BIOMEDICAL INFORMATICS

Modality: Bachelor's degree
Completion: minimum: 4 years; maximum: 7 years
Regime: annual series
Shift: full time (afternoon and evening)
Vacancies: 40 (forty)

1st year – 1st semester		
Axis	**Course**	**Hours**
Principles of Mathematics and Physics	Principles of Mathematics	60
Biological and Health Sciences	General Anatomy	60
	Principles of Cell and Tissue Biology	60
	General Chemistry and Physical Chemistry	60
Principles of Computing	Introduction to Programming in Health	60
	Computer Architecture	60
Human and Social Sciences	Reading and Text Interpretation in English I	30
Integrative Axis	Introduction to Health Informatics	30
1st year – 2nd semester		
Axis	**Course**	**Hours**
Principles of Mathematics and Physics	Calculus I	60
	Vector and Matrix Algebra	60
Biological and Health Sciences	Biochemistry	45
	Pathology Methods Applied to Biomedical Informatics	30
Principles of Computing	Data Structure in Health	60
	Object-Oriented Programming I	60
Human and Social Sciences	History of Health Sciences	30
	Health Sociology and Anthropology	30
	Reading and Text Interpretation in English II	30
Health Informatics	Health Terminology and Documentation	30
2nd year – 1st semester		
Axis	**Course**	**Hours**
Principles of Mathematics and Physics	Calculus II	60
	Basic Physics	60
Biological and Health Sciences	Molecular Biology	60
	Microbiology and Parasitology applied to Biomedical Informatics	60
Principles of Computing	Object-Oriented Programming II	60
Computational Technology	Software Engineering I	60
	Database	60
	Operational Systems	60
Human and Social Sciences	Bioethics	30
2nd year – 2nd semester		
Axis	**Course**	**Hours**
Principles of Mathematics and Physics	Probability and Statistics	60
Biological and Health Sciences	Immunology and Immunopathology	30
	Introduction to Epidemiology	45

Principles of Computing	Introduction to Artificial Intelligence in the Health Area	60
	Computing Theory	60
Computational Technology	Software Engineering II	60
	Database for the Biomedical Area	60
	Introduction to Digital Image Processing	30
Human and Social Sciences	Academic Writing	30
3rd year – 1st semester		
Axis	**Course**	**Hours**
Principles of Mathematics and Physics	Inferential Statistics	60
Biological and Health Sciences	Genetics and Evolution	60
Computational Technology	Signal Processing	30
	Principles of Computer Networks and Distributed Systems	60
	Pattern Recognition	60
Bioinformatics	Biotechnology	60
Health Informatics	Interoperability, Standards and Communication	60
	Seminars on Practices in Health Informatics	45
Integrative Axis	Introduction to Bioinformatics	30
3rd year – 2nd semester		
Axis	**Course**	**Hours**
Computational Technology	Human-Machine Interface	60
Biological and Health Sciences	Public Policies on Health	30
Human and Social Sciences	Entrepreneurship	30
	Education in Health	30
	Healthcare Administration	30
Bioinformatics	Aspects of Genomics and Phylogenetics	60
	Computational Molecular Biology	60
Health Informatics	Information Systems for Biomedical Informatics	60
	Diagnostic Imaging I	30
Integrative Axis	Project Management	60
	Scientific Methodology for Biomedical Informatics	30
4th year – 1st and 2nd semesters		
Axis	**Course**	**Hours**
Bioinformatics	Molecular Modeling	60
Health Informatics	Telehealth: Principles and Applications	60
Integrative Axis	Advanced Topics in Biomedical Informatics	60
	Graduation Paper	200
	Internship	200
Mandatory Extracurricular Activities		**225**
Optional Courses		**220**
Total Required Hours		**3,760**