Code         PMB065         Year of study         1           Course teacher         Prof. Jasna Puizina, PhD         Credits (ECTS)         3           Associate teachers         Type of instruction (number of hours)         L         S         E         F           Status of the course         Elective         Percentage of application of e- learning         10%         15         15           Course objectives         Elective         Percentage of application of e- learning         10%         15         10%           Course objectives         Introducing students to the relationships of living and non-living nature. Understanding the basic principles of cell biology. Mastering the basics of genetics and ecological relationships between organisms.         None.           Course objectives         After successfully passing the course, students will be able to: • Recognize the importance of living organisms in relation to the environment of the course (4 to 10         None.           Learning outcomest expected at the level of the course (4 to 10         Master basic knowledge of cell biology and evolution of organisms • Interpret how environmental changes affect ecosystem changes           Course content broken down in detail by weekly class schedule (syllabus)         • Living and non-living nature (3 + 1 h). • Endoplasmic reticulum, Golgi apparatus, lysosomes (3 + 1h). • Endoplasmic reticulum, Golgi apparatus, lysosomes (3 + 1h). • Endoplasmic reticulum, Golgi apparatus, lysosomes (3 + 1h). • Endoplasmic reticulum, Golgi apparatus, lysosome	CodeCourse teacherAssociate teachersAssociate teachersStatus of the courseCourse objectivesCourse enrolmentrequirements andentry competencesrequired for thecourseLearning outcomesexpected at the levelof the course (4 to 10learning outcomes)	PMB065 Prof. Jasna Puizi	na, PhD	Year of st	udv	1									
Course teacher         Prof. Jasaa Puizina, PhD         Credits (ECTS)         3           Associate teachers         Type of instruction (number of hours)         L         S         E         F           Associate teachers         Elective         Percentage of application of e- learning         10%         10%           Course objectives         Introducing students to the relationships of living and non-living nature. Understanding the basic principles of cell biology, Mastering the basics of genetics and ecological relationships between organisms.         None.           Course enrolment requirements and entry competences required for the course         After successfully passing the course, students will be able to: • Recognize the importance of living organisms in relation to the environment • Master basic knowledge of cell biology and evolution of organisms • interpret basic genetic principles • interpret basice	Course teacher Associate teachers Status of the course Course objectives Course enrolment requirements and entry competences required for the course Learning outcomes expected at the level of the course (4 to 10 learning outcomes)	Prof. Jasna Puizi	na. PhD		uuy	1									
Associate teachers       Type of instruction (number of hours)       L       S       E       F         Status of the course       Elective       Percentage of application of e- learning       10%       10         Course objectives       Introducing students to the relationships of living and non-living nature. Understanding the basic principles of cell biology. Mastering the basics of genetics and ecological relationships between organisms.       None.         Course objectives       After successfully passing the course, students will be able to: - Recognize the importance of living organisms in relation to the environment - Master basic knowledge of cell biology and evolution of organisms - interpret basic genetic principles - interpret have genetic principles - interpret how environmental changes affect ecosystem changes         Course content by weekly class schedule (syllabus)       - Living and non-living nature (3 + 1 h). - Membrane and transports across membrane, nucleus, nucleus DNA, RNA, Central dogma of molecular biology. - (3 + 1h). - Endoplasmic reticulum, Golgi apparatus, lysosomes (3 + 1h). - Mitochondria - respiration, chloroplasts - photosynthesis, peroxisomes (3 + 1h). - Mitochondria - respiration, chloroplast - photosynthesis, peroxisomes (3 + 1h). - Endoplasmic reticulum, Golgi apparatus, lysosomes (3 + 1h). - Ecological concepts and relations of organisms in biocenoses (3 + 1h). - Ecological concepts and relations of organisms in biocenoses (3 + 1h). - Edoplasmic retignation, chloroplast - photosynthesis, peroxisomes (3 + 1h). - Embryonic development, genetic regulation, model of operon, differentiation in plants and animals (3 + 1h). - Edolgical concepts and relations of organisms in biocenoses (3 + 1h). - Edolgical concepts and relations of	Associate teachers Status of the course Course objectives Course enrolment requirements and entry competences required for the course Learning outcomes expected at the level of the course (4 to 10 learning outcomes)			Credits (E	ECTS)	3									
Associate teachers       Image of hours)       30       15         Status of the course       Elective       Percentage of application of elearning       10%         Status of the course       Introducing students to the relationships of living and non-living nature. Understanding the basic principles of cell biology. Mastering the basics of genetics and ecological relationships of living and non-living nature. Understanding the basic principles of cell biology. Mastering the basics of genetics and ecological relationships of the course and ecological relationships of living organisms in relation to the environment         Course enrolment requirements and entry competences required for the course (4 to 10       After successfully passing the course, students will be able to:         Recognize the importance of living organisms in relation to the environment expected at the level of the course (4 to 10       Naster basic knowledge of cell biology and evolution of organisms interpret how environmental changes affect ecosystem changes         Course content broken down in details       Utiving and non-living nature (3 + 1 h).         Prokaryotes, eukaryotes, plant-animal relationships (3 + 1h).       Edoplasmic reticulum, Golgi apaparatus, lysosomes (3 + 1h).         Mitchohoria - respiration, chloroplasts - photosynthesis, peroxisomes (3 + 1h).       Embryonic development, genetic regulation, model of operon, differentiation in plants and animals (3 + 1h).         Course content broken down in details       Mitchohoria - respiration, chloroplasts - photosynthesis, peroxisomes (3 + 1h).         Stended (syllabus)       Eledoplasm	Associate teachers Status of the course Course objectives Course enrolment requirements and entry competences required for the course Learning outcomes expected at the level of the course (4 to 10 learning outcomes)			Type of i	Type of instruction		S	Е	F						
