



**Universitas Negeri Surabaya**  
**Faculty of Mathematics and Natural Sciences**  
**Physics Education Undergraduate Study Program**

Document Code

### SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight	SEMESTER	Compilation Date
ENGLISH FOR PHYSICS	8420303279	Compulsory Study Program Subjects	T=3 P=0 ECTS=4.77	2	July 17, 2024
AUTHORIZATION	SP Developer		Course Cluster Coordinator	Study Program Coordinator	
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Learning model	Project Based Learning																																																																																																																						
Program Learning Outcomes (PLO)	PLO study program that is charged to the course																																																																																																																						
	Program Objectives (PO)																																																																																																																						
	PO - 1	Able to understand Physics material in English by applying reading skills.																																																																																																																					
	PO - 2	Able to understand Physics material in English by applying listening skills.																																																																																																																					
	PO - 3	Able to communicate opinions orally (speaking) using good and correct English structures.																																																																																																																					
	PO - 4	Able to communicate ideas or concepts in writing (writing) using good and correct English structures.																																																																																																																					
	PO - 5	Able to communicate ideas or thoughts orally (speaking) and in writing (writing) using good and correct English structures.																																																																																																																					
	PLO-PO Matrix	<table border="1" style="margin-left: 20px; border-collapse: collapse;"> <tr><td>P.O</td></tr> <tr><td>PO-1</td></tr> <tr><td>PO-2</td></tr> <tr><td>PO-3</td></tr> <tr><td>PO-4</td></tr> <tr><td>PO-5</td></tr> </table>	P.O	PO-1	PO-2	PO-3	PO-4	PO-5																																																																																																															
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PO Matrix at the end of each learning stage (Sub-PO)	<table border="1" style="margin-left: 20px; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">P.O</th> <th colspan="16">Week</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th><th>7</th><th>8</th><th>9</th><th>10</th><th>11</th><th>12</th><th>13</th><th>14</th><th>15</th><th>16</th> </tr> </thead> <tbody> <tr><td>PO-1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>PO-2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>PO-3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>PO-4</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>PO-5</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>	P.O	Week																1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	PO-1																	PO-2																	PO-3																	PO-4																	PO-5																
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**Short Course Description** This course equips students with skills and language components at a basic (pre-intermediate) level which are very necessary to support an English-based understanding of Physics literacy. This course also introduces a standardized test which includes training in reading skills, listening comprehension and grammar and vocabulary which are aimed at preparing for the international standard English test. All lecture activities will be presented by means of lectures and discussions.

<b>References</b>	<b>Main :</b>
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1. Sharpe, Pamela. J. 2003. How to prepare for the TOEFL. Barron 19s Educational Series. NY
2. Official Guide to the TOEFL Test With CD-ROM, 4th Edition (Official Guide to the Toefl Ibt). McGraw-Hill. USA.
4. Phillips, Deborah. 2001. Longman Introductory Course for the TOEFL Test: iBT, 2nd ed. Pearson Education. NY
3. Worcester, Adam, et al. 2008. Building Skill for the TOEFL iBT: Beginning. Compass Publishing.
4. Cullen, Pauline, et al. 2014. The Official Cambridge Guide to IELTS Students Book With Answers with DVD-ROM. Oxford University Press.
5. Parthare, Emma; Parthare, Gary; May, Peter. 2013. Headway Academic Skills IELTS Study Skills Edition: Level 1 Students Book. Oxford University Press.
8. Loughheed, Lin. 2007. Longman Preparation Series for the TOEIC Test: Listening and Reading, 5th Edition. Pearson Education. NY
6. Smith, C. (2004). Environmental physics. Routledge.

**Supporters:**

1. Murphy, R. 2012. English Grammar in Use. Cambridge University Press.
2. Serway, R. A. 2005. College Physics. Belmont, US: ThomsonLearning Publ.
3. Jurnal, referensi lain, dan link web terkait.

