	Universitas Negeri Surabaya Faculty of Mathematics and Natural Sciences Biology Undergraduate Study Program	Document Code

SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight			SEMESTER	Compilation Date
Seminar	4620102159	Compulsory Study Program Subjects	T=2	P=0	ECTS=3.18	6	April 26, 2023

AUTHORIZATION	SP Developer	Course Cluster Coordinator	Study Program Coordinator
	Nur Qomariyah, S.Pd., M.Sc	Prof. Dr. Fida Rachmadiarti, M.Kes	Dr. H. Sunu Kuntjoro, S.Si., M.Si.

Learning model	**Project Based Learning**	
Program Learning Outcomes (PLO)	**PLO study program which is charged to the course**	
	PLO-5	Able to communicate scientific ideas, both orally and in writing using appropriate communication media according to the target, as a means of lifelong learning for academic self-development.
	PLO-7	Able to work independently and collaboratively, as well as responsibly, in completing various tasks in class, in the laboratory and in the field.
	PLO-10	Able to design and conduct experiments in the field of biology, manage, analyze, interpret, document and store research data, to manage biological natural resources
	Program Objectives (PO)	
	PO - 1	Able to demonstrate the basics of research methodology to analyze current issues contained in research methodology research proposals (CPL 2)
	PO - 2	Mastering the basics and forms of scientific communication, the basics of reviewing and writing articles, and the rules for designing scientific posters that reflect reasoning abilities in formulating procedural problem solving in the field of Biology to support professional tasks (CPL 3)
	PO - 3	Able to write abstracts based on IMRAC rules, review articles and design scientific posters in accordance with applicable rules. (CPL6)
	PO - 4	Have the skills to express ideas orally in research proposal seminars produced in research methodology courses, through various practical presentation techniques as a presenter, moderator, or buffer in seminar forums by utilizing appropriate science and technology. (CPL 8)
	PO - 5	Have an independent attitude. honest, responsible, objective, pay attention to ethics in carrying out duties and communicate when conveying both verbally and in writing. (CPL 10)
	PLO-PO Matrix	

P.O	PLO-5	PLO-7	PLO-10
PO-1			
PO-2			
PO-3			
PO-4			
PO-5			

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																
PO-4																
PO-5																

Short Course Description	The Seminar course discusses various scientific forums, techniques for writing and reviewing articles and equips students to publish research results in the field of Biology and present them orally in seminars both theoretically and practically. Seminar studies also include making scientific posters and seminar procedures by implementing various roles such as presenter, moderator and interpreter while still paying attention to communication ethics in scientific forums. The product or output of the seminar course is a biology research proposal that is ready for seminars, and posters for this course are presented in the form of presentations, discussions and assignments.
References	**Main :**

1. Artikel-artikel mutakhir (Jurnal Nasional dan Jurnal Internasional) yang memuat hasil penelitian di bidang biologi
2. Day, Robert A and Barbara Gastel T. 2006. How to Write and Publish Scientific Paper.
3. Newsom, L.C., Miller, S.W. and Chesson, M., 2021. Digital Posters and Printed Posters for Teaching and Learning. American Journal of Pharmaceutical Education.
4. Pedwell, R.K., Hardy, J.A. and Rowland, S.L., 2017. Effective visual design and communication practices for research posters: Exemplars based on the theory and practice of multimedia learning and rhetoric. Biochemistry and Molecular Biology Education, 45(3), pp.249-261.
5. Rowe, N., 2017. Academic & Scientific Poster Presentation. Cham: Springer.
6. Rowe, N., 2018. 'When You Get What You Want, but Not What You Need': The Motivations, Affordances and Shortcomings of Attending Academic/Scientific Conferences. International Journal of Research in Education and Science, 4(2), pp.714-729.
7. Tomita, K., 2017. Visual design tips to develop an inviting poster for poster presentations. TechTrends, 61(4), pp.313-315.

Supporters:

1. Tim Jurnal Unesa. 2012. Template e-journal unesa. www.ejournal.unesa.ac.id.

Supporting lecturer	Prof. Dr. Fida Rachmadiarti, M.Kes. Prof. Dr. Yuliani, M.Si. Nur Qomariyah, S.Pd., M.Sc.

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	Understand the nature of seminars	1. Explain the meaning of seminar 2. Compare various forms of forums based on their purpose	**Criteria:** USS/UTS weight is 20%, Student activities and responses during learning activities, especially practicums, are assessed as participation with a weight of 20%, US has a weight of 30%. Essay and multiple choice questions are assessed jointly on USS and USS. Performance questions are integrated during learning. **Forms of Assessment** : Participatory Activities, Project Results Assessment / Product Assessment	Student centered learning discusses various aspects of seminars and their types based on lecturer presentations and examples of 2 X 50 seminar activities	Learning uses LMS with a student approach to discuss various aspects of seminars and their types based on lecturer presentations and examples of seminar activities	**Material:** Understanding seminars Various scientific meeting forums: panel discussions, colloqium seminars, congresses, etc. **References:** *Rowe, N., 2018. 'When You Get What You Want, but Not What You Need': The Motivations, Affordances and Shortcomings of Attending Academic/Scientific Conferences. International Journal of Research in Education and Science, 4(2), pp.714-729.*	10%

