UNIVERSITAS NEGERI YOGYAKARTA

BIOLOGY EDUCATION
1 Colombo Street, Yogyakarta 55281
Phone (0274)565411 ext. 217, (0274)565411(Administration office), fax (0274)548203
Website: fmipa.uny.ac.id, e-mail: humas_fmipa@uny.ac.id

Bachelor of Education in Biology   **MODULE HANDBOOK**

Module name:	Laboratory work for Biology Learning Media and Information Technology
Module level, if applicable:	Undergraduate
Code:	BIP6203
Sub-heading, if applicable:	-
Classes, if applicable:	-
Semester:	2nd
Module coordinator:	Agung W. Subiantoro
Lecturer(s):	Agung W. Subiantoro.
Language:	Indonesian
Classification within the curriculum:	Study Program Specific Course
Teaching format / class hours per week during the semester:	100 minutes lectures and 120 minutes structured activities and 120 minutes individual study per week.
Workload:	Total workload is 90.67 hours per semester which consists of 100 minutes lectures, 120 minutes structured activities, and 120 minutes individual study per week for 16 weeks.
Credit points:	2 SKS (3 ETCS)
Prerequisites course(s):	-
Program Learning Outcome(s)	PLO5. Understanding the principles of TPACK (*Technological Pedagogical and Content Knowledge*) in biology learning. PLO8. Being able to plan, implement, assess, and follow up the educational biology learning.
Targeted learning outcomes:	After taking this course, the students are expected to be able to: CO1. describe the nature of media and IT in learning biology CO2. describe the principle of multiple representation in biology and IT learning media CO3. distinguish the variety and characteristics of biology learning media CO4. design biology and IT learning media with certain innovations CO5. develop biology and IT learning media according to the design

	chosen as real products CO6. describe / try out learning media products and IT as a result of development
Content:	This course focuses on the study of the basic principles and practices of developing biology and IT learning media, which include: 1) the nature, position and role of media and IT in biology learning, and its relation to TPACK principles in biology learning, 2) multiple principles representation in learning media and its relevance to the characteristics of biological studies, 3) the variety and characteristics of biology learning media, 4) project development and production of media and IT for biology learning in schools.
Study / exam achievements:	Attitude assessment is carried out at each meeting by observation and/or self-assessment techniques using the assumption that basically every student has a good attitude. The student is marked very good or not good attitude if they show it significantly compared to other students in general. The result of attitude assessment is not taken into account in the final grades, but as one of the requirements to pass the course. Students will pass from this course if at least have a good attitude. The final mark will be weight as follow: | CO	Assessment Object	Assessment Technique	Weight
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CO1, CO2, CO3, CO4, CO5, CO6	a. Score for each sub competence b. Final Exam	Presentation / written test	75% 25%
		Total	100%	
Forms of media:	Board, LCD Projector, Laptop/Computer
References:	Heinich, Robert., et al. 2002. *Instructional Media and Technologies for Learning 7th ed.* New Jersey: Merrill Prentice Hall Singer, Maxine. 1999. *Selecting Instructional Materials: A Guide for K-12 Science.* Washington: National Academic Press Treagust, David., Tsui, Chi-Yan (Ed). 2013. *Multiple Representations in Biological Education.* Dordrecht: Springer Rhodes, Holly G. 2018. *Design, Selection, and Implementation of Instructional Materials for the Next Generation Science Standards.* Washington: National Academic Press

PLO and CO mapping

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10	PLO11	PLO12
CO1					v							
CO2					v							
CO3					v							
CO4								v				
CO5								v				
CO6								v				