Status of the course         Elective         Percentage of application of e- learning         10%           COURSE DESCRIPTION         Introducing students to the relationships of living and non-living nature. Understanding the basic principles of cell biology. Mastering the basics of genetics and ecological relationships between organisms.           Course enrolment requirements and curty competences required for the course         After successfully passing the course, students will be able to: • Recognize the importance of living organisms in relation to the environment • None.           Learning outcomes of the course (4 to 10)         After successfully passing the course, students will be able to: • Recognize the importance of living organisms in relation to the environment • Naster basic knowledge of cell biology and evolution of organisms • Interpret basic genetic principles • interpret how environmental changes affect ecosystem changes • interpret into environment (3 + 1 h). • Edoloplasmic reticulum, Golgi apparatus, lysosomes (3 + 1 h). • Embryo	Status of the course Course objectives Course enrolment requirements and entry competences required for the course Learning outcomes expected at the level of the course (4 to 10 learning outcomes)			(number of	(number of hours)			15							
Status of the course       Interver       application of e- learning         Course objectives       Introducing students to the relationships of living and non-living nature. Understanding the basic principles of cell biology. Mastering the basics of genetics and ecological relationships between organisms.         Course objectives       Introducing students to the relationships of living and non-living nature. Understanding the basic principles of cell biology. Mastering the basics of genetics and ecological relationships between organisms.         Course content requirements and entry competences required for the course       After successfully passing the course, students will be able to: • Recognize the importance of living organisms in relation to the environment • Master basic knowledge of cell biology and evolution of organisms • Interpret how environmental changes affect ecosystem changes         Course content broken down in detail by weekly class schedule (syllabus)       • Living and non-living nature (3 + 1 h). • Prokaryotes, eukaryotes, plant-animal relationships (3 + 1h). • Mitochondria - respiration, chloroplasts - photosynthesis, peroxisomes (3 + 1h). • Mitochondria - respiration, chloroplasts - photosynthesis, peroxisomes (3 + 1h). • Cell cycle, mitosis, meiosis (spermatogenesis, oogenesis), fertilization (3 + 1h). • Endoplasmic reticulum, Golgi apparatus, lysosomes (3 + 1h). • Endoplasmic reticulum, Golgi apparatus, lysosomes (3 + 1h). • Endoplasmic reticulum, Golgi apparatus, lysosomes (3 + 1h). • Endoplogical concepts and relations of organisms in biocenoses (3 + 1h). • Endoplogical concepts and relations of organisms in biocenoses (3 + 1h). • Ecological concepts and relations of organisms in biocenoses (3 + 1h). • Ecological concepts and relations of organisms in biocenoses (3 + 1h). • Ecological concept	Status of the course Course objectives Course enrolment requirements and entry competences required for the course Learning outcomes expected at the level of the course (4 to 10 learning outcomes)	Elective		Percentao	e of	10%	10%								
Course objectives         Introducing students to the relationships of living and non-living nature. Understanding the basics principles of cell biology. Mastering the basics of genetics and ecological relationships between organisms.           Course enrolment requirements and entry competences expected at the level of the course (4 to 10 learning outcomes)         After successfully passing the course, students will be able to:	Course objectives Course enrolment requirements and entry competences required for the course Learning outcomes expected at the level of the course (4 to 10 learning outcomes)	Licenve		applicatio	n of e-	1070									
COURSE DESCRIPTION           Course objectives         Introducing students to the relationships of living and non-living nature. Understanding the basic principles of cell biology. Mastering the basics of genetics and ecological relationships between organisms.           Course enrolment requirements and expected at the level of the course (4 to 10) learning outcomes         None.           Production of the course (4 to 10) learning outcomes         • Recognize the importance of living organisms in relation to the environment entry competences           None         • Recognize the importance of living organisms in relation to the environment entry competences           • After successfully passing the course, students will be able to:         • Recognize the importance of living organisms in relation to the environment entry competences           • Recognize the importance of living nature (3 + 1 h).         • Neaster basic knowledge of cell biology.           • Living and non-living nature (3 + 1 h).         • Prokaryotes, eukaryotes, plant-animal relationships (3 + 1h).           • Drokaryotes, eukaryotes, plant-animal relationships (3 + 1h).         • Mitochondria - respiration, chloroplasts - photosynthesis, peroxisomes (3 + 1h).           • Coll cycle, mitosis, meiosis (spermatogenesis, ogenesis), fertilization (3 + 1h).         • Ecological concepts and relations of organisms in biocenoses (3 + 1h).           • Coll cycle, mitosis, meiosis of organisms in biocenoses (3 + 1h).         • Ecological concepts and relations of organisms in biocenoses (3 + 1h).           • Ecological concepts and relations of organis	Course objectives Course enrolment requirements and entry competences required for the course Learning outcomes expected at the level of the course (4 to 10 learning outcomes)			learning											
