this particular profession are integrated in modules that deal with “Integral nutritional assessment work I, II, III, IV”. Based on the module descriptions, the peers could see that different forms of social skills like communication presentation or team work shall be acquired.

The analysis of the curriculum of the Master Nutrition showed that more profound and sophisticated competences in the field of nutrition shall be obtained through modules like “Biochemistry of nutrition”, “Nutrition and human metabolism”, “Cellular and molecular biology” or “Nutrition and disease”. The peers confirmed that a more profound understanding of analytical methods in nutrition can be developed through modules like “Food analysis laboratory” and “Laboratory of molecular Techniques in nutrition”. The peers also understood that advanced scientific research methods shall be acquired in the modules “Research Methods I+II” and the “Thesis I+II”. The peers also comprehended that the graduates shall be qualified to apply innovative methods to problem solving processes and that modules from the field of Optional Advanced Training like “Energy expenditure”, “Development and production of new food”, “Nutrition and cancer”, or “Drug interaction

and nutrients” are well designed to achieve these competences. Furthermore, the peers confirmed that the practical application of theoretical knowledge and the development of application skills can be achieved in modules from the field “Optional Application” like “Design laboratory of experimental diets”, “Body composition”, “Nutritional care process”, “Information systems in nutrition”, or “Food and nutrition programs”. Like in the Specialty Clinical Nutrition, the master program does not contain modules to specifically develop social and non-technical skills but these competences are integrated in the modules that are designed towards the practical application, and it was plausible to the peers that social skills like team work or communication skills can be developed through this approach.

The Master program Public Health is a cross-institution collaboration between the Faculty of Public Health and Nutrition, the Faculty of Odontology and Faculty of Psychology and the Faculty of Medicine and Faculty of Nursing. Examining the curriculum of the Master Public Health, the peers could clearly see that modules like “Management of health services”, “Biostatistics” or “Epidemiology” develop more advanced knowledge and understanding of the professional core discipline of this study program. Analysis and problem solving competences are being further developed through modules like “Management of health services”, “Policies and organization of health systems” or “Prioritization of health problems” as the peers confirmed. The peers also underlined that modules like “Design and validation of an instrument for collecting the information” or “Design and implementation of education programs for the health” foster design competences so that the students learn to practically develop their own concepts and approaches to problems in the field of public health. The peers noticed that scientific research methods play an important role in the curriculum as modules like “Research methodology in health I+II”, “Research seminar I+II” and “Dissemination of research in health I+II” directly contribute to profound research skills. The peers also understood that practical application skills are an integral part of the curriculum as modules like “Integrating product I+II”, “Design and implementation of education programs for the health” or the final thesis clearly prove. Like in the other master programs, social and non-technical competences are not focused on individual modules but are being developed in the context of practical modules. The peers could comprehend that social skills are properly developed through the curriculum and competences required for this specific profession are being fostered.

Hence, the peers concluded that even though the learning outcomes needed some revision and focusing on a comprehensible qualification profile, the curriculum itself is designed to develop the key competences required in the different professions. The peers also confirmed that the curriculum corresponds to the exemplary learning objectives as pointed out in the subject-specific criteria of ASIIN.

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| <b>Criterion 1.4 Admission requirements</b> |
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**Evidence:**

- Self-Assessment Report chapter 1.3
- General Regulation on procedures for admission and permanence of Students (Reglamento General sobre los Procedimientos de Admisión y Permanencia de los Estudiantes): <file:///C:/Users/lichtenberg/Downloads/06admisión.pdf> (accessed 20.11.2016)
- Discussions with representatives of UANL management, program coordinators, lecturers, students

**Preliminary assessment and analysis of the peers:**

The peers learnt that student admission for all faculties and schools within UANL is defined in the “General Regulation on procedures for admission and permanence of Students” which is published in Spanish on the website. The admission requirements are clearly outlined on the subject-specific websites and for all new students the same. Applicants for the Bachelor Degree in Nutrition have to have satisfactorily completed upper middle education, i.e. the high school level. The peers understood that UANL pursues the policy to allow as many interested and qualified applicants access to the university as possible. The intention of this policy is to give many young people a good education and enhance their chances for a positive career development. About 500 students are admitted in the bachelor program per year; the dropout rate was about 18% in recent years. The peers had not received any information on the average duration of study time for the bachelor degree and kindly ask UANL to provide this kind of additional information.

Applicants for the postgraduate programs (Specialty Clinical Nutrition, Master Nutrition; Master Public Health) must meet a number of requirements. UANL pointed out that master programs are considered as “postgraduate” programs contrary to the European notion where master programs are being referred to as “graduate” programs. In this report, the notion “postgraduate studies” relates to the Specialty Clinical Nutrition and the Master Nutrition and the Master Public Health. Applicants must pass the National Examination for Admission to Postgraduate studies, which consists of five modules, among them, mathematical and analytical thinking. Furthermore the students must have oral and written comprehension in Spanish and English language proven through clearly defined test procedures. Additionally, the students have to prove proficiency in the psychometric exam and conduct a psychological interview, which evaluates among other items, tolerance, empathy, capacity for analysis, synthesis and to work under pressure. The interview consists of a set of predefined questions, which need to be answered. Respective notes are

taken and compared. The lecturers admitted that the selection criteria for postgraduate students were difficult but it was the intention to really select appropriate candidates from other institutions or from UANL; those who commence with the postgraduate studies normally finish them successfully. The acceptance rate of applications lies between 50-70% depending on the program; the selection procedure ascertains that only students with the necessary prerequisites are admitted to the programs. They get individual advisory support to choose courses fitting to the competence profile aimed at. The peers wondered about the few students who pursue postgraduate studies compared to the large number of bachelor students. The postgraduate programs are designed for 10-15 students per program and even these few study places are not filled up. The peers understood that most students who finish postgraduate studies also pursue a doctorate program and form the basis for the young academics of the university. The supervision and guidance is very intense and requires a lot of resources from the professors as the peers comprehended. The peers were further explained that only few bachelor students were interested in pursuing postgraduate studies as the additional benefit of a postgraduate degree was not evident and master graduates often had difficulties to find appropriate jobs and were paid the same like bachelors. The peers understood that in the light of the lack of better career opportunities the number of master students was limited and that those who actually aimed at a master degree pursued an academic career. However, the peers underlined that the number of postgraduate students might be too small to be able to recruit sufficient young academics for UANL. That is why the peers recommended making full use of the available places in the master programs to ascertain sufficient young academic professionals for the university. It may also be considered to increase the number of places in the master programs to further broaden the basis of available candidates if sufficient appropriate candidates are available.

Chapter VII of the General Regulation on procedures for admission<sup>4</sup> explains the procedures for recognition of academic competences gained at other (also foreign) institutions of higher education. Students have to submit proper documentation of the competences obtained elsewhere; an academic board analyzes the documents and decides if the competences can be recognized as equivalent to certain modules. The peers understood that rules for recognition of academic achievements were in place and applied transparently.

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<sup>4</sup> Capítulo VII: De la equivalencia y revalidación de estudios realizados en otras instituciones, tanto del Sistema Educativo Nacional como del extranjero

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

The peers gratefully received the explanation that the educational system in Mexico does not provide a Diploma Supplement; therefore it is much appreciated that the FASPYN has initiated an internal process to establish a document (Diploma Supplement) that contains the information according to the ECTS User's Guide. Until its implementation, the peers confirm their intended requirement. The peers also welcomed that the responsible professors and the Academic Committee of the Faculty review the objectives and learning outcomes of each educational program. In that context, the peers affirm that the educational objectives should be outlined more clearly to describe the academic, subject-specific and professional classification of the qualifications gained in the degree programs. With regard to the Bachelor in Nutrition the learning outcomes should be structured according to the specific fields of competence that are offered in the bachelor program. The peers also welcomed that FASPYN intends to revise the module descriptions and to publish them on the subject-specific websites. Until this will have been implemented the peers confirm their intended requirement.

The peers gratefully received information on the average duration of study time for the bachelor degree and noted that the graduation rate lies between 45 and 65% of the regular study duration; when looking at the numbers after 6 years of study up to 76% of the students have graduated. It becomes clear to the peers that a considerable number of students require significantly longer than the envisaged regular study time. The peers highlighted that FASPYN should examine the reasons for exceeding the study time systematically in the context of the quality management system and develop measures to bring students to graduation within the envisaged regular study duration. Furthermore, the peers stick to their recommendation to make full use of the available places in the master programs to ascertain sufficient young academic professionals for the university. For this purpose, it may also be considered to increase the number of places in the master programs.

## **2. The degree programme: structures, methods and implementation**

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| <b>Criterion 2.1 Structure and modules</b> |
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**Evidence:**

- Self-Assessment Report chapter 2.1
- Appendix E- Objective Module-Matrix for the Degree Program
- Study Plans of the degree programs:
  - Ba Nutrition: <http://www.faspyn.uanl.mx/wp-content/uploads/2016/11/Nutrition-Bachelor-Degree-Program.pdf> (accessed 20.11.2016)
  - Specialty Clinical Nutrition: <http://www.faspyn.uanl.mx/wp-content/uploads/2016/11/Study-Plan-of-the-Specialty-in-Clinical-Nutrition.pdf> (accessed 20.11.2016)
  - Ma Nutrition: <http://www.faspyn.uanl.mx/wp-content/uploads/2016/11/Study-Plan-Master-of-Science-in-Nutrition.pdf> (accessed 20.11.2016)
  - Ma Public Health: <http://www.faspyn.uanl.mx/wp-content/uploads/2016/11/Study-Plan-Master-of-Science-in-Public-Health.pdf> (accessed 20.11.2016)
- Appendix C - Module descriptions for all degree programs
- General Rules of International Relations  
[http://transparencia.uanl.mx/normatividad\\_vigente/archivos/LyR09/RelacionesInternacionales.pdf](http://transparencia.uanl.mx/normatividad_vigente/archivos/LyR09/RelacionesInternacionales.pdf) (accessed 20.11.2016)
- Regulation of Social Service:  
<file:///C:/Users/lichtenberg/Downloads/08serviciosocial.pdf> (accessed 20.11.2016)
- Discussions with representatives of UANL management, program coordinators, lecturers, students

**Preliminary assessment and analysis of the peers:**

The Bachelor Degree in Nutrition comprises 10 semesters or five calendar years. The peers indicated that 10 semesters is long compared to bachelor programs in many other countries. UANL explained that the pupils who finish after 12 years of school are generally 17 years old which is young. The long study time shall contribute to their personal development and help them to be well-educated professionals. 10 semesters for bachelor programs is standard throughout Mexico. The peers accepted this explanation. The specialty and the master programs take 4 semesters.

The structure of the undergraduate program and the three postgraduate programs under review is clearly outlined on the subject specific website for each study programme. All

degree programs consist of modules which comprise a sum of teaching and learning. The module descriptions are not published on the subject specific website as indicated under criterion 1.3; however they are attached as appendix to the self-assessment report. Based on the analysis of the sequence of modules and the respective module descriptions the peers concluded that the structure of the degree programs ensures that the learning outcomes can be reached. The peers understood that social service is mandatory for the students of the Bachelor degree in Nutrition and is considered as part of the curriculum (equivalent to 480 hours). The peers noted that in the bachelor program optional courses can be selected already in the early semesters. UANL underlined that the bachelor program intends to provide a thorough but general basis in the field of nutrition and that students can follow their path of interest flexibly. The peers comprehended that this corresponds to the vast set of learning outcomes which should be structured according to the different professional fields as outlined under criterion 1.1. Hence, the structure of the bachelor program provides the option to specialize in order to allow students defining an individual focus and course of study; a tutoring system is in place to give students proper guidance to select courses that support a selected field of specialization (compare criterion 2.4). The students highlighted this flexibility and the freedom of choice as a major advantage of this study program; the elective courses are divided by levels which means that certain prerequisites must have been obtained before specific electives can be taken. This system wants to assure that students have the necessary basics to be able to attend more advanced courses successfully. The peers also praised that UANL succeeds in providing the opportunity for students to follow their personal preferences. The same applies to a lesser extent to the specialty and the master programs where so-called optional professionalizing courses can be selected and allow students to specialize in a specific academic field. In the Master of Public Health, it is possible to specialize in Public Health Nutrition or to focus on public health topics in general. The peers confirmed that the curriculum was structured in a way to allow students to achieve the intended learning outcomes.

