



Universitas Negeri Surabaya
Faculty of Education,
Doctoral Study Program in Basic Education

Document Code

SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight	SEMESTER	Compilation Date
Science Practical Study*	8602203009	Study Program Elective Courses	T=3 P=0 ECTS=7.56	3	July 14, 2023

AUTHORIZATION	SP Developer	Course Cluster Coordinator	Study Program Coordinator
	Prof. Dr. Wahono Widodo, M.Si	Prof. Dr. Wahono Widodo, M.Si	Prof. Dr. Suryanti, M.Pd.

Learning model	Project Based Learning
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PLO study program that is charged to the course

PLO-1	Able to demonstrate religious, national and cultural values, as well as academic ethics in carrying out their duties
PLO-3	Develop logical, critical, systematic and creative thinking in carrying out specific work in their field of expertise and in accordance with work competency standards in the field concerned
PLO-5	Mastering the philosophy and learning methodology of basic education to produce learning innovations.
PLO-7	Able to develop or discover new scientific theories/conceptions/ideas to contribute to the development and practice of science and technology that are innovative and responsive to basic education needs.
PLO-11	Able to develop basic education learning models along with supporting devices that are innovative and responsive to students' learning needs, as well as accommodating developments in technology and information.

Program Objectives (PO)

PO - 1	Carry out knowledge analysis and KPS on the Science Learning Outcomes section
PO - 2	Develop material (description of knowledge dimensions) and activities to support KPS or other skills in the Science Learning Outcomes section
PO - 3	Develop learning and assessment models and tools for the Science Learning Outcomes section according to the dissertation idea

PLO-PO Matrix

	P.O	PLO-1	PLO-3	PLO-5	PLO-7	PLO-11
PO-1		✓	✓			
PO-2		✓	✓		✓	✓
PO-3		✓	✓			✓

PO Matrix at the end of each learning stage (Sub-PO)

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									✓	✓	✓	✓	✓	✓	✓	✓

Short Course Description This course facilitates students to think about the nature, development and role of science, examines facts about science concepts, principles, theories and methodologies, the role of science learning in basic education, as well as strategies and methodologies for science learning in basic education. Lectures are carried out with CP analysis assignments, analysis of science material according to CP, analysis of potential misconceptions, student-centered inquiry ideas/activities, as well as formulation of practical science learning plans, and discussion of analysis & creation results, using a flip-learning model. Assessment is carried out by assessing participation, assignments, quality of thinking, originality of ideas, and written tests.

References Main :

- Arends, Richard I. (2012). Learning to Teach sixth Edition. New York: McGraw-Hill Book Company.
- Savedra, Anna Rosefsky and Opfer, Darlem V. 2012. Teaching and Learning 21st Century Skills, Lesson from The Learning Sciences. Hongkong: Asia Society, Partnership for Global Learning.
- Fogarty, Robin J., Judy Stoehr, and Howard Gardner. 2017. Integrating Curricula with Multiple Intelligences: Teams, Themes, and Threads / Edition 2. New York: SAGE Publications.
- Suryanti, Wahono Widodo, dan MintoHari. 2006. Pembelajaran IPA SD. Surabaya: Unesa University Press.
- <https://guru.kemdikbud.go.id/> [platform MERDEKA MENGAJAR]
- Giancoli, Douglas. 2014. Physics: Principles with Applications II Ed 7E. California: Addison-Wesley.
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- James Trefil & Robert M. Hazen. 2010. The Science (Integrated Approach). NY: John Wiley & Sons.
- Widodo, W., Rachmadiarti, F., Hidayati, S.N. 2016. Buku Siswa dan Buku Guru IPA SMP Kelas VII. Jakarta: Kemdikbud.
- Tim. 2016. Buku Siswa dan Buku Guru SD . Jakarta: Kemdikbud.