**Supporting lecturer**

Prof. Nadi Suprpto, S.Pd., M.Pd., Ph.D.  
 Mita Anggaryani, M.Pd., Ph.D.  
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 Muhammad Habibulloh, M.Pd.  
 Dr. Oka Saputra, M.Pd

Week-	Final abilities of each learning stage (Sub-PO)	Evaluation		Help Learning, Learning methods, Student Assignments, [ Estimated time]		Learning materials [ References ]	Assessment Weight (%)
		Indicator	Criteria & Form	Offline ( offline )	Online ( online )		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	1.Find the main idea in the reading "The Forces of Nature" 2.Read data tables, graphs and diagrams in the reading material "The Forces of Nature".	1.Students are able to find the main idea in the reading "The Forces of Nature". 2.Students are able to read data tables, graphs and diagrams in the reading material "the forces of nature".	<b>Criteria:</b> 1.Individual 2.Group  <b>Form of Assessment :</b> Participatory Activities	Collaborative learning Questions and Answers Discussion 3 X 50	Collaborative learning Questions and answers Discussion 3 x 50	<b>Material:</b> The Forces of nature <b>References:</b> Smith, C. (2004). <i>Environmental physics</i> . Routledge.	1%
2	1.Explain the concept of energy explained in the reading "energy" 2.Read tables, graphs and diagrams in the "energy" reading material	1.Students are able to explain the concept of energy explained in the reading "energy" 2.Students are able to read tables, graphs and diagrams in the "energy" reading material	<b>Criteria:</b> 1.Individual 2.Group  <b>Form of Assessment :</b> Participatory Activities	Collaborative learning Discussion Questions and Answers 3 X 50	Collaborative learning Discussion Questions and Answers 3 x 50	<b>Material:</b> Energy <b>Library:</b> Smith, C. (2004). <i>Environmental physics</i> . Routledge.	2%
3	1.Write mathematical symbols and numbers, as well as formulas in Physics correctly. 2.Write special terms in Physics material with correct spelling.	1.Students are able to write mathematical symbols and numbers, as well as formulas in Physics correctly. 2.Students are able to write special terms in Physics material with correct spelling.	<b>Criteria:</b> 1.Individual 2.Group  <b>Form of Assessment :</b> Participatory Activities	Collaborative learning Discussion Questions and Answers 3 X 50	Collaborative learning Discussion Questions and Answers 3 x 50	<b>Material:</b> Mathematics Symbol <b>Library:</b> Official Guide to the TOEFL Test With CD-ROM, 4th Edition (Official Guide to the Toefl Ibt). McGraw-Hill. USA. 4. Phillips, Deborah. 2001. Longman Introductory Course for the TOEFL Test: iBT, 2nd ed. Pearson Education. NY	2%

4	1. Make notes from the material "Heat and Radiation" 2. Explain the concepts of heat and radiation again after listening to the material.	1. Students are able to take notes from the material "Heat and Radiation" 2. Students are able to explain the concepts of heat and radiation again after listening to the material.	<b>Criteria:</b> 1. Individual 2. Group  <b>Form of Assessment :</b> Project Results Assessment / Product Assessment	Collaborative learning Discussion Questions and Answers 3 X 50	Collaborative learning Discussion Questions and Answers 3 x 50	<b>Material:</b> Heat and Radiation <b>References:</b> Smith, C. (2004). <i>Environmental physics</i> . Routledge.	2%
5	Use correct sentence structure.	Students are able to use correct sentence structures in simple conversations	<b>Criteria:</b> 1. Individual 2. Group  <b>Form of Assessment :</b> Participatory Activities	Small Group Discussion 3 X 50		<b>Material:</b> correct sentence structure in simple conversations <b>References:</b> Sharpe, Pamela. J. 2003. <i>How to prepare for the TOEFL</i> . Barron 19s Educational Series. NY	2%
6	1. Explain orally the three forms of matter. 2. Give examples of changes in the state of matter in English.	1. Able to explain verbally the three forms of matter. 2. Be able to give examples of changes in the state of substances in English.	<b>Criteria:</b> 1. Individual 2. Group  <b>Form of Assessment :</b> Participatory Activities	Small Group Discussion 3 X 50		<b>Material:</b> Calor <b>Bibliography:</b> Serway, RA 2005. <i>College Physics</i> . Belmont, US: Thomson Learning Publ.	2%
7	1. Designing experimental activities related to three forms of substances. 2. Present the results of experimental activities in English.	1. Designing experimental activities related to three forms of substances. 2. Present the results of experimental activities in English.	<b>Criteria:</b> Individual  <b>Form of Assessment :</b> Project Results Assessment / Product Assessment	Collaborative learning Discussion Questions and Answers 3 X 50	Collaborative learning Discussion Questions and Answers 3 x 50	<b>Material:</b> Forms of Substance <b>Library:</b> Smith, C. (2004). <i>Environmental physics</i> . Routledge.	5%
8	Midterm Evaluation / Midterm Exam	Midterm Evaluation / Midterm Exam	<b>Criteria:</b> Test  <b>Form of Assessment :</b> Project Results Assessment / Product Assessment, Test	Midterm Evaluation / Midterm Exam 3 X 50	Midterm Evaluation / Midterm Exam 3 x 50	<b>Material:</b> The Forces of nature; Energy; Heat and Radiation; <b>Bibliography :</b> Smith, C. (2004). <i>Environmental physics</i> . Routledge.	30%
9	Make a summary of the reading "The Earth's climate and climate change"	- Make a summary of the reading "The Earth's climate and climate change"	<b>Criteria:</b> 1. Individual 2. Group  <b>Form of Assessment :</b> Project Results Assessment / Product Assessment	Small Group Discussion 3 X 50	Small Group Discussion 3 x 50	<b>Material:</b> The Earth's climate and climate change <b>References:</b> Smith, C. (2004). <i>Environmental physics</i> . Routledge.	5%

