



STATE UNIVERSITY OF YOGYAKARTA
FACULTY OF MATHEMATICS AND SCIENCE

Address : Karangmalang, Yogyakarta 55281. Telp. 0274586168 ext. 218, 219.

SYLLABI (Course Outline)

Faculty	: Faculty of Mathematics and Science
Study Program	: Biology
Course / Code	General Biology/ BIO151
Credit	: Theory: 2 Practice: 1
Semester	: 1
Prerequisite	: -

I. Course Description

This course contains subject matters and topics for inductive activities more than only for deducto-verbatim activities. Through this lecturing, students 1) identifying some biological objects on any level of life organization in around them; 2) finding some biological problems base on their observation; 3) doing problem solving through scientific methods; 4) comparing characteristics of an individual to others; 5) understanding principles of classification of organism; 6) Classifying organisms base on certain characteristic; 7) connecting specific characteristic of organism to their environment; 8) Connecting specific structure-function of organism to specific function of the organism; 9) simulating ratio of phenotype from crossbreeding; 10) understanding basic principles of adaptation on organisms; 11) understanding basic principles of evolution on organism.

II. Competences

Understanding biology as a knowledge; Understanding objects and problems of biology as a science; identifying unity and diversity of organism; understanding principles of classification of organism; connecting specific characteristic of organism to their environment; Connecting specific structure-function of organism to specific function of the organism; simulating ratio of phenotype from crossbreeding; understanding basic principles of adaptation on organisms; understanding basic principles of evolution on organism.

III. Activity

Meeting	Basic Competence	Essential Concept	Learning Strategy	Ref.	Character
1-2	Understanding biology as a knowledge	Biology as an inquiry	Discussion, references study, and assignment	A, C, E, F	Curiosity
3	Understanding objects and problems of biology as a science	Objects and problems of biology as a science	Observation, reference study, and discussion	A, D, F	Curiosity
4	identifying unity and diversity of organism	unity and diversity of organism	Observation, reference study, and discussion	A, B, D, F	Menghargai keberagaman
5-6	Understanding principles of classification of organism	principles of classification of organism	Observation, reference study, and discussion	A, B, F	Menghargai keberagaman
7	Connecting specific characteristic of organism to their environment	organism and their environment	Observation, reference study, and discussion	A, B, E, F	Curiosity
8	Midterm test				
9-10	Connecting specific structure-function of organism to specific function of the organism	structure-function on organism	Observation, reference study, and discussion	A, B, F	Curiosity
11-12	Simulating ratio of phenotype from crossbreeding	Sustainability in organism	Observation, reference study, and discussion	A, B, F	Menghargai keberagaman
13	Describing regulation and homeostasis in organism	regulation and homeostasis in organism	Observation, reference study, and discussion	A, B, F	Discipline
14	Understanding basic principles of adaptation on organisms	adaptation on organisms	Observation, reference study, and discussion	A, B, F	
15-16.	Understanding basic principles of evolution on organism	evolution on organism	Reference study, and discussion	A, B, F	

References

- Compulsory

- (A) BSCS (1996). *Biological science: A molecular approach*. Lexington, MA: D.C. Heat and Company.
- (F) Paidi, Nur Aini, & Yuni Wibowo. 2010. *General Biology: Manual for Laboratory Activity*. Yogyakarta: Department of Biology Education, Faculty of Mathematics and Science, UNY

- Not Compulsory (Additional)

- (B) Farabee, M.J. 2007. *Online Biology Book*. Arizona: Estrella Mountain Community College, in sunny Avondale. Diakses tanggal 8 Oktober 2010 dari <http://www.mj.farabee@emcmail.maricopa.edu>.
- (C) Carin, A.A. dan Sund, R.B. (1989). *Teaching science through discovery*. Columbus, OH: Merrill Publishing Company.
- (D) Cavendish. S. (1990). *Observation activities*. London: Paul Chapman Publishing Ltd.
- (E) Lawson, A.E. (1994). *Science Teaching and The Development of Thinking*. Belmont : Wadworth Publishing Company.

C. Techniques of Assessment and Final-Score

1. Written test (30%)
2. Performance assessment (20%)
3. Group Project (20%)
4. Assignment (20%)
5. Peer assessment (10%)

Head of Departement
Biology Education Department

Yogyakarta, Februari 2012
Lecturer

Dr. Slamet Suyanto
NIP 19620702 199101 1 001

Paramita Cahyaningrum K., M.Sc.
NIP 19780822 201012 2 001