BSC IN
BIOMEDICAL SCIENCES

TRAINING BIOMEDICAL SCIENTISTS, TRAINING CITIZENS FOR THE COMMON GOOD

Biomedical Sciences students are integrated in activities developed with the different institutional partnerships of CATÓLICA - from companies in different areas, to social solidarity institutions - so that the work environment can be perceived and experienced from the beginning.

Because acquisition of transversal skills makes the difference in personal and professional life, the students are also trained in critical argumentation, oral and written communication, teamwork and investigation in a real context. The development of these skills promotes an innovative, entrepreneur and leadership spirit.

TEACHING TEAM

CATÓLICA's faculty is made up of professors with diverse backgrounds, highly motivated and available. The professors have high quality and internationally recognized research activity.

ACCESS, APPLICATIONS AND ADMISSION

Admission exams:
One of the following subjects: Biology and Geology / Physics and Chemistry / Mathematics

Coordination
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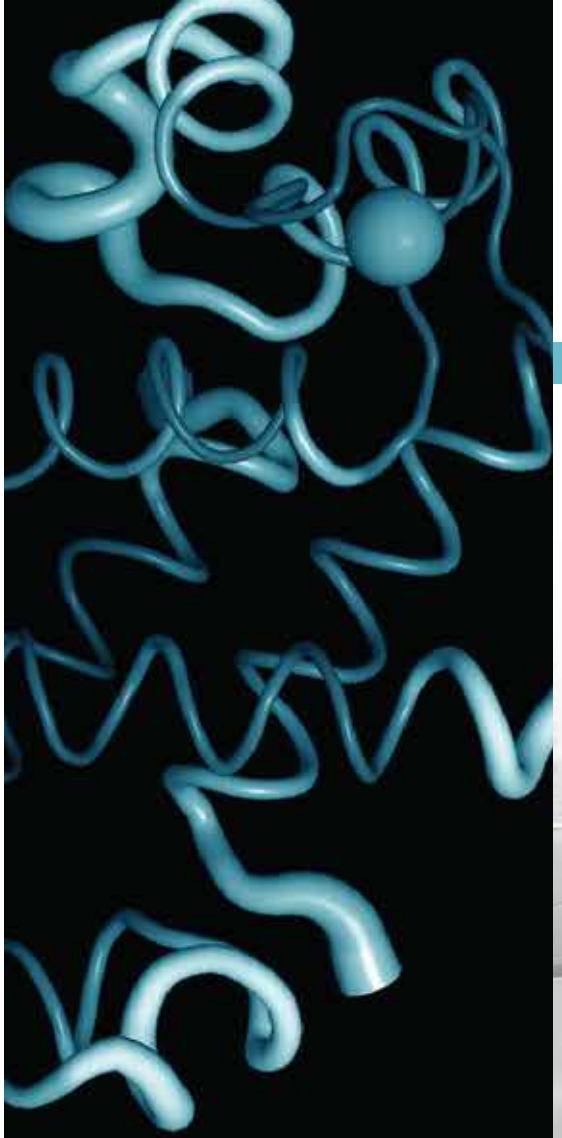

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UNIVERSIDADE CATÓLICA PORTUGUESA
VISEU

BSC IN
BIOMEDICAL SCIENCES

YOUR FIRST STEP TO CREATE HEALTH SOLUTIONS

BIOMEDICINE
THE PROFESSION OF THE FUTURE

BSC IN
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WHY A DEGREE IN BIOMEDICAL SCIENCES?

Biomedicine is the course for those who like the area of health. It is the biomedical scientist who carries out the research that allows the development of vaccines and medicines, the research that allows the discovery of new treatments or new diagnostic methods. Biomedical scientists, together with doctors and pharmacists, are the professionals that are transforming health research.

WHY BIOMEDICINE AT CATÓLICA?

In an environment of discovery, the BSc in Biomedical Sciences at CATÓLICA provides laboratory, clinical and computational experience, so that you can participate in the challenge of CREATING SOLUTIONS in HEALTH and to answer questions such as:

> What molecules are altered in a disease? To discover them, do we use laboratory techniques or can we use informatics and computer tools?
> Can we predict whether certain changes in the environment will have harmful effects for an individual with a particular genetic makeup?
> Are we able to develop a treatment for a specific clinical situation?
> Can we establish a method for early diagnosis of the disease?
> Can we develop quick and cost-effective tests for individual self-testing? Which molecules should be selected to build the test?
> What is the impact on a given population if 5% of individuals are carriers of a given pathology? And for the National Health System?
> What are the consequences of a pandemic? Do we have effective diagnostic methods to identify the causative agent of disease?
> Will it be necessary to design new vaccines for new viral pandemics?
> What is the best way to communicate Health Science effectively, when is urgent to vaccinate the entire population?

