ANNEX x.I_Cycle: The Impact of the Courses/modules on learning outcomes at the qualification level.

Affiliation marked with an "x"

	CYCLE OF STUDY and STUDY PROGRAM TITLE : *I STUDY CYCLE: GENETICS AND BIOENGINEERING*

MODULES

		Mathematics and Statistics	*English Language*	*Biological Sciences*	*Chemistry*	*Other natural sciences*	*Foreign languages*	*Genetics and Engineering*	*Computer Science and Bioinformatics*	*Protein Engineering*	*Ethics in Engineerg*	*Project management*	*Internship/ Work placement*	*University and Free Electives*	*Program Electives*
	Total ECTS per module	*24*	*12*	*30*	*24*	*21*	*6*	*18*	*12*	*6*	*6*	*6*	*6*	*21*	*48*
	ECTS Total	**240**													
	PROGRAM LEARNING OUTCOMES														
LO1	Identify, formulate and solve biological problems by using appropriate theoretical and experimental skills (including bioinformatics and laboratory work);	x		x	x			x	x	x		x	x		x
LO2	Identify, classify and describe the performance of biological systems and components through the use of analytical methods and modelling techniques;	x	x	x	x	x		x	x	x			x		x
LO3	Identify constrains of engineering solutions including environmental, social and sustainability limitations, health and safety and risk assessment issues;	x									x	x	x	x	x
LO4	Apply gained management experience in designing and running experiments and analyze obtained results;	x		x				x				x	x		x
LO5	Apply knowledge and understanding to acquire practical skills for problem solving, for research tasks and the design of protocols and procedures;		x	x	x							x	x		x
LO6	Develop an awareness of and commitment to the role of engineers in society including their professional and ethical responsibilities;					x					x	x		x	x
LO7	Develop technical and professional skills for individual and team work including coordinating the team if necessary;		x								x	x			
LO8	Develop an area for creativity excellence through interactivity and participate in scientific events;		x				x						x	x	x
LO9	Recognize a need to engage in a life-long learning and usage of contemporary technological advances.								x					x	

source: Prirucnik za primjenu kvalifikacijskog okvira u visokom obrazovanje BHQFHE, TEMPUS Projekat, 2016

ANNEX x.II_Cycle: The Impact of the Courses/modules on learning outcomes at the qualification level.

Affiliation marked with an "x"

	CYCLE OF STUDY and STUDY PROGRAM TITLE **:** *II STUDY CYCLE: GENETICS AND BIOENGINEERING*		
		MODULES	
		Program Electives	*Master thesis*
	Total ECTS per module	*36*	*24*
	ECTS Total	**60**	

	PROGRAM LEARNING OUTCOMES		
LO1	Possess in-depth knowledge and skills in specific discipline with global perspective;		x
LO2	Analyze, evaluate and apply existing knowledge to develop critical solutions in new situations;	x	x
LO3	Disseminate ideas to the wider community in a confident, effective and coherent manner;		x
LO4	Describe and critically evaluate current aspects of biosciences in order to solve related problems;	x	
LO5	Create and sustain networking efficiently;	x	x
LO6	Perform given tasks ethically and with dedication;	x	x
LO7	Possess strong enthusiasm and commitment to continuously acquire and disseminate new knowledge and skills.	x	x

source: Prirucnik za primjenu kvalifikacijskog okvira u visokom obrazovanje BHQFHE, TEMPUS Projekat, 2016

ANNEX x.III_Cycle: The Impact of the Courses/modules on learning outcomes at the qualification level.

Affiliation marked with an "x"

	CYCLE OF STUDY and STUDY PROGRAM TITLE **:** *III STUDY CYCLE: GENETICS AND BIOENGINEERING*

		MODULES		
		Program Electives	*Scientific Activity*	*PhD Thesis*
	Total ECTS per module	*36*	*24*	*120*
	ECTS Total	**180**		

PROGRAM LEARNING OUTCOMES

LO1	Apply advanced omics-based methods and models for solving problems in engineering;	x		x
LO2	Assess the performance and limitations of computational and biological models for particular cases;	x		x
LO3	Apply appropriate methodologies to study and understand the pathways which occur in the cell;	x		x
LO4	Choose the appropriate molecular biology technique to achieve particular engineering objectives;	x		x
LO5	Perform independent research activity and report on it;	x	x	x
LO6	Transfer the obtained knowledge in oral and written form;	x	x	x
LO7	Critically evaluate various research approaches, methods and techniques;	x	x	x
LO8	Work effectively in a team.	x	x	x

source: Prirucnik za primjenu kvalifikacijskog okvira u visokom obrazovanje BHQFHE, TEMPUS Projekat, 2016