

2017-2018 ACADEMIC YEAR LIST OF COURSES AT FACULTY OF FISHERIES

COURSES LIST of “BACHELOR of SCIENCE” DEGREE							
Course Code	Credits	Course Title	Winter Semester	Spring Semester	General Contents	Contact Details of Lecturer	Department
ESÜM 113	4	MS OFFICE APPLICATIONS IN COMPUTERS	X	X	Theoretical knowledge and practical trainings will be given on; -Computer operating systems and MS Office programs (Word, Power point and Excel).	Assist. Prof. Osman Kadir TOPUZ E-mail: oktopuz@akdeniz.edu.tr Tel: +9 0 242 310 60 19	Faculty of Fisheries, Department of Seafood Processing Technology
ESÜM 101	4	BASIC LABORATORY TECHNIQUES AND SAFETY PRINCIPLES	X	X	The objective of this course is to give information about basic laboratory techniques and safety principles to increase laboratory experience of students. Information about laboratory equipments, safety of laboratory, designing of laboratory rooms, rules for laboratory safety, risk assessment in laboratory, rules for chemical storage in laboratory, laboratory cleaning procedures, preparation of chemical solution, dilution, concentration, molarities, normality, extraction and evaporation, chemical, microbial, physical and basic analysis	Assist. Prof. Osman Kadir TOPUZ E-mail: oktopuz@akdeniz.edu.tr Tel: +9 0 242 310 60 19	Faculty of Fisheries, Department of Seafood Processing Technology
ESÜM 102	4	FOOD CHEMISTRY AND NUTRITION	X	X	Basic informations about food chemical composition, proteins, amino acids, peptides, enzymes, waters in foods, water activity, fat and lipid properties, omega-3 sources and importance of omega-3 fatty acids for human health, carbohydrates, monosaccharids, disaccharids, oligosaccharides, fibrous foods, prebiotics, vitamins, lipidsoluble and aquasoluble vitamins, mineral compound sources and importance of mineral compounds for human health, digestion of foods, calculation of food calories, sport nutrition, infant and elderly nutrition. <u>Assessment:</u> Includes practical and project works.	Assist. Prof. Osman Kadir TOPUZ E-mail: oktopuz@akdeniz.edu.tr Tel: +9 0 242 310 60 19	Faculty of Fisheries, Department of Seafood Processing Technology

ESÜM 108	3+2	GENERAL MICROBIOLOGY	X	X	<p>In theoretical course; students learn of history and classification of all microorganism, morphology and anatomy of bacteria, pigments of bacteria, chemical structure of bacteria, feeding of bacteria, enzymes in bacteria, reproduction of bacteria, anaerobiosis, together living in bacteria, microbial energy metabolism, factors affecting reproduction, effect of chemical factors, effect of chemotrophs, effect of disinfectants, metabolism regulation, control of enzyme synthesis, variations in bacteria, bacterial genetics, transportation of genetic material in bacteria, extrachromosomal genetically elements in bacteria.</p> <p>Subjects in the practices;</p> <ul style="list-style-type: none"> -isolation and identification of bacteria -culturing bacteria and media -staining methods -respiration experiments -physiological experiments -biochemical experiments - antibiogram tests <p><u>Assessment:</u> Includes practical and project works.</p>	<p>Assoc. Prof. Dr. İ. Tülay ÇAĞATAY</p> <p>E-mail: tulaycagatay@akdeniz.edu.tr</p> <p>Tel: +9 0 242 310 6089</p>	<p>Faculty of Fisheries,</p> <p>Department of Basic Aquatic Sciences</p>
ESÜM 109	3	AQUATIC MICROBIOLOGY	X	X	<p>In this course; students learn of the vital role of aquatic prokaryotic, eukaryotic microorganisms and viruses with particular emphasis on marine and fresh water habitats. They will explore the dynamic interactions that take place between microbial communities (deep, surface and thermal), the diversity of aquatic microorganisms and their adaptations, nutrient cycles, oligotrophy, identification methods in aquatic microbiology will be learned.</p> <p><u>Assessment:</u> Includes practical and project works.</p>	<p>Assoc. Prof. Dr. İ. Tülay ÇAĞATAY</p> <p>E-mail: tulaycagatay@akdeniz.edu.tr</p> <p>Tel: +9 0 242 310 6089</p>	<p>Faculty of Fisheries,</p> <p>Department of Basic Aquatic Sciences</p>
ESÜM 114	2	AQUATIC MICROBIOLOGY LABORATORY	X	X	<p>The practical course; trains students in practice in methods used in aquatic microbiological research. By the end of the course, students are familiar with many techniques such as; filtration and quantification of microbial biomass, isolation, cultivation and identification of aquatic microorganisms with aerobic and anaerobic techniques, Prokaryotic and Eukaryotic microbiology groups, Phototrophic microorganisms, viruses.</p>	<p>Assoc. Prof. Dr. İ. Tülay ÇAĞATAY</p> <p>E-mail: tulaycagatay@akdeniz.edu.tr</p> <p>Tel: +9 0 242 310 6089</p>	<p>Faculty of Fisheries,</p> <p>Department of Basic Aquatic Sciences</p>