#### *International Mobility*

The students confirmed that opportunities for international mobility and exchange programs are being outlined right from the start of the bachelor degree program. If bachelor students are interested in an international program offered at a foreign university which is in line with the specific research field of the student, international mobility is possible and also supported by the university. UANL provides support in terms of flight expenses or scholarships and language courses. Curriculum-wise elective courses can be taken at another university and recognized at UANL. While mobility for bachelor students is something that is being supported and promoted, for master students international mobility is

expected. Statistics show that more than 90% of the master students go abroad for internships. Only very convincing reasons are accepted to allow students not to go abroad. International mobility is seen as part of the development of the personality of young people and thus is mandatory. The peers welcomed this considerable effort to foster international mobility and supported UANL to further pursue this path. However, most of the mobility takes place in the Spanish-speaking world; the peers encouraged UANL to also develop more exchange opportunities to non-Spanish speaking countries. Usually, the language English is used for communication in such instances and training in another language is beneficial to the development of the students.

In the Bachelor Degree in Nutrition the students are required to conduct “Social Services” which are accredited with 16 credit points. The University published the “Regulation of Social Service” where the conditions and content of social services are outlined in a transparent manner. In the postgraduate programs students are expected to implement a number of projects in a practical environment; some of the practical components of the postgraduate studies are supposed to take place in an international context. The exact content and learning objectives are outlined in the module descriptions. The peers concluded that the practical components of the educational programs are well-integrated into the curriculum and clearly defined and foster the competences in practical application and employability.

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| <b>Criterion 2.2 Work load and credits</b> |
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**Evidence:**

- Self-Assessment Report chapter 2.2
- Study Plans of the degree programs:
  - Ba Nutrition: <http://www.faspyn.uanl.mx/wp-content/uploads/2016/11/Nutrition-Bachelor-Degree-Program.pdf> (accessed 20.11.2016)
  - Specialty Clinical Nutrition: <http://www.faspyn.uanl.mx/wp-content/uploads/2016/11/Study-Plan-of-the-Specialty-in-Clinical-Nutrition.pdf> (accessed 20.11.2016)
  - Ma Nutrition: <http://www.faspyn.uanl.mx/wp-content/uploads/2016/11/Study-Plan-Master-of-Science-in-Nutrition.pdf> (accessed 20.11.2016)

- Ma Public Health: <http://www.faspyn.uanl.mx/wp-content/uploads/2016/11/Study-Plan-Master-of-Science-in-Public-Health.pdf> (accessed 20.11.2016)

- Appendix C - Module descriptions for all degree programs
- Discussions with representatives of UANL program coordinators, lecturers, students

**Preliminary assessment and analysis of the peers:**

The peers welcomed that UANL applies a credit point system that is aligned to the European Credit Transfer and Accumulation System (ECTS). According to the UANL credit system, 30 hours of student workload (including lecture hours and self-study hours) are equivalent to 1 credit unit which is fully in line with the European ECTS system. The peers also confirmed that the workload in hours is indicated in the module descriptions; the workload distinguishes between contact study and self-study and is aligned to credit points. However, the peers noticed a number of module descriptions where the calculation was incorrect like e.g. “Bromatology of nutrition”, “Descriptive dietetics laboratory”, “Quality standards in food manufacturing”, “Sanitary analysis”, “Anthropometry and body composition”, “Clinical biochemistry”, “Dietology for collectivities”, “Institutional Feeding”, “Nutritional assessment I and II”, “Pathology and medical therapy I” etc. The peers emphasised that UANL needs to stipulate coherently for how many student working hours one ECTS credit point is awarded.

The Bachelor Degree in Nutrition is organized in ten semesters with a total of 220 credit points including mandatory and optional learning units. The total number of credits that a student can take per semester is 22. Each semester consists of 20 weeks, including 2 weeks for partial evaluations (assessments/examinations), 2 for ordinary 2 for extraordinary evaluations. The peers pointed out that the workload at European universities comprised normally 30 credit points per semester with a workload of 30 hours per credit point which sums up to 900 hours of workload per semester; compared to this the workload at UANL was considerably low. The peers analyzed the work plan published on the subject-specific website and could not comprehend why the sum of lecture time (440 hours) and self-study time (240) leads to 680 hours per semester (in the fifth year, it even ends up at 700 hours) and not to 660 hours which would be the logical sum of 22 credit point times 30 hours of workload per credit point. The peers also indicated that the differences of 102 credit points in the Specialty of Clinical Nutrition, 80 credit points in the Master of Nutrition or 84 credit points in the Master of Public Health made it difficult to compare the postgraduate study programs; this might also impede the comparability with credit points earned at other institutions. The peers underlined that it would be sensible in terms of international recognition of study achievements to apply a system of credit

points consistently for all graduate and postgraduate study programs. Based on the study plans the peers gained the impression that the workload was fairly balanced over the different semesters and that the structure of the programs does not entail structural peaks of workload.

### Criterion 2.3 Teaching methodology

#### Evidence:

- Self-Assessment Report chapter 2.2
- Appendix C - Module descriptions for all degree programs
- Discussions with representatives of UANL management, program coordinators, lecturers, business representatives, students

#### Preliminary assessment and analysis of the peers:

The peers understood that the teaching staff applied diverse teaching methodologies such as lectures, classroom and laboratory exercises, discussion of health related issues, computer training, assignments, seminars, clinical cases/exercises, participation in conferences and participation in clinical internships and practical courses. The peers also learnt that teachers have regular meetings to discuss the teaching methodologies and complement each other. The intention is to look at specific topics from different angles and to see how different units can make contributions to achieve the learning outcomes. The teachers provided practical examples like role plays in English or research for up-to-date scientific articles in international journals to obtain different competences. The students also confirmed that different forms of teaching and learning were applied. The peers could comprehend that the teaching methods and instruments used support the students in achieving the learning outcomes. However, the peers indicated that the type of teaching was not outlined in a transparent manner. Even though this category was foreseen in the template for the module descriptions, no information on the type of teaching was provided. The peers indicated that the module descriptions need to be completed accordingly. They noted positively that the module descriptions provide understandable information on attendance-based learning and self-study time and concluded that this ratio was generally plausible and well-balanced (apart from the miscalculations as indicated under criterion 2.2). The peers could also comprehend that in the Bachelor Degree in Nutrition a number of modules like “Research in nutrition” or “Applied Research” contributed to competences in scientific research and writing. Likewise, modules like “Research seminar I and II” or “Progress of thesis I and II” fostered the research

competences in the postgraduate programs. However, the independent academic research should be further strengthened in the bachelor degree program as is being elaborated in more detail under criterion 3.

#### Criterion 2.4 Support and assistance

##### **Evidence:**

- Self-Assessment Report chapter 2.4
- <http://www.faspyn.uanl.mx/?lang=en> (accessed 20.11.2016)
- Discussions with representatives of UANL management, program coordinators, lecturers, students

##### **Preliminary assessment and analysis of the peers:**

The peers examined the website of the Faculty of Public Health and Nutrition of UANL and confirmed that a lot of general information about the different degree programs was available; however, the more general information about the Faculty is only available in Spanish which makes it difficult for non-Spanish speaking students to get a full picture of the services offered at UANL. But the program specific information is available in English and the peers understood that this is the key information needed. The peers still indicated that UANL should provide all information also in English to foster its goal of further internationalization. Interested stakeholders are able to obtain information about different administrative processes as well as about the programs themselves. The peers praised particularly the tutoring system of UANL which means that full-time or part-time professors become the tutor of up to 20 students at the beginning of the semester. It is their task to support the students and provide individual advisory services, for example when selecting the elective courses. UANL underlined that professors who are tutors receive special training to be able to provide proper advice with regard to the trajectory. The students confirmed that they meet the tutoring professor about once a week and can raise all kinds of questions. The students also explained that, if there are issues with the tutor, they have the opportunity to turn to the head of department or to the coordinator of the tutoring system. Moreover, UANL provided visible support for international mobility especially on the master level. Generally speaking, the students confirmed that they can turn to all professors for support and that a good communication environment was fostered at UANL. The students underlined that they are highly satisfied with the support measures at UANL and that many perceived it as an “honour” to be a student of this institution. The auditors concluded that there were adequate resources available to provide

individual assistance, advice and support for all students. The peers underlined that the allocated advice and guidance, namely the tutor, assisted the students in achieving the learning outcomes and in completing the course within the scheduled time.

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

The peers gratefully took note of Appendix C the revised module descriptions and understood that now it is properly described how many student working hours correspond to one ECTS credit point; the peers refrain from the intended requirement. The peers also comprehended that teaching methods are being applied which foster the achievement of the intended learning outcomes. The peers also welcomed that FASPYN wants to provide web page content throughout in English to facilitate the academic exchange. The peers concluded that this criterion is utterly fulfilled.

### **3. Exams: System, concept and organization**

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| <b>Criterion 3 Exams: System, concept and organization</b> |
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**Evidence:**

- Self-Assessment Report chapter 3
- Appendix C - Module descriptions for all degree programs
- General Regulations Assessments  
[http://transparencia.uanl.mx/normatividad\\_vigente/archivos/LyR09/07evaluaciones.pdf](http://transparencia.uanl.mx/normatividad_vigente/archivos/LyR09/07evaluaciones.pdf) (accessed 20.11.2016)
- Discussions with representatives of UANL management, program coordinators, lecturers, students

**Preliminary assessment and analysis of the peers:**

The peers were explained that UANL adopted the concept of multi-component assessments to measure the achievement of course outcomes and thus the programs' learning outcomes. The types of examinations used in each course are determined in the module descriptions. In the module descriptions the final evaluation components and the weighing factor of each component are clearly outlined. Additionally the module descriptions spell out the "Study and examination requirements and forms of examination". The peers learnt that the academic performance of the students is assessed in different ways which include examinations, reports, case studies/projects and presentation of cases. The exact

forms of evaluation are clearly defined in the “General Regulations Assessments”. When analyzing the module descriptions the peers learnt that the so-called “Integrating Learning Product” (PIA) presents an important approach in the examination setting and is integrated in almost all modules. The function of the “Integrating Learning Product” is to give students the opportunity to demonstrate the scope of the competencies they have obtained in the course. The peers understood that this is an approach to evaluate the competences in a comprehensive manner, using assessment methods and tools that combine knowledge, understanding, problem solving, skills, attitudes and ethical principles. The peers welcomed this complex and comprehensive approach as it aims at assessing different levels of competences. The peers analyzed if also oral communication skills were developed and noticed that in the bachelor program there is a module called “communicative Competence” that focuses explicitly on communication skills. Moreover, “oral presentations” are an integral part of a number of modules like “Application of information technologies” that aims at “Effective electronic Presentations”, “Art Appreciation”, “Principles of Nutrition”, etc. The peers were convinced that oral competences are properly developed through the different oral assignments that have to be carried out; during the interview round with the students the peers gained a very positive impression of the oral skills of the students. The peers concluded that the examinations are structured in a way to cover all of the intended learning outcomes (knowledge, skills and competences) and provide students continuous feedback on their progress in developing competences. The peers analyzed the examinations and confirmed that they were of adequate standard at the level aimed at.

The peers learnt that it is not a requirement for the Bachelor Degree in Nutrition at UANL to write a final thesis but that students have the option to decide voluntarily if they write a research paper. The peers were well aware that the bachelor program contains modules like “Research in nutrition” or “Applied research” which provides an introduction into scientific research methods; however, these modules alone do not grant that students can resolve a set task independently at the level aimed for. The peers understood that a mandatory final thesis would require tremendous additional efforts to grant all the supervision work. That is why the peers underlined that it does not have to be a bachelor thesis; however, some kind of mandatory thesis/dissertation or final project needs to be integrated into the curriculum to ascertain that the students are competent to apply research methods independently to a set task. The peers also gave the example that those students who had written a final thesis emphasized the personal gain from this work; they were given the example of one student who participated in a research project and performed so well that the student even won a price. For the postgraduate studies a final thesis was mandatory. The peers were surprised that the Master Thesis is accredited with

12 ECTS credit points only and does not receive a grade. Given the efforts and factual time that needs to be spent on the final thesis, the peers indicated that this should also be reflected in the amount of credit points that can be obtained. The peers recommended to follow international standards and to provide more credit points and grades to the master theses. When analysing the different final theses in the postgraduate programs the peers noticed a broad variety in the quality of the theses. Some dissertations were of excellent quality whereas other theses just met the minimum expectations of a Master Thesis. This is in line with a comparatively high rate of dissatisfaction stemming from the employers survey that graduates had inappropriate research skills. Therefore the peers underlined that internal quality assurance procedures need to be enhanced to significantly improve the quality standard of final theses.