Supporters:

1. Widodo, Wahono & Sudibyo, Elok & Suryanti, Suryanti & Sari, Dhita & Inzanah, I. & Setiawan, Beni. (2020). The Effectiveness of Gadget-Based Interactive Multimedia in Improving Generation Z's Scientific Literacy. *Jurnal Pendidikan IPA Indonesia*. 9. 248-256. 10.15294/jpii.v9i2.23208.
2. Sari, D.A.P, Widodo, W., Rosdiana, L., Sari, D.P, Aulia, E.V. (2023). H5P Based Learning Media to Reinforce Pre-Service Science Teachers' Critical Thinking Skills: Development and Validation. *Jurnal Penelitian Pendidikan IPA*, 9(12), 10689–10697. <https://doi.org/10.29303/jppipa.v9i12.5452>.
3. Wahono Widodo, Muhamad Arif Mahdiannur, Suryanti Suryanti & Nadia Lutfi Choirunnisa. (2023). Mobile Interactive Multimedia to Assist Prospective Science Teachers Holding Conceptual Understanding in Problem-Solving Electrical Circuits. *TEM Journal*, 12(4), 2251-2263.

Supporting lecturer Prof.Dr. Wahono Widodo, M.Si.

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	Analyzing cognitive processes and knowledge dimensions in the Science Learning Outcomes section	<p>1. Analyze the cognitive processes of CP IPAS fragments that are relevant to the dissertation research idea</p> <p>2. Analyze the knowledge dimensions of CP IPAS fragments that are relevant to the dissertation research idea</p>	<p>Criteria: Accuracy and depth of analysis</p> <p>Form of Assessment : Participatory Activities, Project Results Assessment / Product Assessment</p>	Lecturer Presentations and Discussions related to the nature of science, science/science learning, CP Science, misconceptions, efforts to overcome them, student-centered science learning, and assessment in science learning 3 x 50	<p>Async. Study reading materials and PPT regarding science learning, CP IPAS, articles related to science learning. Async. Study reading materials and PPT regarding science learning, CP IPAS, articles related to science learning. Select CP IPAS fragments, Analyze cognitive processes and dimensions of knowledge in CP IPAS fragments that are relevant to the dissertation research idea. 3 x 50</p>	<p>Material: Elementary School Science Learning Library: Suryanti, Wahono Widodo, and Mintohari. 2006. <i>Elementary School Science Learning</i>. Surabaya: Unesa University Press.</p> <p>Material: integration in science and science learning References: Fogarty, Robin J., Judy Stoehr, and Howard Gardner. 2017. <i>Integrating Curricula with Multiple Intelligences: Teams, Themes, and Threads / Edition 2</i>. New York: SAGE Publications.</p> <p>Material: integration of science and social studies in SD Pustaka: https://guru.kemdikbud.go.id/..... [MERDEKA TEACHING platform]</p> <p>Material: Reference examples : Wahono Widodo, Muhamad Arif Mahdiannur, Suryanti Suryanti & Nadia Lutfi Choirunnisa. (2023). <i>Mobile Interactive Multimedia to Assist Prospective Science Teachers Holding Conceptual Understanding in Problem-Solving Electrical Circuits</i>. <i>TEM Journal</i>, 12(4), 2251-2263.</p> <p>Material: Reference examples : Sari, DAP, Widodo, W., Rosdiana, L., Sari, DP, Aulia, EV (2023). <i>H5P Based Learning Media to Reinforce Pre-Service Science Teachers' Critical Thinking Skills: Development and Validation</i>. <i>Journal of Science Education Research</i>, 9(12), 10689–10697. https://doi.org/...</p> <p>Material: Library Example : Team. 2016. <i>Elementary School Student Books and Teacher Books</i>. Jakarta: Ministry of Education and Culture.</p> <p>Material: Reference examples : Widodo, W., Rachmadiarti, F., Hidayati, SN 2016. <i>Class VII Middle School Science Student's Book and Science Teacher's Book</i>. Jakarta: Ministry of Education and Culture.</p>	5%

