Module Handbook of Fish Population Dynamics

A **Module Handbook or collection of module descriptions that is also available for students to consult** should contain the following information about the individual modules:

Module designation	This course studies the boundaries and identification of fish populations, stocks and types, fishing gear and their effects on stocks, fecundity and reproductive potential, population marking and estimation, population parameter estimation, growth, recruitment, mortality, various stock estimation methods: Surplus Result Models, Dynamic Pool Models.
Module level, if applicable	Undergraduate
Code, if applicable	PIM 2233
Subtitle, if applicable	
Courses, if applicable	
Semester(s) in which the module is taught	Fourth Semester
Person responsible for the module	Dr.Ir. Djumanto, M.Sc. Dr. Eko Setyobudi, S.Pi, M.Si
Lecturer	Dr.Ir. Djumanto, M.Sc. Dr. Eko Setyobudi, S.Pi, M.Si
Language	Bahasa Indonesia
Relation to curriculum	Aquatic Resources Management, Compulsory, First Semester
Type of teaching, contact hours	Activities: a) Lecture (lecture and discussion) b) Examinations c) Take home assignments d) Quiz e) Student presentation
Workload	1. Lecture 2 SKS x 50 minutes x 16 meetings = 1,600 minutes = 26.67 hours = 26.67 hours/30 hours = 0.89 ECTS 2. Structural Assignment 2 SKS x 60 minutes x 16 meetings = 1,920 minutes = 32.00 hours = 32.00 hours/30 hours = 1.07 ECTS 3. Self Study

	2 SKS x 60 minutes x 16 meetings = 1,920 minutes = 32.00 hours = 32.00 hours/30 hours = 1.07 ECTS Total Workload = 3.02 ECTS
Credit points	2 credit points
Requirements according to the examination regulations	The minimum of student attendance is 70% from total 14 meetings to be eligible to take the final exams.
Recommended prerequisites	-
Module objectives/intended learning outcomes	Course Learning Outcome (CO) : - CPMK 1: Describe the study of fish population dynamics and their role in fisheries business, fish populations, and their relation to other science fields (PLO-P2). - CPMK 2: Describe fish population parameters, including reproduction, recruitment, growth, and mortality (PLO-P2) Program Learning Outcome (PLO): - P2: Able to explain problems in the management of fisheries systems through scientific approaches, including problem identification, data collection and analysis, conclusions, and alternative solutions to problems..
Content	Course Learning Outcome (CO-1) 1. Definition and limits of fish population dynamics. 2. Fish stocks, their types and sizes. 3. Fishing gear and target catch. 4. Feed abundance and its relation to stock size Course Learning Outcome (CO-2) 5. Fecundity, spawning season and a variety of stock sizes 6. Tagging and Markings on fish stocks 7. Estimation of stock abundance 8. Stock units and population parameters 9. Stock modeling 10. Growth parameter 11. Mortality parameter 12. Recruitment parameter 13. Dynamic pool model 14. Surplus Yield models
Study and examination requirements and forms of examination	Lecture, self-study, assignments, student presentations, quiz. Midterm exam: Examination Final exam: Examination

Media employed	Powerpoint, Laptop, LCD, eLearning Platform such as eLOK, simaster.
Reading list	1. Fisheries Biology, Assessment, and Management (M. King). 2006. 399 p. 2. Marine fisheries ecology (S.Jening). 2001. 435 p. 3 Introduction to fisheries stock assessment. Spare & Venema. 1998. 433 p.