ESÜM 110	3+2	BLUE BIOTECHNOLOGY	X	X	<p>In this course students will learn and understand new knowledge of recent application of the science and technology in aquatic micro and macro organisms and their life habitat, genetic selection and bioengineering and their products that benefit us such as novel therapeutics, biofuels and pharmaceuticals.</p> <p>Course subjects are:</p> <ul style="list-style-type: none"> -History of aquatic biotechnology research -Introduction of major areas of aquatic biotechnology -Algae: Biofuels, food, cosmetic products -Macro and microorganisms as sources of antibiotics and pharmaceuticals -Bioremediation and biolicing -Bioluminescence and aquatic biosensors (aquatic green fluorescent proteins) -Proteomics and genomics studies in aquatic biotechnology <p><u>Assessment:</u> Includes practical and project works.</p>	<p>Assoc. Prof. Dr. İ. Tülay ÇAĞATAY</p> <p>E-mail: tulaycagatay@akdeniz.edu.tr Tel: +9 0 242 310 6089</p>	<p>Faculty of Fisheries, Department of Basic Aquatic Sciences</p>
ESÜM 111	3	BACTERIAL DIVERSITY IN MARINE ECOSYSTEM	X	X	<p>In this course, students learn general properties, morphology and phylogeny of marine bacteria, bacterial interactions with their biological and physico-chemical environment in marine, bacterial diversity in marine ecosystems. They will also learn identification of marine bacteriology, culturable and unculturable marine microbes and their genetic diversity, special bacterial groups in extreme habitats, halophiles, thermophiles, volcanic marine bacteria, Arcttic bacteria, Archea, phototrophic marine bacteria, Algae, and microbial symbioses.</p> <p><u>Assessment:</u> Includes practical and project works.</p>	<p>Assoc. Prof. Dr. İ. Tülay ÇAĞATAY</p> <p>E-mail: tulaycagatay@akdeniz.edu.tr Tel: +9 0 242 310 6089</p>	<p>Faculty of Fisheries, Department of Basic Aquatic Sciences</p>
ESÜM 112	4	GENETICS	X	X	<p>Course contents are basic Mendel rules, genotype and fenotype, genes and alleles, status of full dominancy, genetic elements in the cell, cell divisions, meiosis, mitosis and fertilization, structural and numerical chromosome differences, mutation, population genetics, fish breeding, and transgenic aquatic animals. Students will learn the basic principles genetics to apply the in their field.</p>	<p>Assoc. Prof. Dr. İ. Tülay ÇAĞATAY</p> <p>E-mail: tulaycagatay@akdeniz.edu.tr Tel: +9 0 242 310 6089</p>	<p>Faculty of Fisheries, Department of Basic Aquatic Sciences</p>