2	<p>1. Analyzing cognitive processes and knowledge dimensions in the Science Learning Outcomes section</p> <p>2. Developing material (description of knowledge dimensions) in the Science Learning Outcomes section</p> <p>3. Analyzing potential misconceptions in the Science Learning Outcomes section</p> <p>4. Develop inquiry ideas or student-centered activities according to the Social Sciences Learning Outcomes</p>	<p>1. Analyze the cognitive processes of CP IPAS fragments that are relevant to the dissertation research idea</p> <p>2. Analyze the knowledge dimensions of CP IPAS fragments that are relevant to the dissertation research idea</p> <p>3. Developing material (description of knowledge dimensions) in the Science Learning Outcomes section</p> <p>4. Analyzing potential misconceptions in the Science Learning Outcomes section</p> <p>5. Develop inquiry ideas or student-centered activities according to the Social Sciences Learning Outcomes</p>	<p>Criteria: Accuracy and depth of analysis, inquiry ideas/student activities</p> <p>Form of Assessment : Participatory Activities, Project Results Assessment / Product Assessment</p>	<p>Lecturer Presentations and Discussions related to the nature of science, science/science learning, IPAS CP, misconceptions, efforts to overcome them, student-centered science learning, and assessment in science AS learning 3 x 50</p>	<p>Async. Study reading materials and PPT regarding science learning, CP IPAS, articles related to science learning. Selecting CP IPAS fragments, Analyzing cognitive processes and dimensions of knowledge in CP IPAS fragments that are relevant to dissertation research ideas, developing inquiry ideas or student-centered activities according to the IPAS Learning Outcomes fragments, uploading in the Vinesa/SIDIA LMS. 3 x 50</p>	<p>Material: Elementary School Science Learning Library: Suryanti, Wahono Widodo, and Mintohari. 2006. <i>Elementary School Science Learning</i>. Surabaya: Unesa University Press.</p> <p>Material: integration in science and science learning References: Fogarty, Robin J., Judy Stoehr, and Howard Gardner. 2017. <i>Integrating Curricula with Multiple Intelligences: Teams, Themes, and Threads / Edition 2</i>. New York: SAGE Publications.</p> <p>Material: integration in elementary school subjects Reader: Team. 2016. <i>Elementary School Student Books and Teacher Books</i>. Jakarta: Ministry of Education and Culture.</p> <p>Material: Natural Sciences and Social Sciences in learning at Pustaka Elementary School: https://guru.kemdikbud.go.id/..... [MERDEKA TEACHING platform]</p> <p>Material: Examples of misconception remediation Readers: Wahono Widodo, Muhamad Arif Mahdiannur, Suryanti Suryanti & Nadia Lutfi Choirunnisa. (2023). <i>Mobile Interactive Multimedia to Assist Prospective Science Teachers Holding Conceptual Understanding in Problem-Solving Electrical Circuits</i>. TEM Journal, 12(4), 2251-2263.</p>	5%
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9	<p>Developing appropriate learning models for the purpose of developing thinking skills or others according to the CP IPAS section</p>	<p>1. Developing a science and science learning model according to dissertation ideas</p> <p>2. Develop a science learning assessment according to the dissertation idea</p>	<p>Criteria: Correctness, accuracy, language (ease of understanding) development results</p> <p>Form of Assessment : Project Results Assessment / Product Assessment</p>	<p>Lecturer Presentation and Discussion of student analysis results. 3 x 50</p>	<p>Async. Develop learning and assessment tools for the Social Science Learning Outcomes section based on analysis results and student inquiry/activity ideas according to dissertation ideas, uploading results to the SIDIA/Vinesa LMS. 3 x 50</p>	<p>Material: integration in elementary school subjects Reader: <i>Team. 2016. Elementary School Student Books and Teacher Books. Jakarta: Ministry of Education and Culture.</i></p> <p>Material: Natural Sciences and Social Sciences in learning at Pustaka Elementary School: https://guru.kemdikbud.go.id/... [MERDEKA TEACHING platform]</p> <p>Material: Integrated science material Reader: <i>James Trefil & Robert M. Hazen. 2010. The Science (Integrated Approach). NY: John Wiley & Sons.</i></p> <p>Material: science-physics References: <i>Giancoli, Douglas. 2014. Physics: Principles with Applications II Ed 7E. California: Addison-Wesley.</i></p>	5%