Course objectives         Introducing students to the relationships of living and non-living nature. Understanding the basic principles of cell biology. Mastering the basics of genetics and ecological relationships between organisms.           Course enrolment requirements and entry competences required for the course         None.           Learning outcomes expected at the level of the course (4 to 10) learning outcomes)         After successfully passing the course, students will be able to: <ul> <li>Recognize the importance of living organisms in relation to the environment</li> <li>Master basic knowledge of cell biology and evolution of organisms</li> <li>Interpret basic genetic principles</li> <li>interpret how environmental changes affect ecosystem changes</li> <li>Living and non-living nature (3 + 1 h).</li> <li>Protaryotes, eukaryotes, plant-animal relationships (3 + 1h).</li> <li>Membrane and transports across membrane, nucleus, nucleus DNA, RNA, Central dogma of molecular biology.</li> <li>(3 + 1h).</li> <li>Endoplasmic reticulum, Golgi apparatus, lysosomes (3 + 1h).</li> <li>Mitochondria - respiration, chloroplasts - photosynthesis, peroxisomes (3 + 1h).</li> <li>Cle cycle, mitosis, meiosis (spermatogenesis, ogenesis), fertilization (3 + 1h).</li> <li>Esclogical concepts and relations of organisms in biocenoses (3 + 1h).</li> <li>Aging and death, viruses (HIV), tumors (3 + 1h).</li> <li>Basics of inheritance, Mendel's laws, mutations (3 + 1h).</li> <li>Aging and death, viruses (HIV), tumors (3 + 1h).</li> <li>Ecological concepts and relations of organisms in biocenoses (3 + 1h).</li> <li>Baboratory</li></ul>	Course objectives Course enrolment requirements and entry competences required for the course Learning outcomes expected at the level of the course (4 to 10 learning outcomes)	COURSE DESCRIPTION													
Course objectives       basic principles of cell biology. Mastering the basics of genetics and ecological relationships between organisms.         Course enrolment required for the course and entry competences required for the course       None.         Learning outcomes expected at the level       After successfully passing the course, students will be able to: <ul> <li>Recognize the importance of living organisms in relation to the environment</li> <li>Master basic knowledge of cell biology and evolution of organisms</li> <li>Interpret basic genetic principles</li> <li>interpret how environmental changes affect ecosystem changes</li> <li>Living and non-living nature (3 + 1 h).</li> <li>Prokaryotes, cukaryotes, plant-animal relationships (3 + 1h).</li> <li>Membrane and transports across membrane, nucleus, nucleus DNA, RNA, Central dogma of molecular biology.</li> <li>(3 + 1h).</li> <li>Endoplasmic reticulum, Golgi apparatus, lysosomes (3 + 1h).</li> <li>Cell cycle, mitosis, meiosis (spermatogenesis, oegenesis), fertilization (3 + 1h).</li> <li>Embryonic development, genetic regulation, model of operon, differentiation in plants and animals (3 + 1h).</li> <li>Aging and death, viruses (HIV), tumors (3 + 1h).</li> <li>Basics of inheritance, Mendel's laws, mutations (3 + 1h).</li> <li>Ecological concepts and relations of organisms in biocenoses (3 + 1h).</li> <li>Basics of inheritance, Mendel's laws, mutations (3 + 1h).</li> <li>Basics of inheritance, Mendel's laws, mutations (3 + 1h).</li> <li>Ecological concepts and relations of organisms in biocenoses (3 + 1h).</li> <li>Ecological concepts and relations of organisms in multimedia</li> <li>exercises</li> <li>on line in entirety</li> <li>partial e-learning</li> <li>finde work</li> <li>(other)</li> <li>Studen</li></ul>	Course objectives Course enrolment requirements and entry competences required for the course Learning outcomes expected at the level of the course (4 to 10 learning outcomes)	Introducing students to the relationships of living and non-living nature. Understanding the													
Detween organisms.           Course enrolment requirements and entry competences required for the course         None.           Learning outcomes expected at the level of the course (4 to 10)         After successfully passing the course, students will be able to: • Recognize the importance of living organisms in relation to the environment • Master basic knowledge of cell biology and evolution of organisms • Interpret basic genetic principles • interpret basic genetic principles • interpret how environmental changes affect ecosystem changes           Course content broken down in detai by weekly class schedule (syllabus)         • Living and non-living nature (3 + 1 h). • Prokaryotes, eukaryotes, plant-animal relationships (3 + 1h). • Mitochondria - respiration, chloroplasts - photosynthesis, peroxisomes (3 + 1h). • Endoplasmic reticulum, Golgi apparatus, lysosomes (3 + 1h). • Mitochondria - respiration, chloroplasts - photosynthesis, peroxisomes (3 + 1h). • Cell cycle, mitosis, meiosis (spermatogenesis), ogenesis), fertilization (3 + 1h). • Basics of inheritance, Mendel's laws, mutations (3 + 1h). • Basics of inheritance, Mendel's laws, mutations (3 + 1h). • Ecological concepts and relations of organisms in biocenoses (3 + 1h). • Ecological concepts and relations of organisms in biocenoses (3 + 1h). • Ecological concepts and relations of organisms in biocenoses (3 + 1h). • Ecological elearning	Course enrolment requirements and entry competences required for the course Learning outcomes expected at the level of the course (4 to 10 learning outcomes)	basic principles of cell biology. Mastering the basics of genetics and ecological relationships													
Course content       After successfully passing the course, students will be able to:         Learning outcomes       After successfully passing the course, students will be able to:         Recognize the importance of living organisms in relation to the environment         Master basic knowledge of cell biology and evolution of organisms         I herrore to a sing outcomes         expected at the level of the course (4 to 10)         I herrore to assic knowledge of cell biology and evolution of organisms         I herrore to assic knowledge of cell biology and evolution of organisms         I herrore to assic knowledge of cell biology and evolution of organisms         I herrore to assic knowledge of cell biology and evolution of organisms         I herrore to assic knowledge of cell biology and evolution of organisms         I Living and non-living nature (3 + 1 h).         Prokaryotes, eukaryotes, plant-animal relationships (3 + 1h).         Membrane and transports across membrane, nucleus, nucleus DNA, RNA, Central dogma of molecular biology.         (3 + 1h).         Endoplasmic reticulum, Golgi apparatus, lysosomes (3 + 1h).         Mitochondria - respiration, chloroplasts - photosynthesis, peroxisomes (3 + 1h).         Embryonic development, genetic regulation, model of operon, differentiation in plants and animals (3 + 1h).         Aging and death, viruses (HIV), tumors (3 + 1h).         Basics of inheritance, Mendel's laws, mutations (3 + 1h).	requirements and entry competences required for the course Learning outcomes expected at the level of the course (4 to 10 learning outcomes)	between organisms.													