All modules comprise 2 partial tests and 1 final test to ensure a continuous assessment of learning. The forms of the tests are defined in the module descriptions. The exact times and days are defined in the syllables which are handed out to the students at the beginning of every semester. Given the small modules and the big number of modules per semester, the peers explicitly approached the students to understand if the overall load of examinations is too big. But the students confirmed that most examinations are well distributed over the semester and at the end there were only few final written examinations. The students confirmed that there was sufficient preparation time and the examination load was adequate. If students fail they have a second chance and can take an extraordinary test one week later. If they fail again they have to repeat the full class and take the exam again. In the bachelor program students can repeat the examinations up to six times. The peers pointed out that the number of repetition opportunities is unusually high; however, the university can decide how many times an examination can be repeated and therefore the peers only took note of it. The students added that most students who fail the exams are successful at the third attempt at the latest. It hardly happens that students make use of all repetition opportunities. In the master programs only one repetition is foreseen. The examinations are being corrected in due time so that this does not lead to any delays in the student's progression. If a student is not able to take an examination, partially or entirely, due to longer-lasting or permanent physical disability or chronic illness, and given that student provides a medical certificate as evidence for the condition, the Program Coordinator must permit the candidate to take an equivalent examination in another time.

UANL added that it was possible that a student carried out the final thesis outside the university. Some lecturers maintain close connections to private businesses and if the supervisor and the student agree on a topic accepted by the private company the project

could be conducted in the company. The first supervisor had to be the staff member from UANL, but the project could also be co-supervised by an expert from industry.

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

The peers acknowledged that FASPYN considers providing more credit points and grades to the master theses to be comparable to international standards. The peers confirmed the intended recommendation to see which kind of solution FASPYN will have found by the time of reaccreditation. The peers also welcomed that FASPYN is contemplating on the possibility of incorporating an independent research project where students develop a final project to increase the competence of "search and analysis of information". As this is an important matter to develop appropriate research skills the peers stick to their intended requirement. The peers also strongly supported FASPYN to encourage professors and the MASTER'S DEGREE Committee to determine strategies to monitor the quality of final theses.

## 4. Resources

|                            |
|----------------------------|
| <b>Criterion 4.1 Staff</b> |
|----------------------------|

**Evidence:**

- Self-Assessment Report chapter 4.1
- Appendix A – Proof of sufficient teaching capacity
- Appendix B – Staff handbook
- Discussions with representatives of UANL management, program coordinators, lecturers, students

**Preliminary assessment and analysis of the peers:**

The peers understood that the Faculty of Public Health and Nutrition maintains an Institutional Development Plan which takes care of the qualification profiles of the teachers and the overall composition of the teaching staff. A competitive selection procedure ensures that only qualified and appropriate candidates are recruited; it is determined in the rules that only teachers with the same academic level can be teaching in a degree program. UANL underlined that they prefer teaching staff that has also industrial or international experiences to further develop the links to the labour market and international partners. UANL provided a staff handbook for all degree programs which was welcomed by the

peers as the individual descriptions were very detailed and provided a proper picture of the qualification profiles. The peers analyzed the staff handbook and concluded that the composition, scientific orientation and qualification of the teaching staff team are suitable for successfully implementing the degree programs. In addition, UANL provided an overview of the number of staff members and their respective teaching obligations which proved that the available teaching capacity was sufficient to successfully implement the programs under review. However, during the visit of the laboratories the peers gained the impression that a lot of introductory courses in the laboratories was carried out by the professors themselves. Technical support staff is only partly available in the laboratories; additional technical staff is available on the faculty level and can be asked for upon request. The peers felt that some of the introductory lab work can be carried out by technical staff members. If some of the introductory work of the professors was carried out by technical support staff, the professors would have more time for supervision duties including independent research projects which should be taken up as a standard at bachelor level. Hence, the peers strongly recommended to make available more technical staff for basic laboratory education and to unburden the professors to give more time for other tasks.

The peers learnt that academic staff can apply for a sabbatical year, with pay and benefits, to perform academic research activities; sabbaticals are granted frequently to staff members of the Faculty of Public Health and Nutrition. The peers understood that different kinds of research grants are available: Internal grants of UANL (Program of Support for Technological and Scientific Research) that all faculty members of UANL can apply for. Furthermore, external funds from industry, Mexican governmental institutions or international organisations are also available. The Faculty of Public Health and Nutrition has been successful in acquiring funds from different sources to implement new projects and to foster the publication of scientific articles and to involve students in practical research projects. The teachers indicated that the time for teaching and the time for research activities are all in all acceptable. Professors with a very successful track record of scientific research may have a reduced teaching obligation and can focus more vigorously on research activities. The peers concluded that the research activities carried out by the teaching staff are in line with and support the level of academic qualification aimed at.

### Criterion 4.2 Staff development

**Evidence:**

- Self-Assessment Report chapter 4.2
- Discussions with representatives of UANL program coordinators, lecturers

**Preliminary assessment and analysis of the peers:**

The Human Resource Department of UANL keeps a register of all staff members and therefore has an overview of the further training in the field of teaching and learning that has been conducted. UANL organizes workshops with the objective to strengthen the teaching competencies and practice of teaching staff. Staff members receive almost weekly information about further training opportunities that are going to take place at UANL in the near future. Staff members can apply for it and have to receive permission from their superiors to participate in it; but the peers understood that opportunities of further training are available and also being used. Professors need to obtain an educational certificate before they can become a tutor. Additionally, UANL maintains incentive programs for excellent teaching and awards its staff members with attendance of international scientific congresses, for example. The peers confirmed that offers and support mechanisms for the teaching staff are available to further develop the professional and teaching skills.

### Criterion 4.3 Funds and equipment

**Evidence:**

- Self-Assessment Report chapter 4.3
- Discussions with representatives of UANL program coordinators, lecturers

**Preliminary assessment and analysis of the peers:**

The main source of funding for the Faculty of Public Health and Nutrition comes from the administration of UANL, which receives funds from the State and the Federation to perform its core activities; the UANL administration transfers this to its departments or faculties. Each year, the Faculty of Public Health and Nutrition must deliver an annual budget presenting the economic needs for the operation of the Faculty and its educational programs. The funds that are received from the UANL are for its basic operations. The Faculty of Public Health and Nutrition provided an overview of the funding situation in recent

years. The peers analyzed this information and were convinced that the financial means were sufficient and secured for the timeframe of the accreditation.

With regard to the equipment the teaching staff explained that the university had undergone a period of transformation in the last 10 years as many new buildings had been erected and the overall situation of equipment has significantly improved; at the same time the number of students has also been increased. The teaching staff reported that they were frequently asked by the administration if and what kind of new equipment was required to consider this for the financial budget. Research projects conducted in industry are another source where lab equipment can be obtained. The peers were located in new premises and took a tour over the campus to get a first-hand impression of the availability and the condition of the equipment. All in all the peers gained a positive impression with a wide range from very well equipped to acceptable standard; however, the kitchen dedicated to teaching and learning and even open for courses held for the public was in an unacceptable state. The equipment was outdated and also the usual hygiene and safety standards were not met at all. The peers underlined that the kitchen needs urgent improvement. As they were aware that these kinds of changes cannot be achieved in a short timeframe the peers pointed out that UANL should present a concept for upgrading the kitchen laboratory and take initial steps to its implementation. The students reported that also partner institutions of UANL can be used if certain equipment is not available at the university itself. Given these co-operational arrangements the students claim that research equipment was accessible. The peers gained the impression that some of the research equipment for more sophisticated research in the master programs needs to be improved unless this kind of equipment can be accessed elsewhere. The peers mentioned "State of the Art" equipment like LC/MS/MS (Liquid Chromatography + Mass Spectrometry and Gas Chromatography + Mass Spectrometry) for the detection of non volatile and volatile compounds in food products and raw materials. For the detection of mineral nutrients an ICP-Equipment should be suitable. The students also confirmed that the basic infrastructure was in proper condition; sufficient computer working places are available and software that is needed for study purposes can be downloaded. The peers recommended also training students in alternative freeware options such as R. The students only complained about the access to the internet which was not provided consistently.

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

The peers are aware that it is a difficult challenge to increase the number of technical staff members. That is why the peers particularly appreciated the efforts that FASPYN intends to take efforts to recruit more technical staff members. The peers were pleased

to hear that their comments on the condition of the kitchen laboratory motivated FASPYN and the management of UANL to take first steps to refurbish the entire kitchen equipment to meet existing norms of operability, hygiene and safety. As the peers know that refurbishment of infrastructure is a costly and time-consuming matter they request FASPYN to provide at least a concept (including a timetable of implementation until the reaccreditation) for upgrading the kitchen laboratory and prove initial steps to its implementation.

The peers thank FASPYN for Annex 2 - LIST OF SPECIALIZED EQUIPMENT USED BY TEACHERS FOR THEIR RESEARCH WORK which provides a good basis for research work. The peers confirmed the recommendation that students should be informed about alternative freeware options.

## 5. Transparency and documentation

### Criterion 5.1 Module descriptions

#### **Evidence:**

- Appendix C - Module descriptions for all degree programs

#### **Preliminary assessment and analysis of the peers:**

The peers positively noted that the full set of modules descriptions had been made available; however, the module descriptions had not been published and hence, the module descriptions are not available for interested stakeholders. The peers examined the module descriptions of all four programmes and noted that the modules have comprehensible names and identification codes. The peers also noted the responsible module coordinators were mentioned although they were surprised that in some cases a whole list of responsible coordinators are enlisted. The lecturers are also mentioned throughout all module descriptions. If requirements for the successful participation in a module are necessary, this is clearly stated. The work load was properly specified in contact-study and self-study correlated with credit units. However, the calculation of the working hours and credit units was not consistently applied as outlined under criterion 2.2; the peers stressed that it must be clear how many hours of workload correspond to one credit hour and this must be applied consistently in all modules. Furthermore, the peers were missing information on the type of teaching. The peers underlined that this information was important because it must become clear that the intended learning outcomes and the type of teaching are logically aligned and the type of teaching is appropriate to achieve the intended learning outcomes. The intended learning outcomes are mostly referring to dif-

ferent levels of competence (knowledge, skills, competence) which is positively judged by the peers. The type of examination and the calculation of the overall module mark were outlined. Also a reading list was provided in all module descriptions. The peers underlined that the module descriptions must be revised based on the aspects mentioned above.

### Criterion 5.2 Diploma and Diploma Supplement

**Evidence:**

- Certificate of study programme
- Transcript of Records of study programme
- Diploma Supplement

**Preliminary assessment and analysis of the peers:**

The peers comprehended that after graduation a degree certificate, a transcript of records and a Diploma Supplement are issued in Spanish and English. The peers confirmed that these documents provide information on the student's individual performance as well as on the individual modules and the grading procedure on which the final mark is based. The peers also appreciated the issuance of Qualification Certificates Supplement which explain the context of the certificate. However, the peers were lacking the classification of the degree program with regard to its applicable education system. Furthermore, the Diploma Supplement does not provide information on the qualifications profile and the statistical data as set forth in the ECTS User's Guide to allow readers to categorise the individual result. The peers pointed out that the missing information must be made available to the graduates.