10	Developing appropriate learning models for the purpose of developing thinking skills or others according to the CP IPAS section	<p>1. Developing a science and science learning model according to dissertation ideas</p> <p>2. Developing assessment instruments in science and science learning according to dissertation ideas</p>	<p>Form of Assessment : Project Results Assessment / Product Assessment</p>	Lecturer Presentation and Discussion regarding the 3 x 50 Science learning and assessment tools	Async. developing 3 x 50 learning and assessment tools	<p>Material: Elementary School Science Learning Library: Suryanti, Wahono Widodo, and Mintohari. 2006. <i>Elementary School Science Learning</i>. Surabaya: Unesa University Press.</p> <hr/> <p>Material: integration in science and science learning References: Fogarty, Robin J., Judy Stoehr, and Howard Gardner. 2017. <i>Integrating Curricula with Multiple Intelligences: Teams, Themes, and Threads / Edition 2</i>. New York: SAGE Publications.</p> <hr/> <p>Material: science learning and assessment (S) Readers: Suryanti, Wahono Widodo, and Mintohari. 2006. <i>Elementary School Science Learning</i>. Surabaya: Unesa University Press.</p> <hr/> <p>Material: Merdeka Pustaka Curriculum Teaching Module : https://guru.kemdikbud.go.id/... [MERDEKA TEACHING platform]</p>	10%
11	Developing learning and assessment tools for the IPAS Learning Outcomes section	<p>1. Developing science and science learning tools according to dissertation ideas</p> <p>2. Developing assessment instruments in science and science learning according to dissertation ideas</p>	<p>Criteria: Correctness, accuracy, language (ease of understanding) development results</p> <p>Form of Assessment : Project Results Assessment / Product Assessment</p>	Presentation and discussion related to the 3 x 50 science learning and assessment tools	Async. developing 3 x 50 learning and assessment tools	<p>Material: Elementary School Science Learning Library: Suryanti, Wahono Widodo, and Mintohari. 2006. <i>Elementary School Science Learning</i>. Surabaya: Unesa University Press.</p> <hr/> <p>Material: integration in science and science learning References: Fogarty, Robin J., Judy Stoehr, and Howard Gardner. 2017. <i>Integrating Curricula with Multiple Intelligences: Teams, Themes, and Threads / Edition 2</i>. New York: SAGE Publications.</p> <hr/> <p>Material: science learning and assessment (S) Readers: Suryanti, Wahono Widodo, and Mintohari. 2006. <i>Elementary School Science Learning</i>. Surabaya: Unesa University Press.</p> <hr/> <p>Material: Merdeka Pustaka Curriculum Teaching Module : https://guru.kemdikbud.go.id/..... [MERDEKA TEACHING platform]</p> <hr/> <p>Material: Library Example : Team. 2016. <i>Elementary School Student Books and Teacher Books</i>. Jakarta: Ministry of Education and Culture.</p> <hr/> <p>Material: Reference examples : Widodo, W., Rachmadiarti, F., Hidayati, SN 2016. <i>Class VII Middle School Science Student's Book and Science Teacher's Book</i>. Jakarta: Ministry of Education and Culture.</p>	10%