entry competences       required for the course         course       After successfully passing the course, students will be able to:         Learning outcomes       •Recognize the importance of living organisms in relation to the environment         expected at the level of the course (4 to 10)       •Interpret basic genetic principles         interpret basic genetic principles       •Interpret basic genetic principles         interpret dasic genetic principles       •Interpret basic genetic principles         is addition of molecular biology.       •(3 + 1h).	entry competences required for the course Learning outcomes expected at the level of the course (4 to 10 learning outcomes)	ivone.													
required for the course       After successfully passing the course, students will be able to:         Learning outcomes expected at the level of the course (4 to 10] learning outcomes)       After successfully passing the course, students will be able to:         · Recognize the importance of living organisms in relation to the environment       · Recognize the importance of living organisms in relation to the environment         · Master basic knowledge of cell biology and evolution of organisms       · Interpret basic genetic principles         · Interpret how environmental changes affect ecosystem changes       · Living and non-living nature (3 + 1 h).         · Prokaryotes, eukaryotes, plant-animal relationships (3 + 1h).       · Membrane and transports across membrane, nucleus, nucleus DNA, RNA, Central dogma of molecular biology.         · (3 + 1h).       · Endoplasmic reticulum, Golgi apparatus, lysosomes (3 + 1h).         · Mitochondria - respiration, chloroplasts - photosynthesis, peroxisomes (3 + 1h).         · Cell cycle, mitosis, meiosis (spermatogenesis, oogenesis), fertilization (3 + 1h).         · Embryonic development, genetic regulation, model of operon, differentiation in plants and animals (3 + 1h).         · Aging and death, viruses (HIV), tumors (3 + 1h).         · Ecological concepts and relations of organisms in bioeconeses (3 + 1h).         · Ecological concepts and relations of organisms in bioeconeses (3 + 1h).         · Ecological concepts and relations of organisms in bioeconeses (3 + 1h).         · Eledwork       independen	Learning outcomes expected at the level of the course (4 to 10 learning outcomes)														
Learning outcomes       After successfully passing the course, students will be able to:         Learning outcomes       Recognize the importance of living organisms in relation to the environment expected at the level of the course (4 to 10) learning outcomes         of the course (4 to 10) learning outcomes       After successfully passing the course, students will be able to:         Recognize the importance of living organisms in relation to the environment expected at the level of the course (4 to 10) learning outcomes       Master basic genetic principles         Interpret how environmental changes affect ecosystem changes       Interpret how environmental changes affect ecosystem changes         Course content broken down in detail       Membrane and transports across membrane, nucleus, nucleus DNA, RNA, Central dogma of molecular biology.         (3 + 1h).       Endoplasmic reticulum, Golgi apparatus, lysosomes (3 + 1h).         Mitochondria - respiration, chloroplasts - photosynthesis, peroxisomes (3 + 1h).         Mitochondria - respiration, chloroplasts - photosynthesis, peroxisomes (3 + 1h).         Cell cycle, mitosis, meiosis (spermatogenesis, oogenesis), of erilization (3 + 1h).         Embryonic development, genetic regulation, model of operon, differentiation in plants and animals (3 + 1h).         Aging and death, viruses (HIV), tumors (3 + 1h).         Basics of inheritance, Mendel's laws, mutations (3 + 1h).         Ecological concepts and relations of organisms in biocenoses (3 + 1h).         Bectures       independent assignments </td <td>Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</td> <td colspan="10"></td>	Learning outcomes expected at the level of the course (4 to 10 learning outcomes)														
Learning outcomes       • Recognize the importance of living organisms in relation to the environment         expected at the level of the course (4 to 10)       • Recognize the importance of cell biology and evolution of organisms         • Interpret basic genetic principles       • Interpret basic genetic principles         • interpret how environmental changes affect ecosystem changes         • Living and non-living nature (3 + 1 h).         • Prokaryotes, eukaryotes, plant-animal relationships (3 + 1h).         • Membrane and transports across membrane, nucleus, nucleus DNA, RNA, Central dogma of molecular biology.         • (3 + 1h).         • Endoplasmic reticulum, Golgi apparatus, lysosomes (3 + 1h).         • Mitochondria - respiration, chloroplasts - photosynthesis, peroxisomes (3 + 1h).         • Cell cycle, mitosis, meiosis (spermatogenesis, oogenesis), fertilization (3 + 1h).         • Embryonic development, genetic regulation, model of operon, differentiation in plants and animals (3 + 1h).         • Ecological concepts and relations of organisms in biocenoses (3 + 1h).         • Ecological concepts and relations of organisms in biocenoses (3 + 1h).         • Ecological concepts and relations of organisms in biocenoses (3 + 1h).         • Ecological concepts and relations of organisms in biocenoses (3 + 1h).         • Ecological concepts and relations of organisms in biocenoses (3 + 1h).         • Ecological concepts and relations of organisms in biocenoses (3 + 1h).         • Ecolo	Learning outcomes expected at the level of the course (4 to 10 learning outcomes)	After successfully passing the course, students will be able to:													