### Criterion 5.3 Relevant rules

**Evidence:**

- Government Laws and Regulations
  - Organic Law  
[http://transparencia.uanl./normatividad\\_vigente/archivos/LyR09/01LeyOrganica.pdf](http://transparencia.uanl./normatividad_vigente/archivos/LyR09/01LeyOrganica.pdf) (accessed 20.11.2016)

- General Statute  
[http://transparencia.uanl.mx/normatividad\\_vigente/archivos/LyR09/03EstatutoGeneral.pdf](http://transparencia.uanl.mx/normatividad_vigente/archivos/LyR09/03EstatutoGeneral.pdf) (accessed 20.11.2016)
- Regulation on the functioning of the Commission of the Honorable University Council  
[http://transparencia.uanl.mx/normatividad\\_vigente/archivos/LyR09/04ComisionesHCU.pdf](http://transparencia.uanl.mx/normatividad_vigente/archivos/LyR09/04ComisionesHCU.pdf) (accessed 20.11.2016)
- School regulations
  - General Regulation on procedures for admission and permanence of Students  
[http://transparencia.uanl.mx/normatividad\\_vigente/archivos/LyR09/06admission.pdf](http://transparencia.uanl.mx/normatividad_vigente/archivos/LyR09/06admission.pdf) (accessed 20.11.2016)
  - General Regulations Assessments  
[http://transparencia.uanl.mx/normatividad\\_vigente/archivos/LyR09/07evaluaciones.pdf](http://transparencia.uanl.mx/normatividad_vigente/archivos/LyR09/07evaluaciones.pdf) (accessed 20.11.2016)
  - Regulation of Social Service  
[http://transparencia.uanl.mx/normatividad\\_vigente/archivos/LyR09/08serviciosocial.pdf](http://transparencia.uanl.mx/normatividad_vigente/archivos/LyR09/08serviciosocial.pdf) (accessed 20.11.2016)
  - Rules of Professional Practice  
[http://transparencia.uanl.mx/normatividad\\_vigente/archivos/LyR09/pprofesionales.pdf](http://transparencia.uanl.mx/normatividad_vigente/archivos/LyR09/pprofesionales.pdf) (accessed 20.11.2016)
  - General Certification Regulations Preparatory Technical, Technical Colleges, Professional Associate and Bachelor  
[http://transparencia.uanl.mx/normatividad\\_vigente/archivos/LyR09/09titulacion.pdf](http://transparencia.uanl.mx/normatividad_vigente/archivos/LyR09/09titulacion.pdf) (accessed 20.11.2016)
  - General Regulations of the Graduate System  
[http://transparencia.uanl.mx/normatividad\\_vigente/archivos/LyR09/10posgrado.pdf](http://transparencia.uanl.mx/normatividad_vigente/archivos/LyR09/10posgrado.pdf) (accessed 20.11.2016)
- Regulation Academics and Discipline
  - General regulations on discipline and good discipline behavior within the areas and Campuses  
[http://transparencia.uanl.mx/normatividad\\_vigente/archivos/LyR09/](http://transparencia.uanl.mx/normatividad_vigente/archivos/LyR09/) (accessed 20.11.2016)

- General Regulations Scholarship  
[http://transparencia.uanl.mx/normatividad\\_vigente/archivos/LyR09/12becas.pdf](http://transparencia.uanl.mx/normatividad_vigente/archivos/LyR09/12becas.pdf) (accessed 20.11.2016)
- Rules for granting recognition to the University Merit  
[http://transparencia.uanl.mx/normatividad\\_vigente/archivos/LyR09/13meritoacademico.pdf](http://transparencia.uanl.mx/normatividad_vigente/archivos/LyR09/13meritoacademico.pdf) (accessed 20.11.2016)
- General Rules of International Relations  
[http://transparencia.uanl.mx/normatividad\\_vigente/archivos/LyR09/RelacionesInternacionales.pdf](http://transparencia.uanl.mx/normatividad_vigente/archivos/LyR09/RelacionesInternacionales.pdf) (accessed 20.11.2016)
- Administrative regulations
  - Regulation of Academic Staff  
[http://transparencia.uanl.mx/normatividad\\_vigente/archivos/LyR09/14personalacademico.pdf](http://transparencia.uanl.mx/normatividad_vigente/archivos/LyR09/14personalacademico.pdf) (accessed 20.11.2016)
  - General Regulation of Revenues and Expenditures  
[http://transparencia.uanl.mx/normatividad\\_vigente/archivos/LyR09/15ingresos.pdf](http://transparencia.uanl.mx/normatividad_vigente/archivos/LyR09/15ingresos.pdf) (accessed 20.11.2016)
  - Regulation of Interventions  
[http://transparencia.uanl.mx/normatividad\\_vigente/archivos/LyR09/23intervenciones.pdf](http://transparencia.uanl.mx/normatividad_vigente/archivos/LyR09/23intervenciones.pdf) (accessed 20.11.2016)

**Preliminary assessment and analysis of the peers:**

The auditors could see that all necessary rights and duties of both UANL and students were clearly defined and binding for all relevant stakeholders. All rules and regulations are published on the university website and hence available to all relevant stakeholders

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

The peers agreed with FASPIN that the revised module descriptions provide a clear and understandable picture of the modules to interested stakeholders. However, the module descriptions should also be published to allow external students to collect information relevant for the study programs. The Diploma Supplement has been dealt with under criterion 1.

## 6. Quality management: quality assessment and development

|   |
|---|
| <b>Criterion 6 Quality management: quality assessment and development</b> |
|---|

### **Evidence:**

- Self-Assessment Report chapter 4.1
- Appendix G Results of internal/external evaluations
- Appendix B – Statistics and data from Quality Management
- Discussions with representatives of UANL management, program coordinators, lecturers, students

### **Preliminary assessment and analysis of the peers:**

The peers understood that the Faculty of Public Health and Nutrition accomplished the certification of ISO 9001:2008 since 2008. The peers confirmed that this is a good basis of the Quality Management System, since the ISO certificate is an international standard that focuses on all elements of quality management. UANL conducts a Customer Satisfaction survey which is a Feedback Questionnaire applied in all four educational programs on the educational services, the learning unit and the infrastructure of the Faculty. The second means to obtain feedback from the students is the performance evaluation that is applied in the undergraduate and postgraduate levels, where they directly evaluate their corresponding teachers from a particular class. Evaluations take place in every course every semester. The results of the evaluation are not directly discussed with the students; however the students confirmed that they could see consequences resulting from their feedback. In one case, a teacher who had consistently been evaluated badly was replaced, for example. The peers could see from the results presented in the self assessment report that the students were overall content with the learning and teaching but also see that there was a development of increasing satisfaction in recent years. UANL explained that every five years a major revision of the degree programs is carried out taking into account feedback from different stakeholders including students (compare criterion 1.1) and these changes that had been implemented in 2013 contributed significantly to an increasing satisfaction of the students. Hence, the quality management system of UANL collects systematically information from relevant stakeholder groups, analyses this data and amends the programs in the light of the feedback received. The peers could comprehend that the quality management system of UANL applies feedback loops and has procedures in place to systematically further develop the programs, adapt to changes

taking place e.g. on the labour market and take recommendations from stakeholders on-board. However, with regard to the results from the evaluations (compare following section) the peers concluded that the internal quality assurance procedures need to be further developed.

Analysing the results from the quality management procedures as presented in the self-assessment report, the peers could see a general satisfaction among graduates and employers; however, almost 20% of the graduates indicated in their “After Graduation Survey” that they were only “medium” satisfied with their competence to “Search and analysis of information” (page 133 of SAR) which supports the demand of the peers to include an independent research work into the bachelor program. Also with regard to the more technical competences, the graduates as well as the employers indicated several fields where further improvement is considered possible. The peers underlined that the internal quality assurance procedures need to be further developed to particularly respond to the identified deficits. Additionally, it was striking to the peers that the employers were quite dissatisfied with the competences of the graduates in the fields of “Design research projects”, “Implementation of research projects”, “Data analysis research projects” and “Dissemination of results of research projects” which is in line with the observation of the peers that a number of final master theses were just of minimum standard (compare criterion 3). The peers underlined that the internal quality assurance procedures need to be enhanced in order to improve the academic level of final theses. Finally, the peers observed from the evaluation results of the Master of Public Health that the “graduation rate within 6 months of graduation date” declined significantly in recent years and pointed out that the reasons for this development should to be examined and appropriate countermeasures need to be taken.

In summary, the peers gained a positive impression of the quality management system of UANL; however, the evaluation results showed clearly that the internal quality management procedures need to be improved to properly respond to the partly mediocre evaluation results in some technical fields as well as in the field of scientific research.

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

The peers concluded that this criterion is largely fulfilled; however, the peers highlighted that the quality management system should also take a systematic look at the study duration of students and examine reasons why so many students do not succeed to finish their studies in the regular study time.

## D Additional Documents

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

1. Ba Nutrition: Information on average study duration.

Has been provided.

## E Summary: Peer recommendations (21.02.2017)

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

| Degree Programme                  | ASIIN-seal                   | Subject-specific label | Maximum duration of accreditation |
|-----------------------------------|------------------------------|------------------------|-----------------------------------|
| Ba Nutrition                      | With requirements for 1 year | /                      | 30.09.2022                        |
| Ma Clinical Nutrition (Specialty) | With requirements for 1 year | /                      | 30.09.2022                        |
| Ma Nutrition                      | With requirements for 1 year | /                      | 30.09.2022                        |
| Ma Public Health                  | With requirements for 1 year | /                      | 30.09.2022                        |

### A) Accreditation with requirements

#### Requirements

- A 1. (ASIIN 1.1) Draft the educational objectives so that they describe the academic, subject-specific and professional classification of the qualifications gained in the degree programs. Bachelor Nutrition: Structure the learning outcomes according to the specific fields of competence that are offered in the bachelor program.
- A 2. (ASIIN 4.3) Provide a concept (including a timetable of implementation until the reaccreditation) for upgrading the kitchen laboratory and prove initial steps to its implementation.
- A 3. (ASIIN 5.2) Ensure that the Diploma Supplement contains detailed information about the educational objectives, intended learning outcomes, the structure and the academic level of the degree program as well as about the classification of the degree program with regard to its applicable education system. Provide statistical data according to the ECTS-Users' guide in addition to the final grade.
- A 4. (ASIIN 1.3, 5.1) Publish the module descriptions on the subject-specific websites.

### **Bachelor Nutrition**

- A 5. (ASIIN 3.1) Make sure that the degree program comprises a thesis/dissertation or final project which ensures that students work on a set task independently and at the level aimed for.

### **Master programs**

- A 6. (ASIIN 3) Enhance the internal quality assurance procedures in order to improve the quality standard of final theses.

### **Recommendations**

- E 1. (ASIIN 4.1) It is recommended to make available more technical staff for basic laboratory education.
- E 2. (ASIIN 4.3) It is recommended informing the students about alternative freeware options.

### **Bachelor Nutrition**

- E 3. (ASIIN 1.4) It is recommended to examine the reasons for exceeding the study time systematically in the context of the quality management system and to develop measures to bring students to graduation within the envisaged regular study duration.

### **All Master programs**

- E 4. (ASIIN 1.4) It is recommended to make full use of the available places in the master programs to ascertain sufficient young academic professionals for the university. For this purpose, it may also be considered to increase the number of places in the master programs.
- E 5. (ASIIN 3) It is recommended to provide more credit points and grades to the master theses to be comparable to international standards.

## F Assessment of the Technical Committees

### Technical Committee 08 - Agronomy, Nutritional Sciences and Landscape Architecture (21.03.2017)

The Technical Committee discussed the procedure.

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

The Technical Committee accepts the assessment of the peers and agrees to the suggested requirements and recommendations without any changes.

The Technical Committee 08 – Agronomy, Nutritional Sciences and Landscape Architecture recommends the award of the seals as follows:

| <b>Degree Programme</b>           | <b>ASIIN-seal</b>            | <b>Subject-specific label</b> | <b>Maximum duration of accreditation</b> |
|-----------------------------------|------------------------------|-------------------------------|--|
| Ba Nutrition                      | With requirements for 1 year | /                             | 30.09.2022                               |
| Ma Clinical Nutrition (Specialty) | With requirements for 1 year | /                             | 30.09.2022                               |
| Ma Nutrition                      | With requirements for 1 year | /                             | 30.09.2022                               |
| Ma Public Health                  | With requirements for 1 year | /                             | 30.09.2022                               |

## Fachausschuss 10 – Life Sciences (16.03.2017)

The Technical Committee discussed the procedure.

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

The Technical Committee accepts the assessment of the peers and agrees to the suggested requirements and recommendations without any changes.

