UNIVERSITAS NEGERI YOGYAKARTA
FACULTY OF MATHEMATICS AND NATURAL SCIENCES
DEPARTMENT OF PHYSICS EDUCATION
PHYSICS STUDY PROGRAM
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Module name:	Reactor Kinematics Experiment
Module level, if applicable:	Undergraduate Programme
Code:	FSK6265
Sub-heading, if applicable:	-
Classes, if applicable:	-
Semester:	6
Module coordinator:	Tri Nugroho Hadi Susanto, M.Si.
Lecturer(s):	Research team of Nuclear Energy Research Organization, National Research and Innovation Agency
Language:	Bahasa Indonesia
Classification within the curriculum:	Elective Course
Teaching format / class hours per week during the semester:	50 minutes lectures and 290 minutes experiment and writing report activities per two weeks.
Workload:	Total workload is 182 hours per semester which consists of 50 minutes lectures, 170 minutes experiments, and 120 minutes of data analysis and experiment report writing per two weeks for 16 weeks.
Credit points:	2 sks (3.25 ECTS)
Prerequisites course(s):	FSK6364
Course Outcomes	Students graduating from this course will be able to:

<table>
<tr><td></td><td>CO1. Apply radiation protection procedure in using Kartini Reactor’s facilities
CO2. Mastering the basic operation of Kartini Reactor
CO3. Calibrate Kartini Reactor’s Control Rod and Power
CO4. Calculate fuel’s temperature reactivity coefficient and neutron flux</td></tr>
<tr><td>Content:</td><td>This course discusses and demonstrates—through experiments—various important parameter in Kartini Reactor’s operation. The lectures and experiments are conducted at Nuclear Energy Research Organization, National Research and Innovation Agency in Yogyakarta.</td></tr>
<tr><td>Study / exam achievements:</td><td>Students taking this course must follow the strict procedure in entering and using Kartini Reactor’s facilities, thus automatically they understand and apply the radiation protection procedure. Other achievements are examined based on their performance in conducting and reporting the experiment’s topics.

The final grade will be weighted as follow:
<table>
<tr><th>No</th><th>CO</th><th>Assessment Object</th><th>Assessment Technique</th><th>Weight</th></tr>
<tr><td>1</td><td>CO2, CO3, and CO4</td><td>a. Biweekly experiment’s pretest and reports
b. Final Exam</td><td>Presentation / written test</td><td>70%

30%</td></tr>
<tr><td colspan="3"></td><td>Total</td><td>100%</td></tr>
</table>
</td></tr>
<tr><td>Forms of media:</td><td>Board, LCD Projector, Laptop/Computer, Kartini Reactor</td></tr>
<tr><td>Literature:</td><td>1. INTERNATIONAL ATOMIC ENERGY AGENCY, Generic Procedures for Response to a Nuclear or Radiological Emergency at Research Reactors, EPR-RESEARCH REACTOR, IAEA, Vienna (2011).
2. INTERNATIONAL ATOMIC ENERGY AGENCY, Training material on TRIGA research reactors, (2010),</td></tr>
</table>

	http://wwwansn.iaea.org/Common/documents/Training/TRIGA%20Reactors%20(Safety%20and%20Technology)/pdf/chapter1_appendix1.pdf 3. Feasibility of Material Degradation Caused by Neutronic Irradiation as a Practicum Module for the Kartini Internet Reactor Laboratory, P. H. Sadewo, P. I. Wahyono, et el., International Conference on Nuclear Science, Technology, and Application (ICONSTA 2020).

PLO and CO mapping

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