UNIVERSITAS NEGERI YOGYAKARTA
FACULTY OF MATHEMATICS AND SCIENCE
DEPARTMENT OF BIOLOGY EDUCATION
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Bachelor of Science in Biology   **MODULE HANDBOOK**

Module name:	Laboratory Work in Biometry
Module level, if applicable:	Undergraduate
Code:	BIO6128
Sub-heading,if applicable:	-
Classes,if applicable:	-
Semester:	Even
Module coordinator:	Suhandoyo, MS
Lecturer(s):	Suhandoyo, MS., Yuni Wibowo, MPd.
Language:	Indonesian
Classification within the curriculum:	Compulsory Course
Teaching format / class hours per week during the semester:	170 minutes individual study per week
Work load:	170 minutes individual study per week for 16 weeks.
Credit points:	1 SKS (1.64 ECTS)
Prerequisites course(s):	Statistics
Perogram Learning Outcomes:	PLO.4. Comprehensively mastering Biology (core biology) to solve problems in the field of Biology (problem-solving) and to underlie the concepts of related sciences PLO.5. Mastering the techniques and methodologies in Biology as well as familiar with the equipment used in Biology laboratories in order to get the knowledge of Biology (how we know what we know) PLO.6. Being adaptive, creative, innovative in applying the concepts of Biology and other related fields PLO.7. Being skillful in applying the techniques used in laboratories and daily life PLO.9. Being able to work and create jobs/being an entrepreneur in the field of Biology PLO.10.Having managerial ability to supervise and evaluate workers and optimizing the networks in order to develop professionalism PLO.11. Possessing scientific skills to support the ability to speak

	in local, national, and international forums
Course Outcomes	After taking this course, the students have ability to: CO.1. Perform the application of descriptive statistical analysis techniques to process biological research data. CO.2. Perform the application of parametric and nonparametric inferential statistical analysis techniques to process biological research data for the purpose of comparing two mean values. CO.3. Perform the application of parametric and non parametric inferential statistical analysis techniques to process biological research data for the purpose of comparing k average values. CO.4. Perform the application of parametric and non parameteric inferential statistical analysis techniques to process biological research data for the purpose of determining the pattern of relationships between independent and dependent variables.
Content:	Implementing statistics to analyze biological research data includes the application of descriptive statistical analysis techniques, parametric and nonparametric inferential statistics.
Study/examachievements:	The final mark will be weight as follow: TABLE_PLACEHOLDER
Forms of media:	Real objects, model, multimedia
Reference:	REFERENCE_PLACEHOLDER

The table in Study/examachievements:

No	CO	Assessment Object	Assessment Technique	Weight
1	CO.1 to CO. 4	Observed attitudes , knolwedge, and skills	Survey, test, rubrics and manuals	100%
			Total	100%

Reference:

1. Kirk, R.E. 1995. *Experimental design: Procedures for behavioral science.* Pasific Grove: Brooks/Colc l'ublishing Conrpanv
2. Moh Nazir. (1988). *Metode penelitian*. Jakarta: Galia Indonesia
3. Sudjana. (1982). *Disain dan analisis eksperimen*. Bandung: Tarsito.
4. Vincent Gaspersz. (1991). *Teknik analisis dalam penelitian percobaan*. Jilid 1. Bandung: Tarsito
5. Fisher, R.A. and Yates, F. (1974*). Statistical tabels for biological, agricultural, and medical research*. New York: Hafner.
6. Gomez, K.A. and Gomez, A.A. (1984*). Statistical procedures for agricultural research*. 2-nd ed. New York: John Wiley & Sons.
7. Nasution, A.H. dan Barizi. (1980) *Metode statistika untuk penarikan kesimpulan*. Ed keempat. Jakarta: Gramedia.
8. Siegel, S. (1956). *Nonparameteric statistics for the beavioral sciences*. Tokyo: Mc-Graw-Hill Kogakusha, Ltd.
9. Steel, R.G.D. and Torrie, J.H. (1980). *Principles and procedures of statistics: A biometrical approach*. 2-nd ed. New York: Mc-Graw-Hill Book Company.

PLO and CO mapping

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10	PLO11
CO1				✓	✓	✓					
CO2				✓	✓	✓	✓		✓	✓	✓
CO3				✓	✓	✓	✓		✓	✓	✓
CO4				✓	✓	✓	✓		✓	✓	✓