

# Specific Skills

## Basic Sciences:

1. Basis of inorganic and organic chemistry.
2. Human body structure and function, focusing on anatomy, histology, and physiology of the organism. Systems related to food and nutrition will be specially taken into account.
3. Cell biology and function, and the cell as unit of tissues.
4. Basis of human genetics.
5. Biochemistry, having more consideration on those chemical compounds and metabolic processes related to food, nutrition, and health.
6. Scientific methods, specially the principles of biostatistics and of methodology in science research.
7. Physiological and social factors that have an influence on food and health or sickness state of an individual or a group of population. Factors related to information transmission of food and its relation to health, and also the perception of the consumer. Group dynamics.

## Food Sciences:

1. Food chemical composition from a bromatological, nutritional, and functional point of view.
2. Physic-chemical properties of food and analysis.
3. Basic operations in food industry, and elaboration and conservation processes of food.
4. Food processing and modification.
5. Food biotechnology.

**Hygiene, Food Safety and Quality Management.** The student must be familiar with the field of food safety and the management of food companies. Therefore, the student must acquire the following knowledge:

1. Food microbiology and parasitology.
2. Food toxicology.
3. Hygiene, products, and processes.
4. Food quality assessment in different fields.
5. Food quality systems used in food business.
6. Food legislation.
7. Food business management, especially companies related to collective restoration. Economic factors that have an influence on how particular groups of population eat and on restoration businesses.

## Nutrition and Health Sciences:

1. Nutrients functions and other food components in the organisms, nutritional requirements depending on the individual characteristics, different stages of life and physiological situations. Integration of metabolic functions. Assessment of the nutritional state. Nutrient bioavailability. Analysis and research techniques in nutrition.
2. Basis of a healthy diet. Design and planning individual or collective diets in the different stages of life and physiological situations.
3. Nutritional physiopathology and pathology, having a special attention to food related diseases.
4. Pharmacology and nutrition: to know the possible interactions between medicines and nutrients.

5. To design, schedule, and monitor diets for individuals or collectives depending on their different pathological states, in primary health and hospital care. Oral, enteral, and parenteral nutrition.
6. Culinary strategies that ensure the nutritional, organoleptic, and texture qualities in each physiological or pathological states.

#### **Public Health and Community Nutrition:**

1. Health systems and food policies. Food and health policies impact on the professional practice of the dietitian-nutritionist.
2. Nutritional epidemiology. Population consumption and eating habits. Assessment methods of the nutritional state of population groups.
3. Relation between food and culture. Historical and cultural factors related to food.
4. Methodology of nutrition education. Learning theories and didactic methods to be applied in health education in the nutritional field. Dietetic advice.
5. Ethical and professional principles of the profession.

**Professional skills (know how).** At the end of the degree, the student will be able to develop the following professional skills:

1. To develop and interpret a dietary record. To interpret a medical record.
2. To identify the factors that influence diet and nutrition.
3. To calculate and develop healthy food guidelines in individuals and population groups: to develop an appropriate dietetic and nutritional control, in healthy or sick people, taking into account their physiological or pathological requirements, pharmacotherapy, personal preferences, and socioeconomic, religious, and cultural aspects.
4. To assess the nutritional state in individuals and population groups.
5. To design and interpret food surveys.
6. To plan, introduce, and assess therapeutic diets and develop a follow-up.
7. To plan menus for groups of people: to participate in the management of food service.
8. To manage food safety (hygienic and nutritional aspects).
9. To assess food quality and develop self-monitoring and quality systems.
10. To plan and carry out programs of health education on food and nutrition. To participate in food guides and consensus protocols development.
11. To develop programs on health promotion and disease prevention.
12. To integrate nutritional knowledge and its relationship with health.
13. To continue training: to coordinate and participate in continuous training on quality, food safety, and health promotion.
14. To provide technical advice to the catering industry and consumers.
15. To develop educational methods for teaching.
16. To facilitate communication in the media through appropriate systems.
17. To know and use tools that makes easier the professional practice through new technologies.
18. To know how to use computing basic tools on information and communication.
19. To be able to adapt to the evolution of scientific knowledge, and to social and cultural changes.
20. To participate in multidisciplinary groups of research, innovation, and development fields.