10	<p>1.Understand the characteristics of descriptive papers</p> <p>2.Understand the characteristics of argumentative papers</p> <p>3.Understand the characteristics of persuasive papers</p>	<p>1.Students are able to understand the characteristics of descriptive papers</p> <p>2.Students are able to understand the characteristics of argumentative papers</p> <p>3.Students are able to understand the characteristics of persuasive papers</p>	<p><b>Criteria:</b></p> <p>1.Individual</p> <p>2.Group</p> <p><b>Form of Assessment :</b></p> <p>Participatory Activities</p>	Small Group Discussion 3 X 50	Small Group Discussion 3 x 50	<p><b>Material:</b> Writing Skills</p> <p><b>References:</b> <i>Parthare, Emma; Parthare, Gary; May, Peter. 2013. Headway Academic Skills IELTS Study Skills Edition: Level 1 Students Book. Oxford University Press.</i> <i>8. Loughheed, Lin. 2007. Longman Preparation Series for the TOEIC Test: Listening and Reading, 5th Edition. Pearson Education. NY</i></p>	5%
11	Make a paraphrasing of a quote taken from the reading "Sound and noise"	- Make a paraphrasing of a quote taken from the reading "Sound and noise"	<p><b>Criteria:</b></p> <p>1.Individual</p> <p>2.Group</p> <p><b>Form of Assessment :</b></p> <p>Project Results Assessment / Product Assessment</p>	Small Group Discussion 3 X 50	Small Group Discussion 3 x 50	<p><b>Material:</b> Sound and Noise</p> <p><b>References:</b> <i>Smith, C. (2004). Environmental physics. Routledge.</i></p>	6%
12	Make an argumentative or persuasive paper on the topic of Physics and the Environment	Students are able to write argumentative or persuasive papers on Physics and the Environment topics well	<p><b>Criteria:</b></p> <p>1.Individual</p> <p>2.Group</p> <p><b>Form of Assessment :</b></p> <p>Project Results Assessment / Product Assessment</p>	Project Based Team Learning 3 X 50	Project Based Team Learning 3 x 50	<p><b>Material:</b> Grammar</p> <p><b>Reference:</b> <i>Murphy, R. 2012. English Grammar in Use. Cambridge University Press.</i></p>	6%
13	Make an argumentative or persuasive paper on the topic of Physics and the Environment	Students are able to write argumentative or persuasive papers on Physics and the Environment topics well	<p><b>Criteria:</b></p> <p>1.Individual</p> <p>2.Group</p> <p><b>Form of Assessment :</b></p> <p>Project Results Assessment / Product Assessment</p>	Project Based Team Learning 3 X 50	Project Based Team Learning 3 x 50	<p><b>Material:</b> Grammar</p> <p><b>Reference:</b> <i>Murphy, R. 2012. English Grammar in Use. Cambridge University Press.</i></p>	6%
14	Design a poster on the topic of Physics and the Environment based on the paper that has been written.	Students are able to design posters on the topic of Physics and the Environment based on the papers they have written.	<p><b>Criteria:</b></p> <p>1.Individual</p> <p>2.Group</p> <p><b>Form of Assessment :</b></p> <p>Participatory Activities, Project Results Assessment / Product Assessment</p>	Project Based Team Learning 3 X 50	Project Based Team Learning 3 x 50	<p><b>Material:</b> Environmental Physics</p> <p><b>Bibliography:</b> <i>Smith, C. (2004). Environmental physics. Routledge.</i></p>	6%
15	Presenting a poster on the topic of Physics and the Environment based on a paper that has been written.M	Students are able to present posters on the topic of Physics and the Environment based on the papers they have written.	<p><b>Criteria:</b></p> <p>1.Individual</p> <p>2.Group</p> <p><b>Form of Assessment :</b></p> <p>Participatory Activities, Project Results Assessment / Product Assessment</p>	Project Based Team Learning 3 X 50	Project Based Team Learning 3 x 50	<p><b>Material:</b> Environmental Physics</p> <p><b>Bibliography:</b> <i>Smith, C. (2004). Environmental physics. Routledge.</i></p>	10%
16	Presenting a poster on the topic of Physics and the Environment based on a paper that has been written.	Students are able to present posters on the topic of Physics and the Environment based on the papers they have written.	<p><b>Criteria:</b></p> <p>1.Individual</p> <p>2.Group</p> <p><b>Form of Assessment :</b></p> <p>Participatory Activities, Project Results Assessment / Product Assessment</p>	Project Based Team Learning 3 X 50	Project Based Team Learning 3 x 50	<p><b>Material:</b> Environmental Physics</p> <p><b>Bibliography:</b> <i>Smith, C. (2004). Environmental physics. Routledge.</i></p>	10%