Der Fachausschuss 10 – Life Sciences recommends the award of the seals as follows:

| <b>Degree Programme</b>           | <b>ASIIN-seal</b>            | <b>Subject-specific label</b> | <b>Maximum duration of accreditation</b> |
|-----------------------------------|------------------------------|-------------------------------|--|
| Ba Nutrition                      | With requirements for 1 year | /                             | 30.09.2022                               |
| Ma Clinical Nutrition (Specialty) | With requirements for 1 year | /                             | 30.09.2022                               |
| Ma Nutrition                      | With requirements for 1 year | /                             | 30.09.2022                               |
| Ma Public Health                  | With requirements for 1 year | /                             | 30.09.2022                               |

## G Decision Accreditation Commission (31.03.2017)

*Assessment and analysis for the award of the ASIIN seal:*

The Accreditation Commission accepts the assessment of the peers and the Technical Committees and agrees to the suggested requirements and recommendations without any changes.

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

| <b>Degree Programme</b>           | <b>ASIIN-seal</b>            | <b>Subject-specific label</b> | <b>Maximum duration of accreditation</b> |
|-----------------------------------|------------------------------|-------------------------------|--|
| Ba Nutrition                      | With requirements for 1 year | /                             | 30.09.2022                               |
| Ma Clinical Nutrition (Specialty) | With requirements for 1 year | /                             | 30.09.2022                               |
| Ma Nutrition                      | With requirements for 1 year | /                             | 30.09.2022                               |
| Ma Public Health                  | With requirements for 1 year | /                             | 30.09.2022                               |

### Requirements

- A 1. (ASIIN 1.1) Draft the educational objectives so that they describe the academic, subject-specific and professional classification of the qualifications gained in the degree programs. Bachelor Nutrition: Structure the learning outcomes according to the specific fields of competence that are offered in the bachelor program.
- A 2. (ASIIN 4.3) Provide a concept (including a timetable of implementation until the reaccreditation) for upgrading the kitchen laboratory and prove initial steps to its implementation.
- A 3. (ASIIN 5.2) Ensure that the Diploma Supplement contains detailed information about the educational objectives, intended learning outcomes, the structure and the academic level of the degree program as well as about the classification of the degree program with regard to its applicable education system. Provide statistical data according to the ECTS-Users' guide in addition to the final grade.
- A 4. (ASIIN 1.3, 5.1) Publish the module descriptions on the subject-specific websites.

- A 5. (ASIIN 3) Enhance the internal quality assurance procedures in order to improve the quality standard of final theses.

**Bachelor Nutrition**

- A 6. (ASIIN 3.1) Make sure that the degree program comprises a thesis/dissertation or final project which ensures that students work on a set task independently and at the level aimed for.

**Recommendations**

- E 1. (ASIIN 4.1) It is recommended to make available more technical staff for basic laboratory education.
- E 2. (ASIIN 4.3) It is recommended informing the students about alternative freeware options.

**Bachelor Nutrition**

- E 3. (ASIIN 1.4) It is recommended to examine the reasons for exceeding the study time systematically in the context of the quality management system and to develop measures to bring students to graduation within the envisaged regular study duration.

**All Master programs**

- E 4. (ASIIN 1.4) It is recommended to make full use of the available places in the master programs to ascertain sufficient young academic professionals for the university. For this purpose, it may also be considered to increase the number of places in the master programs.
- E 5. It is recommended to grade the final theses and adjust the workload to the corresponding workload calculation

## H Fulfilment of Requirements (23.03.2018)

### Analysis of the peers and the Technical Committees (16.03.2018)

#### Requirements

##### For all degree programmes

- A 1. (ASIIN 1.1) Draft the educational objectives so that they describe the academic, subject-specific and professional classification of the qualifications gained in the degree programs. Bachelor Nutrition: Structure the learning outcomes according to the specific fields of competence that are offered in the bachelor program.

| Initial Treatment |   |
|-------------------|---|
| Peers             | fulfilled<br>Vote: unanimous<br>Justification: The objectives have been re-worded and now adequately describe the academic, subject-specific and professional classification of the qualifications gained in the degree programmes. |
| TC 08             | fulfilled<br>Vote: unanimous<br>Justification: The Technical Committee follows the recommended resolution of the peers.   |
| TC 10             | fulfilled<br>Vote: unanimous<br>Justification: The Technical Committee agrees with the auditors.  |

- A 2. (ASIIN 4.3) Provide a concept (including a timetable of implementation until the reaccreditation) for upgrading the kitchen laboratory and prove initial steps to its implementation.

| Initial Treatment |   |
|-------------------|---|
| Peers             | fulfilled<br>Vote: unanimous<br>Justification: A concept for upgrading the kitchen laboratory has been submitted. The students should have possibilities to get their exercises at an adequate place while the reconstruction of the kitchen is in process. |
| TC 08             | fulfilled<br>Vote: unanimous  |

|       |  |
|-------|--|
|       | Justification: The Technical Committee follows the recommended resolution of the peers.          |
| TC 10 | fulfilled<br>Vote: unanimous<br>Justification: The Technical Committee agrees with the auditors. |

- A 3. (ASIIN 5.2) Ensure that the Diploma Supplement contains detailed information about the educational objectives, intended learning outcomes, the structure and the academic level of the degree program as well as about the classification of the degree program with regard to its applicable education system. Provide statistical data according to the ECTS-Users' guide in addition to the final grade.

| Initial Treatment |   |
|-------------------|---|
| Peers             | fulfilled<br>Vote: unanimous<br>Justification: The Diploma Supplements have been updated and now include all necessary information. |
| TC 08             | fulfilled<br>Vote: unanimous<br>Justification: The Technical Committee follows the recommended resolution of the peers.             |
| TC 10             | fulfilled<br>Vote: unanimous<br>Justification: The Technical Committee agrees with the auditors.                                    |

- A 4. (ASIIN 1.3, 5.1) Publish the module descriptions on the subject-specific websites.

| Initial Treatment |   |
|-------------------|---|
| Peers             | fulfilled<br>Vote: unanimous<br>Justification: The module descriptions are published on UANL's homepage.                |
| TC 08             | fulfilled<br>Vote: unanimous<br>Justification: The Technical Committee follows the recommended resolution of the peers. |
| TC 10             | fulfilled<br>Vote: unanimous<br>Justification: The Technical Committee agrees with the auditors.                        |

- A 5. (ASIIN 3) Enhance the internal quality assurance procedures in order to improve the quality standard of final theses.

| Initial Treatment |   |
|-------------------|---|
| Peers             | fulfilled<br>Vote: unanimous<br>Justification: A concept for improving the quality standards of final theses was submitted. |
| TC 08             | fulfilled<br>Vote: unanimous<br>Justification: The Technical Committee follows the recommended resolution of the peers.     |
| TC 10             | fulfilled<br>Vote: unanimous<br>Justification: The Technical Committee agrees with the auditors.                            |

**For the Bachelor's degree programme Nutrition**

- A 6. (ASIIN 3.1) Make sure that the degree program comprises a thesis/dissertation or final project which ensures that students work on a set task independently and at the level aimed for.

| Initial Treatment |  |
|-------------------|--|
| Peers             | fulfilled<br>Vote: unanimous<br>Justification: In collaborative work by groups of teachers of the Bachelor's Degree in Nutrition, according to the professional field that were convened, they proposed different kinds of projects that the students of the Bachelor's Degree should discourse when they are in the 10th semester of their studies. |
| TC 08             | fulfilled<br>Vote: unanimous<br>Justification: The Technical Committee follows the recommended resolution of the peers.  |
| TC 10             | fulfilled<br>Vote: unanimous<br>Justification: The Technical Committee agrees with the auditors.   |

## Decision of the Accreditation Commission (23.03.2018)

| Degree programme                  | ASIIN-label                | Subject-specific label | Accreditation until max. |
|-----------------------------------|----------------------------|------------------------|--------------------------|
| Ba Nutrition                      | All requirements fulfilled | --                     | 30.09.2022               |
| Ma Clinical Nutrition (Specialty) | All requirements fulfilled | --                     | 30.09.2022               |
| Ma Nutrition                      | All requirements fulfilled | --                     | 30.09.2022               |
| Ma Public Health                  | All requirements fulfilled | --                     | 30.09.2022               |

## Appendix: Programme Learning Outcomes and Curricula

According to the subject specific website <http://www.faspyn.uanl.mx/academic-programs/bachelor-degree-in-nutrition/?lang=en> (accessed 20.11.2016) the following **objectives** and **learning outcomes (intended qualifications profile)** shall be achieved by the Bachelor degree program Nutrition:

Learning outcomes and intended qualifications profile

At the end of the academic career, the student demonstrates the achievement of the competencies defined by the Educational Program:

- To evaluate the nutritional status of people, to identify risks through interpretation of the anthropometric, biochemical, clinical and dietary indicators, as well as the economic situation.
- To evaluate the nutritional status of people with pathologies, to identify risks through interpretation of the anthropometric biochemical, clinical and dietary indicators, as well as the economic situation.
- To develop the process of nutritional care to positively impact on the health of the people, through the identification of problems, the establishment of objectives and goals of treatment, evaluation and feedback.
- To design the diet plans, its follow up and control, appropriate to people, considering the distribution of equivalents, the design of the menu, the consultations of monitoring and control, and the adjustments in the nutrition plan.
- To orient and assess the people on the adequate food, to modify and/or strengthen the eating habits through the establishment of objectives and goals of treatment and evaluation.
- To determine the food situation and/or nutritional status of various population groups, in order to identify health risks in populations, considering the national and international standards determined by the governing bodies of the field.
- To determine the nutrient content and the quality of food through the development of laboratory tests and the interpretation of bromatological analysis in order to inform the consumer about the properties of the food.
- To evaluate the sanitary quality in the manufacturing of food through the review of microbiological testing reports and the contrast with the standards established

in national and international norms, in order to reduce the risk of foodborne diseases.

- To participate in planning menus applying basic knowledge about physical structure, composition, types and varieties of each food group in order to give the population a varied and healthy diet.
- To propose alternatives for the resolution of food problems, applying the basic knowledge regarding the physical, chemical, and biological aspects of food processing, from obtaining the raw material in the distribution, acquisition and consumption, to providing the public with healthy eating options.
- To design the administrative and operational structure of a food service to determine the elements that participate in the direction and operation, which enable to optimize the resources planned and obtain benefits for the organization and its users, through the design of prototypes in the clinical, industrial and commercial areas, and/or civil society organizations.
- To ensure the sanitary, nutritious and sensory quality for processed foods in the food service and food industry, through the observance of national and international norms in effect.
- To propose ways of correct collective feeding, covering the nutritional recommendations of different age groups in public and private institutions and civil society.
- To design, calculate, prepare and evaluate normal and modified diets through the adequacy of the normal regime, to contribute to the prevention and/or recovery of health in the population.
- To acquire the ability to interact with inter, multi and trans disciplinary working teams through the intervention in the different professional fields of the dietician.
- To develop new products and services related to food and nutrition, with the purpose of covering specific needs of the community, through the identification of opportunity areas in the field of Nutrition Science.
- To generate viable projects, which enable the dietician to self-employ and create sources of employment in the different professional fields.
- To raise and update policies on food, nutrition and health, to contribute to the resolution of fundamental problems in the various areas of professional development, in the public and private institutions in contexts of the state, national and international levels.
- To make timely and accurate decisions for the solution of problems and improvement of the conditions related to food, nutrition and health, in the different professional performance areas of the dietician.

- To guide and assess on food, nutrition and health in order to improve individual and collective conditions in the different professional performance fields of the dietician.
- To apply the scientific method based on a protocol, to generate new knowledge, intervention strategies, products and services in the different professional fields of performance of the dietician.
- To implement quality systems that allow the continuous improvement of organizational services and products generated, with a focus on satisfying the needs of the customer.
- To preparing technical and research reports, susceptible of publication in the scientific literature in the field or in specialized academic events.
- To perform a civic and professional practice through the continuous and permanent update of the competencies, through the feedback and certification of related organisms such as disciplinary schools and institutions.