12	Developing learning and assessment tools for the IPAS Learning Outcomes section	<p>1. Developing science and science learning tools according to dissertation ideas</p> <p>2. Developing assessment instruments in science and science learning according to dissertation ideas</p>	<p>Criteria: Correctness, accuracy, language (ease of understanding) development results</p> <p>Form of Assessment : Project Results Assessment / Product Assessment</p>	Presentation and discussion related to the 3 x 50 science learning and assessment tools	Async. developing 3 x 50 learning and assessment tools	<p>Material: Elementary School Science Learning Library: Suryanti, Wahono Widodo, and Mintohari. 2006. <i>Elementary School Science Learning</i>. Surabaya: Unesa University Press.</p> <hr/> <p>Material: integration in science and science learning References: Fogarty, Robin J., Judy Stoehr, and Howard Gardner. 2017. <i>Integrating Curricula with Multiple Intelligences: Teams, Themes, and Threads / Edition 2</i>. New York: SAGE Publications.</p> <hr/> <p>Material: science learning and assessment (S) Readers: Suryanti, Wahono Widodo, and Mintohari. 2006. <i>Elementary School Science Learning</i>. Surabaya: Unesa University Press.</p> <hr/> <p>Material: Merdeka Pustaka Curriculum Teaching Module : https://guru.kemdikbud.go.id/..... [MERDEKA TEACHING platform]</p> <hr/> <p>Material: Reference examples : Widodo, W., Rachmadiarti, F., Hidayati, SN 2016. <i>Class VII Middle School Science Student's Book and Teacher's Book</i>. Jakarta: Ministry of Education and Culture.</p> <hr/> <p>Material: Library Example : Team. 2016. <i>Elementary School Student Books and Teacher Books</i>. Jakarta: Ministry of Education and Culture.</p>	10%
13	Carrying out learning simulations that implement learning tools and assessments in the IPAS Learning Outcomes section	<p>1. Carrying out learning simulations</p> <p>2. Reflect on science learning</p>	<p>Criteria: quality and accuracy</p> <p>Form of Assessment : Participatory Activities, Project Results Assessment / Product Assessment</p>	Presentation and discussion related to science learning reflection, and learning videos as a reflection tool 3 x 50	Async. filming science learning 1 meeting according to the dissertation idea and tools created, editing, uploading to the Vinesa/SIDIA LMS page 3 x 50	<p>Material: Elementary School Science Learning Library: Suryanti, Wahono Widodo, and Mintohari. 2006. <i>Elementary School Science Learning</i>. Surabaya: Unesa University Press.</p> <hr/> <p>Material: integration in science and science learning References: Fogarty, Robin J., Judy Stoehr, and Howard Gardner. 2017. <i>Integrating Curricula with Multiple Intelligences: Teams, Themes, and Threads / Edition 2</i>. New York: SAGE Publications.</p> <hr/> <p>Material: science learning and assessment (S) Readers: Suryanti, Wahono Widodo, and Mintohari. 2006. <i>Elementary School Science Learning</i>. Surabaya: Unesa University Press.</p> <hr/> <p>Material: Merdeka Pustaka Curriculum Teaching Module : https://guru.kemdikbud.go.id/..... [MERDEKA TEACHING platform]</p> <hr/> <p>Material: Reference examples : Widodo, W., Rachmadiarti, F., Hidayati, SN 2016. <i>Class VII Middle School Science Student's Book and Teacher's Book</i>. Jakarta: Ministry of Education and Culture.</p> <hr/> <p>Material: Library Example : Team. 2016. <i>Elementary School Student Books and Teacher Books</i>. Jakarta: Ministry of Education and Culture.</p>	7%

