UNIVERSITAS NEGERI YOGYAKARTA
FACULTY OF MATHEMATICS AND NATURAL SCIENCES
DEPARTMENT OF PHYSICS EDUCATION
PHYSICS STUDY PROGRAM
Colombo St. Number 1 Yogyakarta 55281
Telephone (0274)565411 Ext. 217, fax (0274) 548203
Web: http://fisika.fmipa.uny.ac.id/, E-mail: fisika@uny.ac.id

Bachelor of Physics   **MODULE HANDBOOK**

Module name:	Research Methodology in Physics
Module level, if applicable:	Bachelor Programme
Code:	FSK6330
Sub-heading, if applicable:	-
Classes, if applicable:	-
Semester:	5th (Odd)
Module coordinator:	Nur Kadarisman, M.Si
Lecturer(s):	Nur Kadarisman, M.Si
Language:	Bahasa Indonesia
Classification within the curriculum:	Elective Course
Teaching format / class hours per week during the semester:	150 minutes lectures and 180 minutes structured activities per week.
Workload:	Total workload is 136 hours per semester, which consists of 150 minutes lectures, 180 minutes structured activities, and 180 minutes individual study per week for 16 weeks.
Credit points:	3 SKS (4.86 ECTS)
Prerequisites course(s):	-
Course Outcomes	CO1. Understanding Physics Research Methods and the Steps in Research CO2. Applying Physics Research Methods in the Field of Instrumentation and Signal Research CO3. Applying Physics Research Methods in the Field of Geophysical Research CO4. Applying Physics Research Methods in the Field of Material Physics Research

	CO5. Applying Physics Research Methods in the Field of Atomic and Nuclear Physics CO6. Making a Final Year Project Proposal
Content:	This course explains research methods in the field of physics and then applies them to research fields of Geophysics, Materials and Colloidal Physics, Atomic and Nuclear Physics, and Instrumentation and Signals. Students follow up by making a research title and then making a research proposal for the Final Year Project with the appropriate methodology. The proposal is then presented in front of the class. Various suggestions are given upon the proposal. Finally, assessments are conducted.
Study / exam achievements:	After attending this lecture, the product of the research proposal for the final year project is assessed according to the apporpriate research methods in one of the fields of Geophysics, Material and Colloidal Physics, Atomic and Nuclear Physics, as well as Instrumentation and Signals. The final mark will be weight as follow:

No	CO	Assessment Object	Assessment Technique	Weight
1	CO1 CO2 CO3 CO4 and CO5	a. Individual Assignment b. Group Assignment c. Quiz d. Midterm Exam e. Final Exam	Presentation/written	15% 15% 15% 25% 30%
		Total		100%

Forms of media:	Board, LCD Projector, Laptop/Computer
Literature:	1) Gallian, J.A.. 2010. Contemporary Abstract Algebra. Seventh Edition. Eddison Wesley Publishing Company. 2) Malik, D.S., Mordeson, J.M., Sen, M.K.. 1997. Fundamentals of Abstract Algebra. Singapore: McGraw-Hill Companies, Inc. 3) Fraleigh, J.B.. 2006. A First Course in Abstract Algebra. Seventh Edition. New York: Addison-Wesley Publishing Company. 4) Herstein, I.N..1996. Abstract Algebra. Third Edition. Upper Saddle River: Prentice-Hall Int. Inc. 5) Stinson, D.R. 2006. Crptography, Theory And Practice. Third Edition. New York: Chapman and Hall/CRC. 6) https://andarupm.co.id/spektrofotometer-di-laboratorium/ 7) Nur Kadarisman, 2019. Characterization of Sound Spectrum based on Natural Animals as an Alternative Source of Harmonic System Audio Bio Stimulators for

	Increasing Productivity of Food Plants, International Conference on Education, Science and Technology 2019.	

8) Tipler. 1998. Fisika Untuk sains dan Teknik Jilid 1 Edisi ketiga. Jakarta: Erlangga
9) Kadarisman, N., Purwanto, A., dan Rosana, D. 2011. Peningkatan Laju Pertumbuhan dan Produktifitas Tanaman Kentang Melalui Variabel Fisis Gelombang Akustik Pada Pemupukan Daun (Rancang Bangun Teknologi Tepat Guna Audio Bio Harmonik). Abstrak Hasil Penelitian. Yogyakarta: Lembaga Penelitian Universitas Negeri Yogyakarta.

PLO and CO mapping

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9
CO1		✓							
CO2				✓					
CO3				✓					
CO4				✓					
CO5				✓					
CO6							✓		