The following **curriculum** is presented:

### Nutrition Bachelor Degree Program

| Curriculum area             | Mandatory Credits         |
|-----------------------------|---------------------------|
| University General Training | 22                        |
| Professional Basic          | 28                        |
| Professional                | 92                        |
| Free election               | 20                        |
| Social Service              | 16                        |
| Subtotal                    | 178 + 42 optional credits |
| <b>Total</b>                | <b>220</b>                |

Source: curriculum of the Bachelor Degree in Nutrition adapted on February 14<sup>th</sup>, 2013

L: Lecture, S: Self-study, C: Credits

| Module (Course) Code        | First semester                          | L          | S          | C         | Requirements |
|-----------------------------|---|------------|------------|-----------|--------------|
| 001                         | Communicative competence                | 40         | 20         | 2         | N.A.         |
| 002                         | Application of Information technologies | 40         | 20         | 2         | N.A.         |
| 003                         | Appreciation of the arts                | 40         | 20         | 2         | N.A.         |
| 200                         | Leadership, management and citizenship  | 40         | 20         | 2         | N.A.         |
| 201                         | Anatomy and physiology I                | 80         | 40         | 4         | N.A.         |
| 202                         | Structural biochemistry                 | 60         | 30         | 3**       | N.A.         |
| 203                         | Principles of nutrition                 | 80         | 40         | 4         | N.A.         |
| 328/334/<br>345/327/<br>360 | Optional*                               | 60         | 30         | 3**       | N.A.         |
| <b>Total</b>                |   | <b>440</b> | <b>240</b> | <b>22</b> |              |

\*The student must choose an optional learning unit of 3 credits; \*\* Total hours adjusted to the value of the credit UANL.

| Module (Course) Code   | Second semester  | L  | S  | C   | Requirements |
|------------------------|--|----|----|-----|--------------|
| 020/021                | Selected topics of social science, arts and humanities | 40 | 20 | 2   | N.A.         |
| 204                    | Chemical analysis of food                              | 60 | 30 | 3** | N.A.         |
| 205                    | Anatomy and physiology II                              | 80 | 40 | 4   | N.A.         |
| 206                    | Human genetics   | 40 | 20 | 2   | N.A.         |
| 207                    | Bromatology in nutrition                               | 80 | 40 | 4   | N.A.         |
| 335/348/349            | Optional*  | 60 | 30 | 3** | N.A.         |
| 300/301/306<br>308/322 | Optional*  | 80 | 40 | 4*  | N.A.         |

0 Appendix: Programme Learning Outcomes and Curricula

| Module (Course) Code       | Third semester                          | L          | S          | C         | Requirements |
|----------------------------|---|------------|------------|-----------|--------------|
| 004                        | Environment and sustainability          | 40         | 20         | 2         | N.A.         |
| 208                        | Biostatistics                           | 40         | 20         | 2         | N.A.         |
| 209                        | Quality standards in food manufacturing | 60         | 30         | 3**       | N.A.         |
| 210                        | Descriptive dietetics laboratory        | 40         | 20         | 2         | N.A.         |
| 211                        | Health analysis                         | 60         | 30         | 3**       | N.A.         |
| 212                        | Food processing                         | 80         | 40         | 4         | N.A.         |
| 213                        | Preventive nutrition                    | 40         | 20         | 2         | N.A.         |
| 309/324/323<br>329/358/350 | Optional*                               | 80         | 40         | 4         | N.A.         |
| <b>Total</b>               |   | <b>440</b> | <b>240</b> | <b>22</b> |              |

\*The student must choose two optional learning units of 2 credits; \*\* Total hours adjusted to the value of the credit UANL.

| Module (Course) Code              | Fourth semester  | L          | S          | C         | Requirements |
|-----------------------------------|--|------------|------------|-----------|--------------|
| 005                               | Social context of the profession   | 40         | 20         | 2         | N.A.         |
| 040/041/042<br>043/044            | Selected topics of human development, health and sports                    | 40         | 20         | 2         | N.A.         |
| 061/062/063<br>064/065/066<br>067 | Selected topics of professional academic development                       | 40         | 20         | 2         | N.A.         |
| 214                               | Intervention in nutrition and health focused on the person and the culture | 40         | 20         | 2         | N.A.         |
| 215                               | Epidemiology applied to nutrition  | 40         | 20         | 2         | N.A.         |
| 216                               | Anthropometry and body composition   | 60         | 30         | 3**       | N.A.         |
| 217                               | Metabolic biochemistry   | 140        | 40         | 6         | N.A.         |
| 303/313/359<br>336/330            | Optional*  | 60         | 30         | 3**       | N.A.         |
| <b>Total</b>                      |  | <b>460</b> | <b>220</b> | <b>22</b> |              |

\*The student must choose an optional learning unit of 3 credits; \*\* Total hours adjusted to the value of the credit UANL.

0 Appendix: Programme Learning Outcomes and Curricula

| Module (Course) Code       | Fifth semester                                    | L          | S          | C         | Requirements   |
|----------------------------|---|------------|------------|-----------|--|
| 080/081/082                | Selected topics of foreign languages and cultures | 40         | 20         | 2         | N.A.   |
| 218                        | Dietetics for communities                         | 60         | 30         | 3**       | Dietary laboratory (3°) descriptive  |
| 219                        | Institutional feeding                             | 60         | 30         | 3         | Standards of quality in the food manufacturing (3°)<br>Food processes (3°) |
| 220                        | Nutrition in the life cycle                       | 80         | 40         | 4         | N.A.   |
| 221                        | Clinical biochemistry                             | 60         | 30         | 3**       | N.A.   |
| 351/352/337<br>326/338/339 | Optional*   | 60         | 30         | 3**       | N.A.   |
| 310/353/302<br>340/354/332 | Optional*   | 80         | 40         | 4         |  |
| <b>Total</b>               |   | <b>440</b> | <b>260</b> | <b>22</b> |  |

\*The student must choose an optional learning unit of 3 credits and 2 Learning units of 2 credits; \*\* Total hours adjusted to the value of the credit UANL.

| Module (Course) Code                      | Sixth semester                                   | L               | S          | C         | Requirements  |
|---|--|-----------------|------------|-----------|---|
| 006                                       | Ethics, society and profession                   | 40              | 20         | 2         | N.A.  |
| 222                                       | Research in nutrition                            | 40              | 20         | 2         | N.A.  |
| 223                                       | Administrative process in collective restoration | 40              | 20         | 2         | Institutional feeding (5°)  |
| 224                                       | Applied dietetics laboratory                     | 40              | 20         | 2         | Dietetics for communities   |
| 225                                       | Nutritional assessment I                         | 60              | 20         | 3**       | Anthropometry and body composition (4°)<br>Clinical biochemistry (5°) |
| 226                                       | Nutrition and sports                             | 40              | 20         | 2         | N.A.  |
| 315/319/312<br>320/341/344<br>355/342/311 | Optional*  | 18<br>0         | 120        | 9         |   |
| <b>Total</b>                              |  | <b>44<br/>0</b> | <b>240</b> | <b>22</b> |   |

**0 Appendix: Programme Learning Outcomes and Curricula**

| <b>Module (Course) Code</b>       | <b>Seventh semester</b>         | <b>L</b>   | <b>S</b>   | <b>C</b>  | <b>Requirements</b> |
|-----------------------------------|---------------------------------|------------|------------|-----------|---------------------|
| 227                               | Nutritional assessment II       | 60         | 20         | 3**       | N.A.                |
| 228                               | Nutritional Intervention I      | 80         | 40         | 4         | N.A.                |
| 229                               | Pathology and medical therapy I | 80         | 40         | 4         | N.A.                |
| 230                               | Bioethics                       | 40         | 20         | 2         | N.A.                |
| 316/317/318<br>357/314/331        | Optional*                       | 60         | 30         | 3**       |                     |
| 343/356/305<br>325/304/321<br>307 | Optional*                       | 120        | 60         | 6         |                     |
| <b>Total</b>                      |                                 | <b>440</b> | <b>220</b> | <b>22</b> |                     |

\*The student must choose three optional learning units of 2 credits and one learning unit of 3; \*\* Total hours adjusted to the value of the credit UANL.

| <b>Module (Course) Code</b>           | <b>Eighth Semester</b>           | <b>L</b> | <b>S</b> | <b>C</b> | <b>Requirements</b> |
|---------------------------------------|----------------------------------|----------|----------|----------|---------------------|
| 233                                   | Nutritional Intervention II      | 80       | 40       | 4        | N.A.                |
| 235                                   | Pathology and medical therapy II | 80       | 40       | 4        | N.A.                |
| 234                                   | Applied research                 | 60       | 20       | 3**      | N.A.                |
|                                       | Subtotal                         | 220      | 100      |          |                     |
| 400/401/402<br>403/404/405<br>406/407 | Free election                    | 330*     |          | 11       | N.A.                |

\*\* Total hours adjusted to the value of the credit UANL.

| <b>Module (Course) Code</b>           | <b>Ninth Semester</b>            | <b>L</b>   | <b>S</b> | <b>C</b>  | <b>Requirements</b> |
|---------------------------------------|----------------------------------|------------|----------|-----------|---------------------|
| 361                                   | Supervised professional Practice | 330        | 0        | 11        | N.A.                |
| 400/401/402<br>403/404/405<br>406/407 | Free election                    | 330*       |          | 11        | N.A.                |
| <b>Total</b>                          |                                  | <b>660</b> |          | <b>22</b> |                     |

| Module (Course) Code | Tenth semester                    | L   | S  | C  | Requirements |
|----------------------|-----------------------------------|-----|----|----|--------------|
| 236                  | World class professional exercise | 140 | 40 | 6  | N.A.         |
| 930                  | Social Service                    | 480 | 0  | 16 | N.A.         |
| Total                |                                   | 660 |    | 22 |              |

### Mandatory and optional learning units

| Type of Learning Unit | Learning Unit   | Semester | Credits | Hours |
|-----------------------|---|----------|---------|-------|
| Mandatory             | Leadership, management and citizenship                    | 1        | 2       | 3     |
|                       | Anatomy and physiology I                                  |          | 4       | 6     |
|                       | Structural biochemistry                                   |          | 3       | 5     |
|                       | Principles of nutrition                                   |          | 4       | 6     |
|                       | Anatomy and physiology II                                 | 2        | 4       | 5     |
|                       | Human genetics  |          | 2       | 3     |
|                       | Metabolic biochemistry                                    | 4        | 6       | 9     |
|                       | Clinical biochemistry                                     | 5        | 3       | 5     |
| Optional              | Food orientation  | 2        | 2       | 3     |
|                       | Educational techniques and materials for food orientation |          | 2       | 3     |
|                       | Medical microbiology                                      |          | 3       | 5     |

| Type of Learning Unit | Learning Unit  | Semester | Credits | Hours |
|-----------------------|--|----------|---------|-------|
| Mandatory             | Chemical analysis of food  | 2        | 3       | 5     |
|                       | Bromatology of Nutrition   |          | 4       | 6     |
|                       | Biostatistics  | 3        | 2       | 3     |
|                       | Quality standards in food manufacturing                                  |          | 3       | 5     |
|                       | Descriptive dietetics laboratory   |          | 2       | 3     |
|                       | Health analysis  |          | 3       | 5     |
|                       | Food processing  |          | 4       | 6     |
|                       | Preventive nutrition   |          | 2       | 3     |
|                       | Intervention, nutrition and health focused on the person and the culture |          | 4       | 2     |
|                       | Epidemiology applied to nutrition  | 2        |         | 3     |
|                       | Anthropometry and body composition                                       | 3        |         | 5     |

