

CODE :ANIMBIO4		COURSE TITLE: ANIMAL BREEDING PROGRAMS		ECTS: 6	
COORDINATOR: DR. HAB. TOMASZ STRABEL			DEPARTMENT: ANIMAL BREEDING AND GENETICS		
COURSE CATEGORY:					
VOLUME(H) 30			PERSONAL WORK (H) 15		
LECTURE: (H) 15	PRACTICALS /LAB (H) 15	PLACEMENT(H)	PROJECT(H)	OTHER MODALITIES 15(H)	
EVALUATION:		OTHER MODALITIES:		LECTURER(S)	
EVALUATION MODALITIES		1. PERSONAL WORK WITH COMPUTER PROGRAM + INDIVIDUAL REPORT 2. PERSONAL ORAL PRESENTATION ON SELECTED TOPICS			
ORAL INDIVIDUAL REPORT	X				
WRITTEN INDIVIDUAL REPORT	X				
FINAL ORAL EXAM					
FINAL WRITTEN EXAM					
COMMENTS OF EVALUATION: FINAL EXAM: MULTIPLE-CHOICE TEST			TEACHING METHODS: LECTURES, SEMINARS, COMPUTER LAB		
SEMESTER: SUMMER			LANGUAGE: ENGLISH		
PERIOD:			YEAR OF STUDY: THIRD AND/OR HIGHER		
OBJECTIVES					
<ul style="list-style-type: none"> ▪ TO TEACH STUDENTS INTRODUCTION TO QUANTITATIVE GENETICS AND BASICS OF ANIMAL BREEDING METHODS ▪ TO TEACH HOW ANIMAL BREEDING PROGRAM ARE ORGANIZED ▪ TO TEACH HOW NEW REPRODUCTION TECHNIQUES AND ADVANCES OF MOLECULAR GENETICS CAN INFLUENCE ANIMAL BREEDING PROGRAMS ▪ TO TEACH WHAT ARE THE CONSEQUENCES OF ORGANIZED SELECTION ▪ TO STUDY, BASED ON PRACTICAL EXAMPLES, HOW ARE ORGANIZED ANIMAL BREEDING PROGRAMS OF SELECTED DOMESTIC SPECIES 					
CONTENTS					
<ul style="list-style-type: none"> ▪ PARTITIONING PHENOTYPIC VARIATION. GENETIC PARAMETERS: HERITABILITY, REPEATABILITY. ▪ SELECTION DIFFERENTIAL, INTENSITY OF SELECTION, RESPONSE TO SELECTION, GENERATION INTERVAL. ▪ BREEDING VALUE FOR A SINGLE PAIR OF ALLELES. BREEDING VALUES FOR QUANTITATIVE TRAITS. ▪ GENETIC SIMILARITY OF ANIMALS: INBREEDING AND COANCESTRY. INBREEDING DEPRESSION. CONTROLLING INBREEDING IN BREEDING PROGRAMS. ▪ CONSTRUCTION OF BREEDING PROGRAMS. ▪ USE OF REPRODUCTION TECHNIQUES IN MODERN BREEDING PROGRAMS. MOET SCHEMES. ▪ OPTIMIZATION OF BREEDING PROGRAMS USING COMPUTER SIMULATION PROGRAMS. SELECTION. ▪ IMPROVING MORE THAN ONE TRAIT – GENETIC CORRELATION. INDEXES FOR MANY TRAITS. ▪ USE OF MOLECULAR TECHNOLOGIES TO IMPROVE QUANTITATIVE TRAITS. ▪ ECONOMIC ASPECTS OF ANIMAL BREEDING. PROFIT FUNCTION. ECONOMIC INDEXES. ▪ CONSERVATION GENETIC PROGRAMS. ▪ BREEDING PROGRAMS FOR SELECTED DOMESTIC SPECIES. 					
GROUP SIZE: 15 MAX (LAB)			PRE-REQUIRES: STATISTICS (BASIC COURSE), GENETICS (BASIC COURSE)		