THE MODULE HANDBOOK
FACULTY OF BIOLOGY
MASTER PROGRAMME

POPULATION ECOLOGY

Module code	BIO-70308
Module level	1st year of Master Program in Biology
Abbreviation, if applicable	-
Courses related	-
Semester	Odd
Course coordinator(s)	Siti Nurleily Marliana, Ph.D.
Lecture(s)	1. Siti Nurleily Marliana, Ph.D. 2. Prof. Dr. Tjut S. Djohan, M.Sc.
Language	Bahasa Indonesia and English
Classification within the Curriculum	Compulsory Courses for Specific Field of Interest
Teaching format/class hours per week during the semester	This course is organized into one class and planned to have 14 teaching weeks and 2 weeks of examination.
Workload	Estimated working hour: 7 hours/week.
Credit	2-0 credits
Requirements	-
Course Learning Outcome	1. Describe species population dynamics using standard terms in population ecology. 2. Explain the role of biotic and abiotic components in determining population dynamics and stability. 3. Apply relevant quantitative methods in population ecology. 4. Analyze and evaluate how population ecology is used to address problems in evolution, conservation and management of natural resources. 5. Identify factors that threaten biodiversity maintenance and how to overcome them. 6. Implement principles and techniques in population dynamics and ecology to analyze population viability and develop natural resource management plans.
Syllabus	Population ecology studies the size and composition of an organism's population and the processes that determine its size and composition. This course integrates a variety of topics, including demographics, population ecology, the evolution of life history, social behavior, and genetics. Lectures are preceded by identification of population demographic characteristics and techniques used to quantify these characteristics. The impact of abiotic and

	biotic factors on population changes will be studied. In this lecture, students will study biological populations, growth and population regulation, niche theory, evolution of life history, natural selection, extinction, predator-prey dynamics, competition, metapopulation ecology, and application of population ecology to conservation.
Study/exam achievements	a. Midterm: 30% b. Final examination: 30% c. Quiz: 10% d. Term Paper: 15% e. Presentation: 15%
Forms of media	White board, notebook, LCD
Reference	1. Rockwood, L.L. 2015. Introduction to Population Ecology. Wiley-Blackwell. 2. Ricklefs, R.E. 2008. The Economy of Nature. W.H. Freeman and Company. 3. Begon, M., M, Mortimer, D.J. Thompson. 1996. Population Ecology: A Unified Study of Animals and Plants. 3rd edition. Wiley-Blackwell.