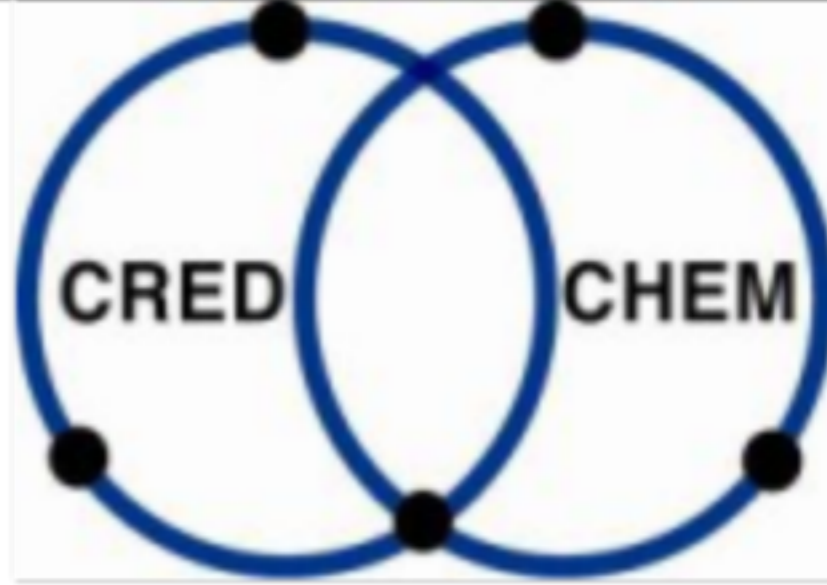
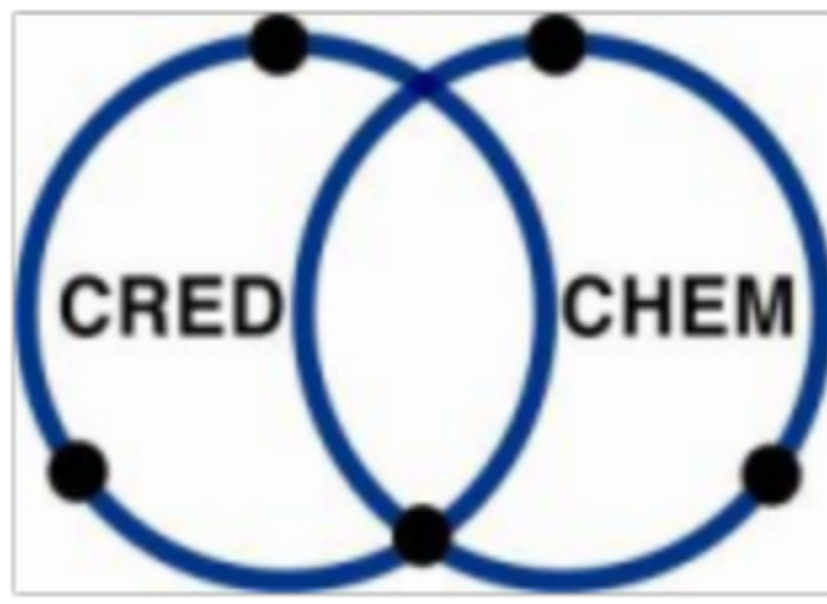


Field of action	Working in the laboratory			 LEE Bio 1	
Learning outcome unit	Bio 1 - Isolating and determining microorganisms and cells				
EQF level	Competence level A: EQF level 3 Competence level B: EQF level 4 Competence level C: EQF level 5				
Relations to national qualifications	BG	CZ	DE	IT	SK
			Chemical laboratory technician, biological laboratory technician, physics laboratory technician		Chemical technician, chemical laboratory technician, microbiologist
Learning outcomes					
Competence¹		Skills		Knowledge	
Competence level A (EQF level 3) - isolates and determines microorganisms and cells with the aid of simple methods and adapts these methods to the given conditions (selects methods)		- accepts orders for isolating and determining microorganisms and cells and plans all further processing steps until supplying the result - selects methods and respective laboratory equipment depending on the property of the microorganisms and cells and handles them accurately, carefully and expertly - evaluates results		- knows methods for examining and handling microorganisms (immobilising, preparing, isolating, producing nutrient media, determining germ number...) - knows respective processing steps	
Competence level B: (EQF level 4) - deals with problems typical for the methods		- analyses the problem, develops solution approaches by applying specialist knowledge and decides how to solve the problem - reflects on whether the problem was actually solved		- knows structure and nature of microorganisms, factors responsible for their properties - knows biochemical processes and influencing factors	
Competence level C: (EQF level 5) - optimises methods according to context in cooperation with the team		- works as part of the team, is actively involved in the work process and thus brings the work process forward - communicates with others about scientific and technological content (application of specialist knowledge) and about the work process			

¹ The competence levels build upon each other.

Field of action	Working in the laboratory				 LEE Bio 1
Learning outcome unit	Bio 1 - Isolating and determining microorganisms and cells				
Countries	BG	CZ	DE	IT	SK
Which CREDCHEM learning place offers the learning outcome unit?			Saxon Education Company for Environmental Protection and Chemical Occupations Dresden Ltd.		Secondary Technical School Novaky, Secondary Technical School Bratislava
How many learners can be admitted?			3-4		4
At which competence level is the learning outcome unit offered?			A, B, C		A, B, C
In which language is the mobility taught?			English/German		English/German
Which methods are used?	(Micro-)biological-chemical processes and analysis methods				
The following occupational tasks² (which can also be used for imparting the learning outcomes) have been exemplarily analysed in preparing the LEE:					
Preparing, inoculating, resistance to antibiotics (bacteria)					
Macroscopic and biochemical determination of bacteria					
Quantification of microorganisms					
The following examination tasks were designed for the competence levels indicated:					Competence level
Quantification of microorganisms					A, B, C
Preparing, inoculating, resistance to antibiotics (bacteria)					A, B, C
Macroscopic and biochemical determination of bacteria					A, B, C

² Occupational and examination tasks can be downloaded at www.credchem.eu.