



People's Democratic Republic of Algeria
Ministry of Higher Education and
Scientific Research
Abbes Laghrour
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Instruction descriptive form

Domain: Natural and life sciences Branch: Food Sciences

- **Educational Objectives:**

The objectives of the common core curriculum for Natural and Life Sciences are directed towards developing foundational knowledge in natural sciences, which branches into five specialized fields in the second year: Biological Sciences, Environmental Sciences, Biotechnology, Food Sciences, and Agricultural Sciences.

- The emphasis is on equipping students with the ability to understand, analyze, and apply scientific knowledge in these domains. The first year serves as a comprehensive foundation for these specializations, focusing on the theoretical and practical aspects of natural sciences, enabling a seamless transition to the respective fields.
- Skills Acquired:
- Biological Sciences:

Students gain in-depth knowledge of cellular biology, microbiology, and biochemistry. This enables them to understand the molecular and cellular mechanisms of life processes.

- Environmental Sciences:

The focus is on understanding ecosystems, environmental monitoring, and sustainable practices, preparing students for roles in environmental management and conservation.

- Biotechnology:

Students acquire skills in genetic engineering, microbial technology, and bioinformatics, enabling them to innovate in medical, agricultural, and industrial applications.

- Food Sciences:

The curriculum covers food quality, safety, and technology. Students are trained to analyze, develop, and market functional foods while adhering to regulatory standards.

- Agricultural Sciences:

The focus is on sustainable farming practices, crop production, and pest management, equipping students to address agricultural challenges.

- **Targeted Qualifications and Competencies:**

The students undergoing this training are expected to develop strong analytical and research skills, enabling them to assess scientific data and contribute effectively to their respective fields. They will also acquire interdisciplinary expertise, preparing them for further studies (Master's and Ph.D.) or immediate integration into professional sectors such as education, research, and industry.

Semester organization of lessons
Semester 01

Teaching Unit	WHV	WHV				Coef.	Credits	Evaluation Mode	
	14-16 W.	C	DW	PW	Others			Continue	Exam
Fondamental									
FTU (O/P)									
General chemistry	45 H	1.5	1.5	1.5	60	3	6	X	X
Cell biology	60 H	1.5	1.5	3	90	4	9	X	X
Methodology									
MTU (O/P)									
Mathematics statistics	15 H	1.5	1.5	-	60	2	5		X
Expression and communication techniques 1 (French)	15 H	1.5	1.5	-	45	2	3		X
Discovery									
DTU(O/P)									
Geology	60 H	1.5	-	3	60	3	5	X	X
Transversal									
Universal history of life science	60 H	1.5	-	-	45	1	2	X	X
Total Semestre 1	335.5 H	9	6	7.5	360	13	30		

Semester 02

Teaching Unit	WHV	WHV				Coeff.	Credits	Evaluation Mode	
	14-16 W.	C	DW	PW	Others			Continue	Exam
Fondamental									
FTU (O/P)									
Thermodynamics and chemistry of solutions	67.5	1.5	1.5	1.5	60	3	6	X	X
Plant biology	67.5	1.5		3	90	3	8	X	X
Animal biology	67.5	1.5		3	90	3	8		
Methodology									
MTU (O/P)									
Physics	45	1.5	1.5	-	45	2	4		X
Expression and communication techniques 1 (English)	45	1.5	1.5	-	45	2	2		X
Transversal									
Work methods	22.5	1.5	-	-	22.5	1	2	X	X
Total Semester 2	315	9	4.5	7.5	355.5	14	30		