FEDERAL UNIVERSITY OF PARANÁ
TECHNOLOGY SECTOR
DEPARTMENT OF BIOPROCESS AND BIOTECHNOLOGY ENGINEERING

Engenharia de Bioprocessos e Biotecnologia
DAEBB - UFPR

CURRICULUM FRAMEWORK

1st SEMESTER	2nd SEMESTER	3rd SEMESTER	4th SEMESTER	5th SEMESTER	6th SEMESTER	7th SEMESTER	8th SEMESTER	9th SEMESTER	10th SEMESTER
60h Pre-Calculus CEG019	60h Calculus 1 CM311	60h Calculus 2 CM312	45h Thermodynamics Applied to Biotechnology TEB039	90h Fermentation Engineering TEB354	75h Bioseparation Engineering I TEB358	30h Bioseparation Engineering II TEB359	60h Environmental Biotechnology TEB068	300h Internship in Biotechnology Industry I TEB302	300h Internship in Biotechnology Industry II TEB303
60h Introduction to Analytic Geometry and Linear Algebra CI182	60h Physics I CF109	60h Mathematics Applied to Biotechnology I TEB059	90h Transport Phenomena in Bioprocesses TEB157		60h Enzyme Engineering TEB055	60h Bioreactor Engineering TEB371	90h Fermentative Processes in the Food Industry TEB367	Elective I	Elective II
30h Fundamentals of Bioprocess and Biotechnology Engineering CM310	30h Experimental Physics I CF113	60h Physics II CF110	60h Physics III CF111		60h Mathematics Applied to Biotechnology II TEB062		60h Biotechnology Industry Project II TEB361		
60h Computer Programming CI208	60h Physical Chemistry D CQ033	60h Numerical Methods CI202	60h Biotransformation of Organic Compounds CQ085	60h Business Administration TT510	45h Sterilization of Equipment, Media, and Air in Bioprocesses TEB056	45h Instrumentation and Control in Bioprocesses TEB060	60h Fundamentals of Toxicology BT021		
60h General Chemistry B CQ031		60h Introduction to Statistics CE009	60h Molecular Biology and Bioinformatics BQ110	60h Engineering Economics TT080	60h Biomaterials and Biomechanics TEB364	30h Biotechnology Industry Project I TEB360			
90h General Microbiology BP001	75h Principles of Organic Chemistry CQ038	75h Structure and Function of Biomolecules BQ107	45h Microorganism Metabolism BQ108	45h Biomolecule Analysis BQ109	45h Immunology Applied to Biotechnology BP031	60h Vaccinology BP028			
	30h Biosafety and Ethics TEB038	60h Introduction to Analytical Chemistry Applied to Bioprocesses TEB340	60h Instrumental Analytical Chemistry Applied to Bioprocesses TEB357	60h Introduction to Genetics BG025	60h Genetic Principles in Biotechnology BG026	60h Plant Cell and Tissue Culture In Vitro: Principles and Applications BB051			
	60h Cell Biology BC089			60h Technical Drawing I CEG001					
24 hours per week	25 hours per week	29 hours per week	28 hours per week	25 hours per week	27 hours per week	19 hours per week	18 hours per week	29,3 hours per week	35,3 hours per week	259,6 hours per week
360 h 360 h	375 h 735 h	435 h 1.170 h	420 h 1.590 h	375 h 1.965 h	405 h 2.370 h	285h 2.655 h	270 h 2.925 h	440 h 3.365h	530h 3.895h	C.W. TOTAL