Did you know that the Biomedical researchers/professors of the BSc in Biomedical Sciences at CATÓLICA have developed a method for the diagnosis of COVID-19 in saliva, based on RT-PCR? And that this strategy is being used to test athletes in Viseu? Your path in Biomedicine at CATÓLICA is shared with national and international students of Medicine and Dentistry, and with researchers from the Centre for Interdisciplinary Research in Health (CIIS).

The Master in Applied Biomedicine - Computing Branch or Management Branch, may be the option to pursue your studies at CATÓLICA.

BIOMEDICAL SCIENCES MAJOR CAREERS AND JOBS

The multidisciplinary training offered in the BSc in Biomedical Sciences at CATÓLICA allows for a variety of career options, including:

> Work in the pharmaceutical industry on the development of vaccines or new therapies;
> Work in the medical device industry or clinical trials;
> Work in IT companies that develop solutions in Biomedicine and Health;
> Work in biomedical product marketing companies;
> Work in the area of Health Management;
> Work in the field of Forensic Science;
> Be a Science Manager;
> Engage or lead a Science communication team;
> Be a career researcher in an R&D institute;
> Pursuing studies in Biomedicine or Medicine, for example.

HOW IS THE BSC IN BIOMEDICAL SCIENCES STRUCTURED?

The BSc in Biomedical Sciences at CATÓLICA has a theoretical perspective articulated with a vast practical and theoretical-practical component, which includes laboratory and dry-lab sessions, that is, work in a computational environment. In an innovative environment, you will have the opportunity to develop solid bases in Biochemistry, Molecular Biology, Genetics, Microbiology, Cell Biology, Immunology, Computational Biology, Omics, Toxicology, Pharmacology, Epidemiology, Neurobiology, among others. Science Communication is also part of the training in Biomedical Sciences at CATÓLICA and in this module, students participate in Science Communication activities in the community and for different audiences. In the third year of the course, the objective is to apply the knowledge acquired in the previous semesters and participate in an ongoing research project or present a proposal for a project to be developed.

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CURRICULAR PLAN

The syllabus includes fundamental scientific concepts and specialty subjects in the field of biomedicine.

YEAR 1 | 1st SEMESTER

Curricular Unit	Contact Hours	ECTS
Structural Biochemistry	50,0	5,0
Cell Biology	48,0	5,5
Molecular Biology	38,0	3,5
Biomolecular Laboratories	30,0	3,0
Information and Communication Systems	31,0	3,0
Biostatistics	31,0	3,0
Functional Biology I	75,0	7,0

YEAR 1 | 2nd SEMESTER

Curricular Unit	Contact Hours	ECTS
Biomaterials	32,0	3,0
Biochemistry and Metabolism	48,0	5,0
Human and Molecular Genetics	36,0	3,0
General Microbiology	26,0	1,5
Personal and Professional Interaction	29,0	2,5
Bioethics and Christian Mundivity	20,0	1,5
Immunobiology	48,0	4,5
Functional Biology II	102,0	9,0

YEAR 2 | 1st SEMESTER

Curricular Unit	Contact Hours	ECTS
Biomolecular Laboratories II	74,0	10,0
Pathophysiology	43,0	4,0
Toxicology	23,0	3,0
General Principles of Pharmacology	32,0	3,0
Applied Microbiology	32,0	6,0
Immunology	44,0	4,0

YEAR 2 | 2nd SEMESTER

Curricular Unit	Contact Hours	ECTS
Computational Biology	50,0	7,5
Epidemiology and Public Health	25,0	3,0
Pharmacology	68,0	7,0
Biomolecular Laboratories III	74,0	10,0
Science Communication	25,0	2,5

YEAR 3 | 1st SEMESTER

Curricular Unit	Contact Hours	ECTS
Neurobiology	32,0	4,0
Biology of Aging	14,0	2,0
Genomics	22,0	4,0
Proteomics	22,0	4,0
Project I	60,0	16,0

YEAR 3 | 2nd SEMESTER

Curricular Unit	Contact Hours	ECTS
Molecular Diagnosis	49,0	6,0
Biomarkers and Molecular Mechanisms	34,0	7,0
Project II	70,0	17,0