Master basic knowledge of cell biology and evolution of organisms         Interpret basic genetic principles         interpret how environmental changes affect ecosystem changes         Itripret how envices         Itri	of the course (4 to 10 learning outcomes)	• Recognize the i	mportance	of living organ	isms in relation	to the env	vironmen	t							
tearning outcomes)       • interpret oast generic principles         • interpret oast generic principles       • interpret how environmental changes affect ecosystem changes         • interpret how environmental changes affect ecosystem changes       • Living and non-living nature (3 + 1 h).         • Prokaryotes, eukaryotes, plant-animal relationships (3 + 1h).       • Prokaryotes, eukaryotes, plant-animal relationships (3 + 1h).         • Membrane and transports across membrane, nucleus, nucleus DNA, RNA, Central dogma of molecular biology.       • (3 + 1h).         • Endoplasmic reticulum, Golgi apparatus, lysosomes (3 + 1h).       • Mitochondria - respiration, chloroplasts - photosynthesis, peroxisomes (3 + 1h).         • Cell cycle, mitosis, meiosis (spermatogenesis, oogenesis), fertilization (3 + 1h).       • Cell cycle, mitosis, meiosis (spermatogenesis, oogenesis), fertilization in plants and animals (3 + 1h).         • Aging and death, viruses (HIV), tumors (3 + 1h).       • Basics of inheritance, Mendel's laws, mutations (3 + 1h).         • Ecological concepts and relations of organisms in biocenoses (3 + 1h).       • Ecological concepts and relations of organisms in biocenoses (3 + 1h).         • Basics of inheritance, Mendel's laws, mutations (3 + 1h).       • Ecological concepts and relations of organisms in biocenoses (3 + 1h).         • Basics of inheritance, Mendel's laws, mutations (3 + 1h).       • Ecological concepts and relations of organisms in biocenoses (3 + 1h).         • Con line in entirety       □ independent assignments       □ multimedia	learning outcomes)	<ul> <li>Master basic kr</li> <li>Interpret basic</li> </ul>	nowledge of	f cell biology a	nd evolution of	organisms	5								
• Living and non-living nature (3 + 1 h).         • Living and non-living nature (3 + 1 h).         • Prokaryotes, eukaryotes, plant-animal relationships (3 + 1h).         • Membrane and transports across membrane, nucleus DNA, RNA, Central dogma of molecular biology.         • (3 + 1h).         • Endoplasmic reticulum, Golgi apparatus, lysosomes (3 + 1h).         • Mitochondria - respiration, chloroplasts - photosynthesis, peroxisomes (3 + 1h).         • Cell cycle, mitosis, meiosis (spermatogenesis, oogenesis), fertilization (3 + 1h).         • Embryonic development, genetic regulation, model of operon, differentiation in plants and animals (3 + 1h).         • Aging and death, viruses (HIV), tumors (3 + 1h).         • Ecological concepts and relations of organisms in biocenoses (3 + 1h).         • Ecological concepts and relations of organisms in biocenoses (3 + 1h).         • Ecological concepts and relations of organisms in biocenoses (3 + 1h).         • Ecological concepts and relations of organisms in biocenoses (3 + 1h).         • Ecological concepts and relations of organisms in biocenoses (3 + 1h).         • Ecological concepts and relations of organisms in biocenoses (3 + 1h).         • Ecological concepts and relations of organisms in biocenoses (3 + 1h).         • Ecological concepts and relations of organisms in biocenoses (3 + 1h).         • Ecological concepts and relations of organisms in biocenoses (3 + 1h).         • Ecological concepts and relations of organisms in biocenoses (		<ul> <li>interpret basic j</li> <li>interpret how end</li> </ul>	nvironment	al changes affe	ct ecosystem ch	anges									
<ul> <li>Prokaryotes, eukaryotes, plant-animal relationships (3 + 1h).</li> <li>Membrane and transports across membrane, nucleus, nucleus DNA, RNA, Central dogma of molecular biology.         <ul> <li>(3 + 1h).</li> <li>Endoplasmic reticulum, Golgi apparatus, lysosomes (3 + 1h).</li> <li>Mitochondria - respiration, chloroplasts - photosynthesis, peroxisomes (3 + 1h).</li> <li>Cell cycle, mitosis, meiosis (spermatogenesis, oogenesis), fertilization (3 + 1h).</li> <li>Cell cycle, mitosis, meiosis (spermatogenesis, oogenesis), fertilization (3 + 1h).</li> <li>Embryonic development, genetic regulation, model of operon, differentiation in plants and animals (3 + 1h).</li> <li>Aging and death, viruses (HIV), tumors (3 + 1h).</li> <li>Basics of inheritance, Mendel's laws, mutations (3 + 1h).</li> <li>Ecological concepts and relations of organisms in biocenoses (3 + 1h).</li> <li>Ecological concepts and relations of organisms in biocenoses (3 + 1h).</li> </ul> </li> <li>Format of instruction         <ul> <li>Getures</li> <li>independent assignments</li> <li>seminars and workshops</li> <li>multimedia</li> <li>exercises</li> <li>on line in entirety</li> <li>partial e-learning</li> <li>work with mentor</li> <li>field work</li> <li>(other)</li> </ul> </li> <li>Student responsibilities         <ul> <li>Students should attend all exercises and at least 70% of lecture hours. They should have a notebook, work coat, drawing utensils and all laboratory exercises must be recorded in a notebook. They need to pass 2 written colloquia or one written exam.</li> </ul> </li> </ul>		Living and r	on-living n	$\frac{c}{ature (3 + 1 h)}$		0									
