

**SEMESTER LEARNING ACTIVITY PLANS  
(SLAP)  
SEMESTER ODD/EVEN 2022/2023**



Research III  
MFF6013 / 3 Credits

Lecturer Coordinator:

**UNIVERSITAS GADJAH MADA  
FACULTY OF MATHEMATICS AND NATURAL SCIENCE  
2022**



## Universitas Gadjah Mada

Faculty of Mathematics and Natural Science

Physics Department / Study Program Master of Physics

Semester Odd/Even 2022/2023

### SEMESTER LEARNING ACTIVITY PLANS (SLAP)

Code	Course Name	Credits (credits)	Semester	Status	Prerequisite												
MFF6013	Research III	3	Odd/Even	Elective	Can only be taken by students on the research path												
<b>Short Description</b>	<p>Research III course is Elective course 3 credits (Theory) in the 2022 Curriculum Master of Physics Study Program, Faculty of Mathematics and Natural Science UGM.</p> <p>The syllabus of this course is as follows: Students submit the final data of their research as well as their analysis, discussion, and discussion, reaching temporary conclusions of the results of their research. It also conveyed the target plan of scientific journals and seminars that would be the place for publication of the results of their research.</p> <p>The courses are held in class for 14 weeks, each week's session last for 3 x 50 minutes. Four weeks of course period is used for Midterm Exam and Final Exam, each held for two weeks as scheduled.</p> <p>Student evaluation for course assessments is performed summative and formative. The summative evaluation is implemented as written exams, both Midterm and Final Exam, which take a maximum of 120 minutes. The formative evaluation is implemented as individual assignments for each student in the form of completing an assignment individually. Monitoring is carried out by observing student activities during the course, such as attendance, Q&amp;A and discussion about the material presented, and student performance in completing individual assignments.</p>																
<b>Program Learning Outcomes (PLO) Imposed on the Course</b>	<table border="1"> <tbody> <tr> <td>PLO 2</td> <td>Having the professional ability of a scientist.</td> </tr> <tr> <td>PLO 3</td> <td>Mastering further knowledge of classical and modern physics theory, and its relationship with other disciplines, and has mastered an advanced field of physics specialization that allows him to keep up with the latest international research developments.</td> </tr> <tr> <td>PLO 4</td> <td>Mastering various mathematical disciplines related to an advanced field of physics, and able to develop physical models using various mathematical and computational tools with an inter or multidisciplinary approach to solving problems related to an advanced field of physics.</td> </tr> <tr> <td>PLO 5</td> <td>Able to plan, manage and carry out experiments and conclude the results, or be able to create and use modeling and simulations based on the basic principles of physics to study and solve a problem in a scientific field of Physics or applied Physics that produces models, methods, or theories tested and innovative.</td> </tr> <tr> <td>PLO 6</td> <td>Able to apply knowledge to analyze, synthesize, formulate problems and solve problems comprehensively in one of advanced field of physics, through experimental or theoretical research, then be able to classify and draw conclusions about their findings for the development of science and technology.</td> </tr> <tr> <td>PLO 7</td> <td>Able to communicate and discuss orally and in writing the results of studies, and mastery of various problems in the field of physics and other related fields in Indonesian and English, as well as being able to document and save the</td> </tr> </tbody> </table>					PLO 2	Having the professional ability of a scientist.	PLO 3	Mastering further knowledge of classical and modern physics theory, and its relationship with other disciplines, and has mastered an advanced field of physics specialization that allows him to keep up with the latest international research developments.	PLO 4	Mastering various mathematical disciplines related to an advanced field of physics, and able to develop physical models using various mathematical and computational tools with an inter or multidisciplinary approach to solving problems related to an advanced field of physics.	PLO 5	Able to plan, manage and carry out experiments and conclude the results, or be able to create and use modeling and simulations based on the basic principles of physics to study and solve a problem in a scientific field of Physics or applied Physics that produces models, methods, or theories tested and innovative.	PLO 6	Able to apply knowledge to analyze, synthesize, formulate problems and solve problems comprehensively in one of advanced field of physics, through experimental or theoretical research, then be able to classify and draw conclusions about their findings for the development of science and technology.	PLO 7	Able to communicate and discuss orally and in writing the results of studies, and mastery of various problems in the field of physics and other related fields in Indonesian and English, as well as being able to document and save the
PLO 2	Having the professional ability of a scientist.																
PLO 3	Mastering further knowledge of classical and modern physics theory, and its relationship with other disciplines, and has mastered an advanced field of physics specialization that allows him to keep up with the latest international research developments.																
PLO 4	Mastering various mathematical disciplines related to an advanced field of physics, and able to develop physical models using various mathematical and computational tools with an inter or multidisciplinary approach to solving problems related to an advanced field of physics.																
PLO 5	Able to plan, manage and carry out experiments and conclude the results, or be able to create and use modeling and simulations based on the basic principles of physics to study and solve a problem in a scientific field of Physics or applied Physics that produces models, methods, or theories tested and innovative.																
PLO 6	Able to apply knowledge to analyze, synthesize, formulate problems and solve problems comprehensively in one of advanced field of physics, through experimental or theoretical research, then be able to classify and draw conclusions about their findings for the development of science and technology.																
PLO 7	Able to communicate and discuss orally and in writing the results of studies, and mastery of various problems in the field of physics and other related fields in Indonesian and English, as well as being able to document and save the																

		results of the study and mastery, and publish them in reputable scientific forums or scientific journals.		
<b>Course Outcomes (CO)</b>	<b>Upon completion of this course, students should be able to:</b>			
	<i>CO1</i>	Conduct analysis, discussion and discussion of the data or the final results of the research.		
	<i>CO2</i>	Summarizing the results of the research.		
	<i>CO3</i>			
	<i>CO4</i>			
	<i>CO5</i>			
	<i>CO6</i>			
	<i>CO7</i>			
	<i>CO8</i>			
<b>The Correlation of CO to Learning Materials and Methods, and Time Allocation</b>		<b>Learning Materials</b>	<b>Learning Methods</b>	<b>Time Allocation</b>
	<i>CO1</i>			3 x 50 minutes
	<i>CO1</i>			3 x 50 minutes
	<i>CO1</i>			3 x 50 minutes
	<i>CO2</i>			3 x 50 minutes
	<i>CO2</i>			3 x 50 minutes
	<i>CO2</i>			3 x 50 minutes
	<i>CO2</i>			3 x 50 minutes
	<i>CO3</i>			3 x 50 minutes
	<i>CO3</i>			3 x 50 minutes
	<i>CO3</i>			3 x 50 minutes
	<i>CO4</i>			3 x 50 minutes
	<i>CO4</i>			3 x 50 minutes
	<i>CO4</i>			3 x 50 minutes
	<i>CO4</i>			3 x 50 minutes
	<b>Final Exam/ Project Task Results/ Case Analysis Results</b>			

