


MODULE HANDBOOK

	UNIVERSITAS PADJADJARAN FACULTY OF MATHEMATICS AND NATURAL SCIENCES BACHELOR OF BIOLOGY PROGRAMME	COURSE CODE: D10D-60105
Module designation	Cytogenetics	
Semester(s) in which the module is taught	6	
Person(s) responsible for the module	1. Annisa, M.Si., Ph.D 2. Dr. Sri Rejeki R.	
Medium of instruction	Indonesian	
Relation to curriculum	Elective course	
Teaching methods	Lectures, discussions, cooperative learning, and inquiry learning	
Workload	Total workload : 5440 minutes = 90.67 hours Lectures, discussions, cooperative learning, and inquiry learning : 2 x 50 minutes x 16 weeks = 1600 minutes = 26.67 hours Exercises : 2 x 60 minutes x 16 weeks = 1920 minutes = 32 hours Self-study : 2 x 60 minutes x 16 weeks = 1920 minutes = 32 hours	
Credit points	2,00 (3,62 ECTS)	
Required and recommended prerequisites for joining the module	1. Genetics 2. Cell and molecular biology	
Module objectives/intended learning outcomes	1. Master the concept of cytogenetics and understand the application of genetics 2. Able to explain the basic analysis of genetic data using cytogenetic diagnostics; able to connect and explain the basic considerations of cytogenetics in breeding programs, evolutionary studies and genetic analysis (hybrid offspring, syndrome diagnostics, and natural variants); able to understand what epigenetics is and its application in biology and biologically related fields.	
Contents	The cytogenetics course discusses the concept of cytogenetics and the application of genetics. After taking this course, students can explain what epigenetics is and its application in biology and biologically related fields.	
Examination forms	Quiz, midterm exam, assignment, and final exam	
Study and examination requirements	The minimum attendance in lectures is 80%. Final grades are evaluated based on Quizzes (20%), Tasks (20%), midterm exams (30%), and final exam (30%)	
Reading lists	1. Snustad D.P and Simmons M.J.2012. Principles of Genetics, 6th Ed. John Wiley & Sons,Inc. NJ. 2. Griffiths, A.J.F., Wessler, S.R., Carool, S.B., and Doebley, J. 2015. Introduction to Genetics Analysis, 11th Ed. M.H. Freeman and company. NY. 3. Ram J. Singh. 2017. Plant cytogenetics 3rd Edition. Taylor & Francis. Illinois. 4. Shukla, R.S. & P.S. Chandel. 2001.Cytogenetics, Evolution and Plant Breeding 5. Fan, Yao-Shan. 2002.Molecular Cytogenetics: Protocols and Applications 6. Arsham, M.S., M.J. Barch and H.J. Lawce. 2017. The AGT Cytogenetics Laboratory Manual	