• Membrane and transports across membrane, nucleus, nucleus DNA, RNA, Central dogma of molecular biology.         • (3 + 1h).         • Endoplasmic reticulum, Golgi apparatus, lysosomes (3 + 1h).         • Mitochondria - respiration, chloroplasts - photosynthesis, peroxisomes (3 + 1h).         • Cell cycle, mitosis, meiosis (spermatogenesis, oogenesis), fertilization (3 + 1h).         • Cell cycle, mitosis, meiosis (spermatogenesis, oogenesis), fertilization in plants and animals (3 + 1h).         • Aging and death, viruses (HIV), tumors (3 + 1h).         • Basics of inheritance, Mendel's laws, mutations (3 + 1h).         • Ecological concepts and relations of organisms in biocenoses (3 + 1h).         • Bectures       independent assignments         • on line in entirety       indepratory         • partial e-learning       work with mentor         • field work       (other)         Student responsibilities       Students should attend all exercises and at least 70% of lecture hours. They should have a notebook, work coat, drawing utensils and all laboratory exercises must be recorded in a notebook. They need to pass 2 written colloquia or one written exam.		• Prokaryotes,	eukaryotes	s, plant-animal	relationships (3	+ 1h).									
Course content       is (3 + 1h).         broken down in detail       by weekly class         schedule (syllabus)       Mitochondria - respiration, chloroplasts - photosynthesis, peroxisomes (3 + 1h).         Cell cycle, mitosis, meiosis (spermatogenesis, oogenesis), fertilization (3 + 1h).         Cell cycle, mitosis, meiosis (spermatogenesis, oogenesis), fertilization (3 + 1h).         Embryonic development, genetic regulation, model of operon, differentiation in plants and animals (3 + 1h).         Aging and death, viruses (HIV), tumors (3 + 1h).         Basics of inheritance, Mendel's laws, mutations (3 + 1h).         Ecological concepts and relations of organisms in biocenoses (3 + 1h).         Ecological concepts and relations of organisms in biocenoses (3 + 1h).         Ecological concepts and relations of organisms in biocenoses (3 + 1h).         Ecological concepts and relations of organisms in biocenoses (3 + 1h).         Ecological concepts and relations of organisms in biocenoses (3 + 1h).         Ecological concepts and relations of organisms in biocenoses (3 + 1h).         Ecological concepts and relations of organisms in biocenoses (3 + 1h).         Ecological concepts and relations of organisms in biocenoses (3 + 1h).         Ecological concepts and relations of organisms in biocenoses (3 + 1h).         Electures       Independent assignments         Induction       Work with mentor         Inductory       Inductotenos		• Membrane a	nd transpor	ts across mem	orane, nucleus,	nucleus D	NA, RNA	A, Centra	ıl						
Course content broken down in detail by weekly class schedule (syllabus)       • Endoplasmic reticulum, Golgi apparatus, lysosomes (3 + 1h).         • Endoplasmic reticulum, Golgi apparatus, lysosomes (3 + 1h).       • Mitochondria - respiration, chloroplasts - photosynthesis, peroxisomes (3 + 1h).         • Cell cycle, mitosis, meiosis (spermatogenesis, oogenesis), fertilization (3 + 1h).       • Embryonic development, genetic regulation, model of operon, differentiation in plants and animals (3 + 1h).         • Aging and death, viruses (HIV), tumors (3 + 1h).       • Basics of inheritance, Mendel's laws, mutations (3 + 1h).         • Ecological concepts and relations of organisms in biocenoses (3 + 1h).       • Ecological concepts and relations of organisms in biocenoses (3 + 1h).         • Ecological concepts and relations of organisms in biocenoses (3 + 1h).       • Ecological concepts and relations of organisms in biocenoses (3 + 1h).         • Ecological concepts and relations of organisms in biocenoses (3 + 1h).       • Ecological concepts and relations of organisms in biocenoses (3 + 1h).         • Ecological concepts and relations of organisms in biocenoses (3 + 1h).       • Ecological concepts and relations of organisms in biocenoses (3 + 1h).         • Ecological concepts and workshops       □ independent assignments       □ multimedia         □ seminars and workshops       □ laboratory       □ work with mentor         □ field work       □ (other)       Students should attend all exercises and at least 70% of lecture hours. They should have a notebook, work coat, drawing utensils and all lab		dogma of models (3 + 1h)	olecular bio	ology.											
broken down in detail       • Mitochondria - respiration, chloroplasts - photosynthesis, peroxisomes (3 + 1h).         • Cell cycle, mitosis, meiosis (spermatogenesis, oogenesis), fertilization (3 + 1h).         • Embryonic development, genetic regulation, model of operon, differentiation in plants and animals (3 + 1h).         • Aging and death, viruses (HIV), tumors (3 + 1h).         • Basics of inheritance, Mendel's laws, mutations (3 + 1h).         • Ecological concepts and relations of organisms in biocenoses (3 + 1h).         • Ecological concepts and relations of organisms in biocenoses (3 + 1h).         • Bectures       independent assignments         • seminars and workshops       multimedia         © exercises       work with mentor         • field work       (other)         Student responsibilities       Students should attend all exercises and at least 70% of lecture hours. They should have a notebook. They need to pass 2 written colloquia or one written exam.	Course content	<ul> <li>Endoplasmic</li> </ul>	c reticulum,	Golgi apparat	us, lysosomes (3	3 + 1h).									
