

## Module Description

<b>Module name</b>	Course Module
<b>Module level, if applicable</b>	Master of Physics Education
<b>Code, if applicable</b>	32363162
<b>Subtitle, if applicable</b>	-
<b>Course, if applicable</b>	Physics Learning Curriculum and Design
<b>Semester(s) in which the module istaught</b>	I (Odd semester)
<b>Person responsiblefor the module</b>	Lecturer of Courses
<b>Lecturer</b>	1. Prof. Dr. Sunaryo
<b>Language</b>	Indonesian Language [Bahasa Indonesia]
<b>Relation to Curriculum</b>	This course is a compulsory course and offered in the 1 <sup>st</sup> semester.
<b>Type of teaching, contact hours</b>	Teaching methods used in this course are: - Lecture (i.e., group investigation, small group discussion, andragogy approach, collaborative learning, and video-based learning) - Structured assignments (i.e., essays and case study) The class size for lecture is 20 students. Contact hours for lecture is 26.67 hours, assignments are 64 hours, and privat study is 64 hours.
<b>Workload</b>	For this course, students required to meet a minimum of 154.67 hours in one semester, which consist of: 26.67 hours for lecture, 64 hours for structured assignments, 64 hours for private study.
<b>Credit points</b>	5.2 ECTS
<b>Requirements according to the examination regulations</b>	Students should have attended all lectures and submitted all scheduled individual and group assignments prior to the final examination.
<b>Recommended prerequisites</b>	Students should have attended all lectures and submitted all scheduled individual and group assignments prior to the final

	examination.
<b>Program learning outcomes</b>	<p>PLO 2 Master advanced knowledge of classical physics and modern physics</p> <p>PLO 5. Able to propose various alternative solutions to the problems of physics education with inter- and multidisciplinary approaches.</p>

<b>Content</b>	<p><b>Students will learn about:</b></p> <p>This course aims to discuss the general education curriculum, both nationally and internationally, and its implementation in designing a physics learning curriculum. Topics discussed in this course include: curriculum conception, certification and curriculum, curriculum development principles, curriculum development methods, curriculum implementation in learning, curriculum as a scientific discipline, studies of the National curriculum, international curriculum, and current issues about curriculum development and physics learning design. Learning strategies and evaluation systems in developed countries will also be discussed as case studies. Students will be trained in a guided manner how to design a physics curriculum in schools as part of the learning process. Lectures will be held with a case-based learning approach. Mastery of these lectures will help students increase their knowledge, knowledge and develop themselves professionally.</p>
<b>Forms of Assessment</b>	<p>Assessment of the learning process follows the following components: attendance 5%; assignments and presentations 30%; mid-test 30%, and final-test 35%.</p>
<b>Study and examination requirements</b>	<p><b>Study and examination requirements:</b></p> <ul style="list-style-type: none"> <li>- Students must attend 15 minutes before the class starts.</li> <li>- Students must switch off all electronic devices.</li> <li>- Students must inform the lecturer if they will not attend the class due to sickness, etc.</li> <li>- Students must submit all class assignments before the deadline.</li> <li>- Students must attend the exam to get final grade.</li> </ul> <p><b>Form of examination:</b> Forms of examination: project, presentation, and written exam.</p>
<b>Media employed</b>	<p>Powerpoint slides, simulation videos, learning management system (LMS), ZOOM application, and UNJ e-learning.</p>

<b>Reading list</b>	<ol style="list-style-type: none"><li>1. Jules Pieters, Joke Voogt, Natalie Pareja Roblin (2019) Collaborative Curriculum Design for Sustainable Innovation and Teacher Learning. Springer International Publishing.</li><li>2. MaurícioPietrocola,IvãGurgel (2017) Crossing the Border of the Traditional Science Curriculum: Innovative Teaching and Learning in Basic Science Education. Bold Visions in Educational Research, Sense Publishers</li><li>3. Lynnette R Porter (2004) Developing an online curriculum: technologies and techniques. Information Science Publishing.</li><li>4. Aaron D. Isabelle, Gilbert A. Zinn (2017) STEPS to STEM: A Science Curriculum Supplement for Upper Elementary and Middle School Grades – Teacher’s Edition</li></ol>
---------------------	--