Basic Skills

BS6 Possess and understand knowledgeable facts that serve as a basis or opportunity for being original in the development and/or application of ideas, frequently within the context of research.

BS7 The students will be able to apply acquired knowledge and problem solving abilities to fields outside this program, including that which is new and scarcely known, within a more ample or multidisciplinary context related to the research, development and innovation of drugs.

BS8 The students will be able to integrate concepts and manage the complex task of drawing valid conclusions from information which, in spite of being incomplete or limited, includes reflections regarding social and ethical responsibilities linked to the application of general knowledge, specific concepts and common sense to the research, development and innovation of drugs.

BS9 The students will learn to relay their conclusions -and the most recent facts and reasoning supporting said conclusions- to specialized personnel and to the general public in a clear and precise manner.

BS10 The students will have acquired learning abilities that will permit them to continue studying in a self-directed and autonomous manner.

General Skills

GS1 The students will develop their degree of leadership, creativity, initiative and enterprising spirit.

GS2 The students will be able to communicate, both orally and in writing, facts regarding their field of knowledge in congresses, work meetings, and job interviews.

GS3 The students will learn how to carry out work on a team, forming part of multidisciplinary teams and collaborating with other professionals linked to the area of research.

Specific Skills

SS1 The students will learn and practice the basic techniques related to the research, development and innovation of drugs.

SS2 The students will learn to apply scientific methods and to acquire skills for the following: dealing with legislation, handling sources of diverse data and literature references, preparing protocols and working with laboratory animals, including all other aspects that are necessary for the design and critical evaluation of preclinical and clinical trials.

SS3 The students will learn to design and carry out biological and toxicological evaluation of a new active substance, meeting the required aspects of technical and quality assurance.

SS4 The students will learn the tasks related to clinical research in all its phases and monitor them.

SS5 The students will master the resources and systems required by today's companies in the pharmaceutical business for guaranteeing product quality.

SS6 The students will learn how to register a pharmaceutical specialty taking into account the established requirements and the general registration procedures.

SS7 The students will learn to master management techniques that will permit them to direct research projects, research teams and diverse activities within pharmaceutical companies.

SS8 The students will learn to master marketing and publicity techniques related to pharmaceutical specialties for their commercialization.

SS9 The students will learn to apply ethical principals in accordance with legislation, regulatory affairs, and administration policies and procedures that govern this profession, taking into account the ethical health implications in a changing social context.

SS10 The students will learn the importance of intellectual property, its need and importance in the pharmaceutical world and in the R&D&I for technology transfer.

SS11 The students will learn to design, formulate and prepare different pharmaceutical forms, on an advance level, for the development and innovation of drugs.

SS12 The students will learn the potential of nanoparticles and other novel systems used for the administration of biologically active molecules.

SS13 The students will learn to project pharmaceutical and pharmacokinetic studies, to correctly handle and present the data in both clinical and preclinical studies, as well as to interpret the results.

SS14 The students will acquire knowledge regarding biostatistics on an advanced level which will permit the design, analysis and understanding of research work.

SS15 The students will acquire skills and dexterity in the handling of different tools and equipment, such as chromatographs and mass spectrometers, and learn to properly carrying out cell culture techniques their application to the research, development and innovation of novel drugs.

SS16 The students will learn the importance of the validation system of analytical methods in drug analysis.

SS17 The students will learn to synthetize new active molecules which permit the development and innovation of novel drugs.

SS18 The students will learn to resolve practical cases related to the application of molecular modeling techniques to research projects.

SS19 The students will learn to design and carry out experiments in vitro and in vivo which permit advancement in the knowledge of genetic, molecular and cellular bases of human diseases, diagnosis, prevention and treatment.

SS20 The students will learn sufficient English so as to permit the diffusion of specific facts and general knowledge within the scientific world.

SS21 The students will learn to prepare a professional business plan, as a tool for the creation of pharmaceutical companies and biomedical investment projects.

SS22 The students will learn to apply techniques such as outsourcing and benchmarking as strategic and operative tools for managing a pharmaceutical company.

SS23 The students will learn to apply economic concepts to drug R&D&I management.

SS24 The students will learn to identify the possibilities and perspectives of publicity and information of drugs in the national and international markets for the purpose of facilitating their innovation and sale.