<ul> <li>Cell cycle, mitosis, meiosis (spermatogenesis, oogenesis), fertilization (3 + 1h).</li> <li>Embryonic development, genetic regulation, model of operon, differentiation in plants and animals (3 + 1h).</li> <li>Aging and death, viruses (HIV), tumors (3 + 1h).</li> <li>Basics of inheritance, Mendel's laws, mutations (3 + 1h).</li> <li>Ecological concepts and relations of organisms in biocenoses (3 + 1h).</li> <li>Ecological concepts and relations of organisms in biocenoses (3 + 1h).</li> <li>Ecological concepts and relations of organisms in biocenoses (3 + 1h).</li> <li>Ecological concepts and relations of organisms in biocenoses (3 + 1h).</li> <li>Ecological concepts and relations of organisms in biocenoses (3 + 1h).</li> <li>Ecological concepts and relations of organisms in biocenoses (3 + 1h).</li> <li>Ecological concepts and relations of organisms in biocenoses (3 + 1h).</li> <li>Ecological concepts and relations of organisms in biocenoses (3 + 1h).</li> <li>Ecological concepts and relations of organisms in biocenoses (3 + 1h).</li> <li>Ecological concepts and relations of organisms in biocenoses (3 + 1h).</li> <li>Ecological concepts and relations of organisms in biocenoses (3 + 1h).</li> <li>Ecological concepts and relations of organisms in biocenoses (3 + 1h).</li> <li>Ecological concepts and relations of organisms in biocenoses (3 + 1h).</li> <li>Ecological concepts and relations of organisms in biocenoses (3 + 1h).</li> <li>Ecological concepts and relations of organisms in biocenoses (3 + 1h).</li> <li>Ecological concepts and relations of organisms in biocenoses (3 + 1h).</li> <li>Ecological concepts and relations of organisms in biocenoses (3 + 1h).</li> <li>Ecological concepts and workshops</li> <li>Entremative organisms in biocenoses (3 + 1h).</li> <li>Student responsibilities</li> <li>Students should attend all exercises and at least 70% of lecture hours. They should have a notebook. They need</li></ul>	broken down in detail	• Mitochondri	a - respirati	on, chloroplas	s - photosynthe	sis, peroxi	isomes (3	+ 1h).							
<ul> <li>Embryonic development, genetic regulation, model of operon, differentiation in plants and animals (3 + 1h).</li> <li>Aging and death, viruses (HIV), tumors (3 + 1h).</li> <li>Basics of inheritance, Mendel's laws, mutations (3 + 1h).</li> <li>Ecological concepts and relations of organisms in biocenoses (3 + 1h).</li> <li>Ecological concepts and relations of organisms in biocenoses (3 + 1h).</li> <li>Ecological concepts and relations of organisms in biocenoses (3 + 1h).</li> <li>Ecological concepts and relations of organisms in biocenoses (3 + 1h).</li> <li>Ecological concepts and relations of organisms in biocenoses (3 + 1h).</li> <li>Ecological concepts and relations of organisms in biocenoses (3 + 1h).</li> <li>Ecological concepts and relations of organisms in biocenoses (3 + 1h).</li> <li>Ecological concepts and relations of organisms in biocenoses (3 + 1h).</li> <li>Ecological concepts and relations of organisms in biocenoses (3 + 1h).</li> <li>Ecological concepts and relations of organisms in biocenoses (3 + 1h).</li> <li>Ecological concepts and relations of organisms in biocenoses (3 + 1h).</li> <li>Ecological concepts and relations of organisms in biocenoses (3 + 1h).</li> <li>Ecological concepts and relations of organisms in biocenoses (3 + 1h).</li> <li>Ecological concepts and relations of organisms in biocenoses (3 + 1h).</li> <li>Ecological concepts and relations of organisms in biocenoses (3 + 1h).</li> <li>Independent assignments</li> <li>multimedia</li> <li>work with mentor</li> <li>multimedia</li> <li>work with mentor</li> <li>motebook, work coat, drawing utensils and all laboratory exercises must be recorded in a notebook. They need to pass 2 written colloquia or one written exam.</li> <li>Class</li> </ul>	schedule (svllabus)	• Cell cycle, mitosis, meiosis (spermatogenesis, oogenesis), fertilization (3 + 1h).													