No	Evaluation	Percentage
1.	Participatory Activities	27%
2.	Project Results Assessment / Product Assessment	58%
3.	Test	15%
		100%

#### Notes

1. **Learning Outcomes of Study Program Graduates (PLO - Study Program)** are the abilities possessed by each Study Program graduate which are the internalization of attitudes, mastery of knowledge and skills according to the level of their study program obtained through the learning process.
2. **The PLO imposed on courses** are several learning outcomes of study program graduates (CPL-Study Program) which are used for the formation/development of a course consisting of aspects of attitude, general skills, special skills and knowledge.
3. **Program Objectives (PO)** are abilities that are specifically described from the PLO assigned to a course, and are specific to the study material or learning materials for that course.
4. **Subject Sub-PO (Sub-PO)** is a capability that is specifically described from the PO that can be measured or observed and is the final ability that is planned at each learning stage, and is specific to the learning material of the course.
5. **Indicators for assessing** abilities in the process and student learning outcomes are specific and measurable statements that identify the abilities or performance of student learning outcomes accompanied by evidence.
6. **Assessment Criteria** are benchmarks used as a measure or measure of learning achievement in assessments based on predetermined indicators. Assessment criteria are guidelines for assessors so that assessments are consistent and unbiased. Criteria can be quantitative or qualitative.
7. **Forms of assessment:** test and non-test.
8. **Forms of learning:** Lecture, Response, Tutorial, Seminar or equivalent, Practicum, Studio Practice, Workshop Practice, Field Practice, Research, Community Service and/or other equivalent forms of learning.
9. **Learning Methods:** Small Group Discussion, Role-Play & Simulation, Discovery Learning, Self-Directed Learning, Cooperative Learning, Collaborative Learning, Contextual Learning, Project Based Learning, and other equivalent methods.
10. **Learning materials** are details or descriptions of study materials which can be presented in the form of several main points and sub-topics.
11. **The assessment weight** is the percentage of assessment of each sub-PO achievement whose size is proportional to the level of difficulty of achieving that sub-PO, and the total is 100%.
12. TM=Face to face, PT=Structured assignments, BM=Independent study.