14	Carrying out learning simulations that implement learning tools and assessments in the IPAS Learning Outcomes section	1. Carrying out learning simulations 2. Reflect on science learning	Criteria: quality and accuracy Form of Assessment : Participatory Activities, Project Results Assessment / Product Assessment	Presentation and discussion related to science learning reflection, and learning videos as a reflection tool 3 x 50	Async. filming science learning 1 meeting according to the dissertation idea and tools created, editing, uploading to the Vinesa/SIDIA LMS page 3 x 50	Material: Elementary School Science Learning Library: Suryanti, Wahono Widodo, and Mintohari. 2006. <i>Elementary School Science Learning</i> . Surabaya: Unesa University Press. Material: integration in science and science learning References: Fogarty, Robin J., Judy Stoehr, and Howard Gardner. 2017. <i>Integrating Curricula with Multiple Intelligences: Teams, Themes, and Threads / Edition 2</i> . New York: SAGE Publications. Material: science learning and assessment (S) Readers: Suryanti, Wahono Widodo, and Mintohari. 2006. <i>Elementary School Science Learning</i> . Surabaya: Unesa University Press. Material: Merdeka Pustaka Curriculum Teaching Module : https://guru.kemdikbud.go.id/..... [MERDEKA TEACHING platform] Material: Reference examples : Widodo, W., Rachmadiarti, F., Hidayati, SN 2016. <i>Class VII Middle School Science Student's Book and Science Teacher's Book</i> . Jakarta: Ministry of Education and Culture.	5%
15	Carrying out learning simulations that implement learning tools and assessments in the IPAS Learning Outcomes section	1. Carrying out learning simulations 2. Reflect on science learning	Criteria: quality and accuracy Form of Assessment : Participatory Activities, Project Results Assessment / Product Assessment	Presentation and discussion related to science learning reflection, and learning videos as a reflection tool 3 x 50	Async. filming science learning 1 meeting according to the dissertation idea and tools created, editing, uploading to the Vinesa/SIDIA LMS page 3 x 50	Material: Elementary School Science Learning Library: Suryanti, Wahono Widodo, and Mintohari. 2006. <i>Elementary School Science Learning</i> . Surabaya: Unesa University Press. Material: integration in science and science learning References: Fogarty, Robin J., Judy Stoehr, and Howard Gardner. 2017. <i>Integrating Curricula with Multiple Intelligences: Teams, Themes, and Threads / Edition 2</i> . New York: SAGE Publications. Material: science learning and assessment (S) Readers: Suryanti, Wahono Widodo, and Mintohari. 2006. <i>Elementary School Science Learning</i> . Surabaya: Unesa University Press. Material: Merdeka Pustaka Curriculum Teaching Module : https://guru.kemdikbud.go.id/..... [MERDEKA TEACHING platform] Material: Bibliography Examples : James Trefil & Robert M. Hazen. 2010. <i>The Science (Integrated Approach)</i> . NY: John Wiley & Sons. Material: Library Example : Team. 2016. <i>Elementary School Student Books and Teacher Books</i> . Jakarta: Ministry of Education and Culture.	5%

16	Carrying out learning simulations that implement learning tools and assessments in the IPAS Learning Outcomes section	1. Carrying out learning simulations 2. Reflect on science learning	Criteria: quality and accuracy Form of Assessment : Project Results Assessment / Product Assessment	Presentation and discussion related to science learning reflection, and learning videos as a reflection tool 3 x 50	Async. filming science learning 1 meeting according to the dissertation idea and tools created, editing, uploading to the Vinesa/SIDIA LMS page 3 x 50	Material: Elementary School Science Learning Library: Suryanti, Wahono Widodo, and Mintohari. 2006. <i>Elementary School Science Learning</i> . Surabaya: Unesa University Press. Material: integration in science and science learning References: Fogarty, Robin J., Judy Stoehr, and Howard Gardner. 2017. <i>Integrating Curricula with Multiple Intelligences: Teams, Themes, and Threads / Edition 2</i> . New York: SAGE Publications. Material: science learning and assessment (S) Readers: Suryanti, Wahono Widodo, and Mintohari. 2006. <i>Elementary School Science Learning</i> . Surabaya: Unesa University Press. Material: Merdeka Pustaka Curriculum Teaching Module : https://guru.kemdikbud.go.id/... [MERDEKA TEACHING platform]	0%
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Evaluation Percentage Recap: Project Based Learning

No	Evaluation	Percentage
1.	Participatory Activities	32.5%
2.	Project Results Assessment / Product Assessment	67.5%
		100%

Notes

- 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.
- 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.
- 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.
- 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.
- Indicators for assessing** ability in the process and student learning outcomes are specific and measurable statements that identify the ability or performance of student learning outcomes accompanied by evidence.
- 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.
- Forms of assessment:** test and non-test.
- 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.
- 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.
- Learning materials** are details or descriptions of study materials which can be presented in the form of several main points and sub-topics.
- 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%.
- TM=Face to face, PT=Structured assignments, BM=Independent study.