Aging and death, viruses (HIV), tumors (3 + 1h).         Basics of inheritance, Mendel's laws, mutations (3 + 1h).         Ecological concepts and relations of organisms in biocenoses (3 + 1h).         Ecological concepts and relations of organisms in biocenoses (3 + 1h).         Ecological concepts and relations of organisms in biocenoses (3 + 1h).         Ecological concepts and relations of organisms in biocenoses (3 + 1h).         Ecological concepts and relations of organisms in biocenoses (3 + 1h).         Ecological concepts and relations of organisms in biocenoses (3 + 1h).         Ecological concepts and relations of organisms in biocenoses (3 + 1h).         Ecological concepts and relations of organisms in biocenoses (3 + 1h).         Ecological concepts and relations of organisms in biocenoses (3 + 1h).         Ecological concepts and relations of organisms in biocenoses (3 + 1h).         Ecological concepts and relations of organisms in biocenoses (3 + 1h).         Ecological concepts and relations of organisms in biocenoses (3 + 1h).         Ecological concepts and relations of organisms in biocenoses (3 + 1h).         Ecological concepts and workshops         Eseminars and workshops       Induction         Ecological concepts and workshops       Induction         Ecological concepts and workshops       Induction         Ecological concepts and workshops       Induction         Econcepts and telearning       Induc		• Embryonic development, genetic regulation, model of operon, differentiation in plants													
<ul> <li>Basics of inheritance, Mendel's laws, mutations (3 + 1h).</li> <li>Ecological concepts and relations of organisms in biocenoses (3 + 1h).</li> <li>Ecological concepts and relations of organisms in biocenoses (3 + 1h).</li> <li>Independent assignments</li> <li>Independent assign</li></ul>		<ul> <li>and animals (3 + 1h).</li> <li>Aging and death viruses (HIV) tumors (3 + 1h)</li> </ul>													
<ul> <li>Ecological concepts and relations of organisms in biocenoses (3 + 1h).</li> <li>Bectures</li> <li>Independent assignments</li> <li>Independent asteast</li> <li>Independent assignments</li> <li>Indepen</li></ul>		<ul> <li>Basics of inheritance, Mendel's laws, mutations (3 + 1h).</li> </ul>													
Format of instruction       Image: lectures independent assignments independent assignmentaspecter independent assignments independent		• Ecological concepts and relations of organisms in biocenoses (3 + 1h).													
Format of instruction       seminars and workshops       multimedia         Student responsibilities       on line in entirety       work with mentor         Student responsibilities       Students should attend all exercises and at least 70% of lecture hours. They should have a notebook, work coat, drawing utensils and all laboratory exercises must be recorded in a notebook. They need to pass 2 written colloquia or one written exam.         Class       0.5       Practical	Format of instruction	⊠ lectures			□ independer	dent assignments									
Format of instruction       Image: exercises in the		$\Box$ seminars and $\nabla$	workshops		□ multimedia	nultimedia									
Student responsibilities       Students should attend all exercises and at least 70% of lecture hours. They should have a notebook, work coat, drawing utensils and all laboratory exercises must be recorded in a notebook. They need to pass 2 written colloquia or one written exam.         Class       0.5       Practical		$\boxtimes$ exercises	rotu		⊠ laboratory	1									
Student responsibilities       G field work       G (other)         Student responsibilities       Students should attend all exercises and at least 70% of lecture hours. They should have a notebook, work coat, drawing utensils and all laboratory exercises must be recorded in a notebook. They need to pass 2 written colloquia or one written exam.         Class       0.5       D       Practical		$\Box$ partial e-learn	ing		$\Box$ work with	mentor									
Student responsibilities       Students should attend all exercises and at least 70% of lecture hours. They should have a notebook, work coat, drawing utensils and all laboratory exercises must be recorded in a notebook. They need to pass 2 written colloquia or one written exam.         Class       0.5       Practical		$\Box$ field work	ing		□ (oth	ler)									
Student responsibilities       notebook, work coat, drawing utensils and all laboratory exercises must be recorded in a notebook. They need to pass 2 written colloquia or one written exam.         Class       0.5       Practical	Student	Students should attend all exercises and at least 70% of lecture hours. They should have a													
Class     O.5     D.1     Practical	Student	notebook, work coat, drawing utensils and all laboratory exercises must be recorded in a													
Class Q 7 P 1 Practical	responsionnues	notebook. They need to pass 2 written colloquia or one written exam.													
Screening student U.S. Research	Screening student	Class	0.5	Research		Practica	1								
work (name the	work (name the proportion of ECTS credits for each activity so that the total number of ECTS	attendance	0.5	Researen		training									
proportion of ECTS Experimental work 1 Report (Other)		Experimental	1	Report		(	Other)								
activity so that the Seminar		WUIK		Seminar											
total number of ECTS Essay (Other)		Essay		essay		()	Other)								
credits is equal to the Tests Oral oxam (Other)	credits is equal to the			*	İ	(	Othor)								

<i>ECTS value of the course)</i>	Written exam	1.5	Project		(Other	.)					
Grading and evaluating student work in class and at the final exam	Max.100 points = 70 points (lectures) + 30 points (exercises) 90% - 100% grade 5 (excellent) 78% - 89% grade 4 (very good) 66% - 77% grade 3 (good) 55% - 65% grade 2 (sufficient) < 55% grade 1 (insufficient).										
		]	Number of copies in the library	Availability via other media							
Required literature (available in the library and via other media)	1. Cooper, G.M., molekularni prist Zagreb 2010. (Th	Hausman, tup. Peto iz ne Cell – A	A few								
	2. Puizina J. 202	0: General	biology – teach	ng materials.		Yes, E- learning, Microsoft Teams					
Optional literature (at the time of submission of study programme proposal)	A.Delić i N. Vijt	iuk, Prirod	oslovlje, Školsk	a knjiga, Zagre	b, 2004.(in Croa	itian)					
Quality assurance methods that ensure the acquisition of exit competences	The quality of teaching will be monitored by collecting feedback from students through consultation, discussion and questions asked during classes. At the end of the semester, subject and teacher evaluation will be conducted through an anonymous student survey. Students' performance on the exam will be analyzed and used for the purpose of improvement quality in the next academic year.										
Other (as the proposer wishes to add)											