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| Type of Learning Unit | Learning Unit   | Semester | Credits | Hours |
|-----------------------|---|----------|---------|-------|
|                       | Dietetics for communities                               | 5        | 3       | 5     |
|                       | Institutional feeding                                   |          | 3       | 5     |
|                       | Nutrition in the life cycle                             |          | 4       | 6     |
|                       | Research in nutrition                                   | 6        | 2       | 3     |
|                       | Administrative processes in collective restoration      |          | 2       | 3     |
|                       | Applied dietetics laboratory                            |          | 2       | 3     |
|                       | Nutritional assessment I                                |          | 3       | 5     |
|                       | Nutrition and sports                                    |          | 2       | 3     |
|                       | Nutritional assessment II                               | 7        | 3       | 5     |
|                       | Nutritional intervention I                              |          | 4       | 6     |
|                       | Pathology and medical therapy I                         |          | 4       | 6     |
|                       | Bioethics   |          | 2       | 3     |
|                       | Nutrition intervention II                               | 8        | 4       | 6     |
|                       | Pathology and medical therapy II                        |          | 4       | 6     |
|                       | Applied research  |          | 3       | 4     |
|                       | Supervised professional practice                        | 9        | 11      | 16    |
|                       | World class professional exercise                       | 10       | 6       | 9     |
| Optional              | Human development                                       | 1        | 3       | 5     |
|                       | Pedagogical techniques                                  |          | 3       | 5     |
|                       | The art of serving food                                 |          | 3       | 5     |
|                       | Statistics  |          | 3       | 5     |
|                       | Nutritional research                                    |          | 3       | 5     |
|                       | Demography  | 2        | 2       | 3     |
|                       | Nutrition in public health                              |          | 2       | 3     |
|                       | Accounting  |          | 2       | 3     |
|                       | Exercise physiology                                     |          | 3       | 5     |
|                       | Embryology  |          | 3       | 5     |
|                       | Feeding and health policies                             | 3        | 2       | 3     |
|                       | Vegetarian cuisine                                      |          | 2       | 3     |
|                       | Gastronomy  |          | 2       | 3     |
|                       | Neuro-linguistic programming                            |          | 2       | 3     |
|                       | Human growth and development                            |          | 2       | 3     |
|                       | Emotional Intelligence                                  | 4        | 2       | 3     |
|                       | Innovation in the production of food                    |          | 3       | 5     |
|                       | Nutrigenetics and nutrigenomics                         |          | 3       | 5     |
|                       | Nutritional and food supplements                        |          | 3       | 5     |
|                       | Techniques for the improvement and conservation of food |          | 3       | 5     |
|                       | Marketing in nutrition                                  |          | 3       | 5     |
|                       | Inborn errors of metabolism                             |          | 3       | 5     |

| Type of Learning Unit | Learning Unit  | Semester | Credits | Hours |   |
|-----------------------|--|----------|---------|-------|---|
|                       | Maternal and Infant health   | 5        | 3       | 5     |   |
|                       | Projects of social intervention  |          | 3       | 5     |   |
|                       | Selected topics of nutrition:<br>Childhood obesity<br>Integrative biology of obesity |          | 3       | 5     |   |
|                       | Selected topics of nutrition:<br>Childhood Obesity                                   |          | 3       | 5     |   |
|                       | Selected topics of nutrition: Diabetes   |          | 3       | 5     |   |
|                       | Selected topics of nutrition: Geriatrics   |          | 3       | 5     |   |
|                       | Alternative nutritional therapy I  |          | 2       | 3     |   |
|                       | Qualitative research in food and nutrition   |          | 2       | 3     |   |
|                       | Quality of industrialized foods  |          | 2       | 3     |   |
|                       | Sensory evaluation techniques in the food manufacturing                              |          | 2       | 3     |   |
|                       | Food safety systems in collective restoration  |          | 2       | 3     |   |
|                       | Teaching skills  |          | 2       | 3     |   |
|                       | Eating disorders   |          | 6       | 3     | 5 |
|                       | Nutrition and immunity   |          |         | 3     | 5 |
|                       | Pharmacology   | 3        |         | 5     |   |
|                       | Nutrition and high performance sports  | 3        |         | 5     |   |
|                       | Nutrition in endurance sports  | 3        |         | 5     |   |
|                       | Accounting in collective restoration   | 3        |         | 5     |   |
|                       | Design of archetypes for collective restoration                                      | 3        |         | 5     |   |
|                       | Nutrition in the first year of life  | 3        |         | 5     |   |
|                       | Communication in nutrition   | 3        |         | 5     |   |
|                       | Nutrition in the hospitalized patient  | 7        |         | 2     | 3 |
|                       | Assessment and intervention in patients with overweight and obesity                  |          | 2       | 3     |   |
|                       | Metabolic diseases of nutrition  |          | 2       | 3     |   |
|                       | Juice therapy  |          | 2       | 3     |   |
|                       | Nutrition for children and adolescent athletes                                       |          | 2       | 3     |   |
|                       | Alternative nutritional therapy II   |          | 2       | 3     |   |
|                       | Nutrition management   |          | 2       | 3     |   |
|                       | Nutritional interventions in Gynaecology   |          | 3       | 5     |   |
|                       | Nutritional interventions in Geriatrics  |          | 3       | 5     |   |
|                       | Nutritional interventions in Paediatrics   |          | 3       | 5     |   |
|                       | Intervention in patients with diabetes mellitus                                      |          | 3       | 5     |   |

According to the subject specific website <http://www.faspyn.uanl.mx/postgraduate-programs/?lang=en> (accessed 20.11.2016) the following **objectives and learning outcomes (intended qualifications profile)** shall be achieved by the Specialty Clinical Nutrition:

### **General Objective**

The objective of the Specialty in Clinical Nutrition of the Faculty of Public Health and Nutrition is to train specialists with knowledge, skills and attitudes that will allow for the professional practice and research in Clinical Nutrition.

### **Specific Objectives**

1. Provide high-level expertise in the area of Clinical Nutrition through experts on the subject.
2. Provide scenarios of clinical fields that are locally, nationally and internationally desirable for the development of abilities and skills that allow the practice of the academic and professional exercise.
3. Provide the platform for academic bodies of the SEI, particularly those established in the LGAC according to the objectives of the EP, linking to research and academic area along with the scenarios of clinical field, creating products of research and development to give a satisfactory response to a series of social, institutional and professional needs.
4. Meet the needs of the comprehensive training of the graduates of the Degree in Nutrition in the field of Clinical Nutrition, integrating the working fields, products of research and development that contribute to progress in scientific knowledge.
5. Strengthen the inpatient and ambulatory care with the integration in the health team of a Professional who is more skilled, highly specialized and trained to design and implement with greater precision the nutritional care process (NCP) in individuals with special nutritional conditions.

Curriculum

| Unit of Learning   | Curriculum area   | Distribution of hours and credits |                            |                     |                       |
|--|-------------------|-----------------------------------|----------------------------|---------------------|-----------------------|
|  |                   | Hours and mandatory credits       | Hours and elective credits | Total hours by area | Total credits by area |
| <ul style="list-style-type: none"> <li>• Foundations and physiopathology of nutrition</li> <li>• Scientific research</li> <li>• Research seminar I</li> <li>• Human nutrition and disease</li> <li>• Research seminar II</li> <li>• Research seminar III</li> </ul>  | Basic             | 360/ 12                           | 180/ 6                     | 540                 | 18                    |
| Basic elective: <ul style="list-style-type: none"> <li>• Foundations of nephrology</li> <li>• Nutrition in the critically patient</li> <li>• Immunity-nutrition</li> <li>• Production and marketing of food products</li> <li>• Nutri-genomics</li> <li>• Functional nutritional therapy.</li> </ul>                             |                   |                                   |                            |                     |                       |
| <ul style="list-style-type: none"> <li>• Nutritional care work I</li> <li>• Nutritional care work II</li> <li>• Nutritional care work III</li> <li>• Nutritional care work IV</li> <li>• Integrating product I</li> <li>• Integrating product II</li> <li>• Integrating product III</li> <li>• Integrating product IV</li> </ul> | Professionalizing | 2400/80                           | 0/ 0                       | 2400                | 80                    |
| Optional professionalizing: <ul style="list-style-type: none"> <li>• Nutrition and oncology Surgery and nutritional support</li> <li>• Nutrition and nephrology</li> <li>• Nutrition in geriatrics</li> <li>• Nutrition and paediatrics</li> <li>• Nutrition in the first year of life.</li> </ul>                               |                   |                                   |                            |                     |                       |
| <ul style="list-style-type: none"> <li>• Free election</li> </ul>  | Free election     | 0/ 0                              | 120/ 4                     | 120                 | 4                     |
| <b>Total</b>   |                   | <b>2760/ 92</b>                   | <b>30/ 10</b>              | <b>3060</b>         | <b>102</b>            |

According to the subject specific website <http://www.faspyn.uanl.mx/postgraduate-programs/?lang=en> (accessed 20.11.2016) the following **objectives** and **learning outcomes (intended qualifications profile)** shall be achieved by the Master degree program Nutrition:

### **Specific Objectives**

1. Generate scientific knowledge of vanguard in the area of food and nutrition through the active participation of teachers and students in the program.
2. Involve students in the lines of generation and application of knowledge for their development and consolidation.
3. Enter and maintain the mastery of the National Register of Graduate Quality.
4. Ensure the entry of professionals in the area of teaching that comply with the requirements of the program.
5. Contribute to the efficiency and consolidation of the postgraduate systems from the FASPYN and the UANL.
6. Be the basis for the creation of the Master Degree in Nutrition (professionalizing) and for the Doctorate in Science, considering the postgraduate system of the Faculty and the UANL.
7. Implement the modality of Master in Sciences in a bi-national option with the Texas Woman's University.

### **Learning outcomes and intended qualifications profile**

A graduate of the Master of Science in Nutrition:

1. Uses border, multi- and interdisciplinary knowledge with a critical attitude to analyse biochemical, metabolic and molecular nutrition processes.
2. Knows and applies the methods used to evaluate the condition of nutritional status of each patient, with the best techniques to establish a diagnosis and appropriate nutritional care.
3. Applies the scientific research method in a critical way for the resolution of nutritional problems.
4. Uses leading-edge knowledge in the area of nutrition with academic and professional commitment to perform teaching labour.
5. Applies the knowledge of nutrition to depth, research skills and the capacity of resolution of problems with concrete proposals for a better performance of his/her profession.
6. Develops Intervention Strategies In Food, Nutrition and nutritional care, with ethics and social commitment for the resolution of food and nutritional problems.

7. Presents and publishes the results of his/her research to the scientific community, in a timely manner for its dissemination.
8. Disseminates advances in nutrition science to the general population with clarity, to contribute to the improvement of knowledge and the health status of the population.
9. Interacts with the different sectors of society, involved in the field of food and nutrition, with professionalism and human commitment for decision-making that impacts on the wellbeing of society.

Curriculum

| Learning Unit/ Module  | Curriculum area   | Distribution of hours and credits |                            |                     |                       |
|--|-------------------|-----------------------------------|----------------------------|---------------------|-----------------------|
|  |                   | Hours and mandatory credits       | Hours and elective credits | Total hours by area | Total credits by area |
| <p>Mandatory:</p> <ul style="list-style-type: none"> <li>Biochemistry of nutrition</li> <li>Nutrition and human metabolism</li> <li>Statistical methods</li> </ul> <p>Basic elective:</p> <ul style="list-style-type: none"> <li>Functional foods and health</li> <li>Genetics and nutrition</li> <li>Childhood obesity</li> </ul>   | Basic Training    | 480/16                            | 0/0                        | 480                 | 16                    |
| <p>Mandatory:</p> <ul style="list-style-type: none"> <li>Cellular and molecular biology</li> <li>Nutrition and disease</li> <li>Intervention strategies in nutrition</li> </ul> <p>Optional Advanced:</p> <ul style="list-style-type: none"> <li>Energy expenditure</li> <li>Development and production of new food</li> <li>Nutrition and cancer</li> <li>Drug interaction and nutrients</li> </ul> | Advanced Training | 360/12                            | 120/4                      | 480                 | 16                    |
| <p>Mandatory:</p> <ul style="list-style-type: none"> <li>Food analysis laboratory</li> <li>Molecular techniques in nutrition laboratory</li> <li>Evaluation laboratory of nutritional status</li> </ul> <p>Application optional:</p> <ul style="list-style-type: none"> <li>Design laboratory of experimental diets</li> <li>Body composition</li> </ul>   | Application       | 360/12                            | 120/4                      | 480                 | 16                    |

## 0 Appendix: Programme Learning Outcomes and Curricula

| Learning Unit/ Module  | Curriculum area        | Distribution of hours and credits |                            |                     |                       |
|--|------------------------|-----------------------------------|----------------------------|---------------------|-----------------------|
|  |                        | Hours and mandatory credits       | Hours and elective credits | Total hours by area | Total credits by area |
| <ul style="list-style-type: none"> <li>Nutritional care process</li> <li>Nutrition information systems</li> <li>Food and nutrition programs</li> </ul>   |                        |                                   |                            |                     |                       |
| Mandatory: <ul style="list-style-type: none"> <li>Research seminar I</li> <li>Research seminar II</li> <li>Thesis I</li> <li>Thesis II</li> </ul>  | Research               | 840/28                            | 0/0                        | 840                 | 28                    |
|  | Free election          | 120/4                             | 0/0                        | 120                 | 4                     |
|  | Disclosure/Publication |                                   |                            |                     |                       |
| <b>Total</b>   |                        |                                   |                            | <b>2,400</b>        | <b>80</b>             |
| **The curriculum area of disclosure contemplates the development of different activities such as the presentation of research results in scientific forums as well as the development of a scientific article which will be published in an indexed magazine |                        |                                   |                            |                     |                       |
| OBB: Mandatory basic, OBAV: mandatory advanced, OBAP: mandatory of application, OBINV: mandatory of research,<br>OPB: basic elective, OPAV: optional advanced, LE: free election   |                        |                                   |                            |                     |                       |

According to the subject specific website <http://www.faspyn.uanl.mx/postgraduate-programs/?lang=en> (accessed 20.11.2016) the following **objectives** and **learning outcomes (intended qualifications profile)** shall be achieved by the Master degree program Public Health:

### General Objective

To provide a comprehensive university training with key focus on the solution of public health problems, through competencies in research, management, teaching and dissemination at a level of excellence; at the same time, develop in the individual, his/her innovative capacity and encourage critical attitude and autonomous learning.

### Vision

The Master of Science in Public Health program is recognized by the excellence of professors and students, and its social, humanistic and scientific relevance, as a superior educa-

tional program of the Autonomous University of Nuevo Leon with the highest national prestige.

#### Mission

To train teachers and public health science researchers, capable of development in knowledge-based society, with wide understanding of regional, national and international public health situation, demonstrating academic values and principles, committed with the improvement of public health. Creation of social, humanistic and scientific knowledge in the Public Health field as a permanent activity for the improvement of public health, contributing to the steady progress of quality postgraduate education.

#### Program

The program is a cross-institution collaboration between the Faculty of Public Health and Nutrition, the Faculty of Odontology and Faculty of Psychology; and effective August 2015, the Faculty of Medicine and Faculty of Nursing. Studying is a full-time activity, and teaching events are scheduled on weekdays from 8:00 to 18:00 hrs. All courses require the presence of the students. The extent of studies is measured by credit units, which comply with UANL post-graduate guidelines. The student must complete in two years of full-time study a total of 84 ECTS according to the 2015-updated study plan.

#### Learning outcomes and intended qualifications profile

To student who has completed the Master of Science in Public Health can:

- Prioritize problems and health needs from different public health perspective areas in order to provide an organized social response.
- Apply epistemological, theoretical, methodological and technical foundations of qualitative and quantitative research to analyse the health-disease process of a globalized society.
- Evaluate health services, implementation of health policies and financial resources management for the solution of health problems.
- Design educational programs to satisfy the educational programme needs of different society sectors.
- Publish research results to encourage the dissemination of knowledge using oral and written formats for the scientific community, decision-makers, interested groups and general population.
- Apply the pursuit of knowledge in an autonomous way to resolve problems by himself/herself.

Curriculum

| Learning unit/module  | Curriculum area     | Distribution of hours and credits |                            |                     |                       |
|---|---------------------|-----------------------------------|----------------------------|---------------------|-----------------------|
|   |                     | Hours and mandatory credits       | Hours and elective credits | Total hours by area | Total credits by area |
| <ul style="list-style-type: none"> <li>• Research methodology in health I</li> <li>• Biostatistics</li> <li>• Epidemiology</li> <li>• Management of health services</li> </ul> Basic elective (1).  | Basic Training      | 480/16                            | 60/2                       | 540                 | 18                    |
| <ul style="list-style-type: none"> <li>• Environmental health.</li> <li>• Research methodology in health II.</li> <li>• Policies and organization of health systems.</li> </ul> Advanced elective (2).  | Advanced Training   | 360/12                            | 120/4                      | 480                 | 16                    |
| <ul style="list-style-type: none"> <li>• Design and validation of an instrument for collecting the information.</li> <li>• Design and implementation of education programs for the health.</li> <li>• Prioritization of health problems.</li> </ul> Optional Application (1). | Application         | 420/14                            | 60/2                       | 480                 | 16                    |
| <ul style="list-style-type: none"> <li>• Research seminar I</li> <li>• Research seminar II</li> <li>• Progress of thesis I</li> <li>• Progress of thesis II</li> </ul>  | Research            | 360/12                            |                            | 360                 | 12                    |
| <ul style="list-style-type: none"> <li>• Dissemination of research in health I</li> <li>• Dissemination of research in health II</li> </ul>   | Dissemination       | 180/6                             |                            | 180                 | 6                     |
| <ul style="list-style-type: none"> <li>• Integrating product I</li> <li>• Integrating product II</li> </ul>   | Integrating Product | 360/12                            |                            | 360                 | 12                    |
| <ul style="list-style-type: none"> <li>• Free election</li> </ul>   | Free election       | 120/4                             |                            | 120                 | 4                     |
| <b>Total</b>  |                     |                                   |                            | <b>2520</b>         | <b>84</b>             |

## Structure by working hours Master of Science in Public Health Study Plan

L: Lecture, S: Self-study, C: Credits

| Module<br>(Course) Code | First semester                | L   | S   | C  | Requirements |
|-------------------------|-------------------------------|-----|-----|----|--------------|
| MCSP-OBBA-103           | Health research methodology I | 120 | 60  | 6  | N.A          |
| MCSP-OBBA-101           | Biostatistics                 | 80  | 40  | 4  | N.A          |
| MCSP-OBBA-102           | Epidemiology                  | 40  | 80  | 4  | N.A          |
| MCSP-OBAV-101           | Environmental health          | 40  | 20  | 2  | N.A          |
| MCSP-OBINV-101          | Health research seminar I     | 40  | 20  | 2  | N.A          |
|                         | <i>Basic optional*</i>        | 20  | 40  | 2  | N.A          |
|                         | <b>TOTAL</b>                  | 340 | 260 | 20 |              |

| Module<br>(Course) Code | Second semester   | L   | S   | C  | Requirements                                 |
|-------------------------|---|-----|-----|----|--|
| MCSP-OBBA-202           | Health services management  | 40  | 20  | 2  | Epidemiology                                 |
| MCSP-OBBA-201           | Health research methodology II                                    | 120 | 60  | 6  | Health research methodology I, Biostatistics |
| MCSP-OBAV-201           | Policies and organization of health systems                       | 40  | 80  | 4  | Epidemiology                                 |
| MCSP-OBAP-202           | Design and validation of an instrument for collecting information | 40  | 20  | 2  | None   |
| MCSP-OBINV-201          | Health research seminar II  | 40  | 20  | 2  | Health research seminar I                    |
|                         | Integrating product I   | 40  | 140 | 6  |  |
|                         | <b>TOTAL</b>  | 320 | 340 | 22 |  |

0 Appendix: Programme Learning Outcomes and Curricula

| Module<br>(Course) Code | Third semester   | L   | S   | C  | Requirements   |
|-------------------------|--|-----|-----|----|--|
| MCSP-OBAP-301           | Prioritization of health problems                          | 60  | 180 | 8  | Epidemiology   |
| MCSP-OBT-301            | Progress of the thesis I                                   | 40  | 80  | 4  | Health research seminar II   |
| MCSP-OBDIV-301          | Dissemination of health research I                         | 40  | 20  | 2  | Biostatistics,<br>Health research methodology II,<br>Health research seminar I, II |
| MCSP-OBAP-201           | Design and implementation of education programs for health | 40  | 80  | 4  | None   |
|                         | <i>Advanced elective*</i>                                  | 20  | 40  | 2  |  |
|                         | <i>Advanced elective*</i>                                  | 20  | 40  | 2  |  |
|                         | <b>TOTAL</b>   | 220 | 440 | 22 |  |

| Module<br>(Course) Code | Fourth semester                        | L    | S    | C  | Requirements                  |
|-------------------------|--|------|------|----|-------------------------------|
| MCSP-OBT-401            | Thesis II                              | 40   | 80   | 4  | Thesis I                      |
| MCSP-OBDIV-401          | Dissemination of Health research II    | 40   | 80   | 4  | Disclosure in public health I |
|                         | <i>Optional application*</i>           | 20   | 40   | 2  |                               |
|                         | Integrating product II                 | 40   | 140  | 6  |                               |
| MCSP-LE-401             | Free election                          | 120  | 0    | 4  |                               |
|                         | <b>TOTAL</b>                           | 260  | 340  | 20 |                               |
|                         | <b>GRAND TOTAL<br/>(Credit Points)</b> | 1140 | 1380 | 84 |                               |

0 Appendix: Programme Learning Outcomes and Curricula

| Module<br>(Course) Code | Optional  | L  | S  | C | Requirements   |
|-------------------------|---|----|----|---|--|
| MCSP-OPBA-101           | Basic optional<br>(Preventive odontology)   | 40 | 20 | 2 | None   |
| MCSP-OPBA-102           | Basic elective<br>(Psychology of health)  | 40 | 20 | 2 | None   |
| MCSP-OPBA-103           | Basic optional<br>(Contemporary problems of<br>food and nutrition in<br>populations )               | 40 | 20 | 2 | None   |
| MCSP-OPBA 104           | Basic optional<br>(Essential functions of<br>nursing<br>in public health )                          | 40 | 20 | 2 | None   |
| MCSP-OPBA 105           | Basic optional<br>Epidemiological<br>surveillance   | 40 | 20 | 2 |  |
| MCSP-OPAV-301           | Optional advanced (Social<br>and biological feeding<br>determinants)                                | 40 | 20 | 2 | None   |
| MCSP-OPAV-302           | Optional advanced<br>(Epidemiological<br>surveillance<br>of nutrition)                              | 40 | 20 | 2 |  |
| MCSP-OPAV-303           | Optional advanced<br>(Evaluation methods of<br>food safety and quality<br>at health establishments) | 40 | 20 | 2 | Health services<br>management                              |
| MCSP-OPAV-304           | Optional advanced<br>(Occupational health)  | 40 | 20 | 2 | Management and<br>assessment of the<br>environmental risks |
| MCSP-OPAV-305           | Optional advanced   | 40 | 20 | 2 | Epidemiology   |

**0 Appendix: Programme Learning Outcomes and Curricula**

|                                 |   |          |          |          |  |
|---------------------------------|---|----------|----------|----------|--|
|                                 | (Oral epidemiology)   |          |          |          |  |
| MCSP-OPAV-306                   | Optional advanced<br>(Analysis of dental care models)   | 40       | 20       | 2        | Health services management                                   |
| MCSP-OPAV-307                   | Optional advanced<br>(Hospital epidemiology)  | 40       | 20       | 2        | Epidemiology   |
| <b>Module<br/>(Course) Code</b> | <b>Optional</b>   | <b>L</b> | <b>S</b> | <b>C</b> | <b>Requirements</b>  |
| MCSP-OPAV-308                   | Advanced elective<br>(Management of nursing services in health)                               | 40       | 20       | 2        | Health services management                                   |
| MCSP-OPAV-309                   | Optional advanced<br>(Models of psychological intervention in public health problems)         | 40       | 20       | 2        | None   |
| MCSP-OPAP-401                   | Optional of application<br>(Management and assessment of environmental risks)                 | 40       | 20       | 2        | Environmental health   |
| MCSP-OPAP-402                   | Optional of application<br>(Community odontology)   | 40       | 20       | 2        | None   |
| MCSP-OPAP-403                   | Optional of application<br>(analysis and assessment of the nutritional status of populations) | 40       | 20       | 2        | None   |
| MCSP-OPAP-404                   | Optional of application<br>(Nursing programs in public health)                                | 40       | 20       | 2        | Design and implementation of educational programs for health |
| MCSP-OPAP-405                   | Optional of application   | 40       | 20       | 2        | Organization and health policies<br>biostatistics            |

**0 Appendix: Programme Learning Outcomes and Curricula**

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|               |   |    |    |   |  |
|---------------|---|----|----|---|--|
|               | (Analysis of data for decision-making in public health)                       |    |    |   | health services management                                     |
| MCSP-OPAP-406 | Optional of application (Method practices of Intervention in chronic diseases | 40 | 20 | 2 | Models of psychological intervention in public health problems |