2	Developing works in the form of posters	1. Explain the meaning of posters 2. Identify the characteristics of a poster 3. Skilled in making posters based on research results	**Criteria:** USS/UTS weight 20% Student activities and responses during learning activities, especially practicums, are assessed as participation, weight 20% US weight 30% Essay and multiple choice questions are assessed jointly on USS and USS Performance questions are integrated during learning **Form of Assessment** : Project Results Assessment / Product Assessment	Discuss the characteristics of Student-centered learning posters by creating a poster project: Creating individual posters based on research results from internships or Student Creativity Program activities that have been proposed. 2 X 50	Lectures use LMS with the same activities 2 X 50	**Material:** Definition of a poster, components of a poster, poster format, procedure for making a poster **Reference:** *Pedwell, RK, Hardy, JA and Rowland, SL, 2017. Effective visual design and communication practices for research posters: Exemplars based on the theory and practice of multimedia learning and rhetoric. Biochemistry and Molecular Biology Education, 45(3), pp.249-261.* **Material:** Definition of a poster, poster components, poster format, procedure for making a poster **Reference:** *Rowe, N., 2017. Academic & Scientific Poster Presentation. Cham: Springer.*	10%
3	Communicate the results of making posters	Skilled in presenting posters that have been created	**Criteria:** USS/UTS weight 20% Student activities and responses during learning activities, especially practicums, are assessed as participation, weight 20% US weight 30% Essay and multiple choice questions are assessed jointly on USS and USS Performance questions are integrated during learning **Form of Assessment** : Project Results Assessment / Product Assessment, Portfolio Assessment	Student centered learning: Students present scientific posters and discuss the characteristics of scientific posters that appear strong or that are still not appropriate 2 X 50	Learning using LMS with similar activities	**Material:** Poster components **Reference:** *Rowe, N., 2017. Academic & Scientific Poster Presentation. Cham: Springer.* **Material:** Procedures for poster presentations **Reference:** *Tomita, K., 2017. Visual design tips for developing an inviting poster for poster presentations. TechTrends, 61(4), pp. 313-315.*	5%
4	Understand the content of research results	1. Explain the contents of the research results and discussion 2. Linking theory and discussion of an article	**Criteria:** USS/UTS weight 20% Student activities and responses during learning activities, especially practicums, are assessed as participation, weight 20% US weight 30% Essay and multiple choice questions are assessed jointly on USS and USS Performance questions are integrated during learning **Form of Assessment** : Project Results Assessment / Product Assessment	Student Centered learning by discussing various aspects of research results based on the journals provided according to the research field/topic for each thesis interest group 2 X 50	Student Centered learning by discussing various aspects of research results based on journals provided according to the research field/topic of each thesis interest group via LMS. 2 X 50	**Material:** 1. Explaining the contents of research results and discussions 2. Relating theory and discussion from an article **Library:** *Latest articles (National Journals and International Journals) containing research results in the field of biology*	5%

5	Write abstracts and publications in the form of articles	1. Explain the contents of the abstract 2. Create an abstract based on literature 3. Explain the meaning of the article 4. Explain the format for writing articles 5. Explain the components of an article 6. Can write an article based on the research results provided	**Criteria:** USS/UTS weight 20% Student activities and responses during learning activities, especially practicums, are assessed as participation, weight 20% US weight 30% Essay and multiple choice questions are assessed jointly on USS and USS Performance questions are integrated during learning **Form of Assessment** : Project Results Assessment / Product Assessment	Discuss the characteristics of 2 X 50 abstracts and articles	Create individual articles based on the research results provided 2 X 50	**Material:** Contents of the abstract, Definition of articles, Format for writing articles, Tips for writing articles, Criteria for a good article **References:** *Day, Robert A and Barbara Gastel T. 2006. How to Write and Publish Scientific Paper.*	5%
6	Review articles from national and international journals	1. Look for the main ideas of the articles being studied 2. Reviewing articles studied based on background, methods and research results	**Criteria:** USS/UTS weight 20% Student activities and responses during learning activities, especially practicums, are assessed as participation, weight 20% US weight 30% Essay and multiple choice questions are assessed jointly on USS and USS Performance questions are integrated during learning **Forms of Assessment** : Participatory Activities, Project Results Assessment / Product Assessment	Student Centered Learning: Students review national or international journals (minimum two journals) 2 X 50	Learning via LMS with the same activities 2 X 50	**Material:** Article Review **Bibliography:** *Day, Robert A and Barbara Gastel T. 2006. How to Write and Publish Scientific Paper.*	5%

7	Communicate the results of article creation	1. Explain the seminar procedures 2. Skilled in presenting articles that have been created	**Criteria:** USS/UTS weight 20% Student activities and responses during learning activities, especially practicums, are assessed as participation, weight 20% US weight 30% Essay and multiple choice questions are assessed jointly on USS and USS Performance questions are integrated during learning **Forms of Assessment** : Participatory Activities, Project Results Assessment / Product Assessment	Student centered learning with students presenting the results of a review of articles that have been created 2 X 50	Student centered learning with students presenting the results of a review of articles that have been created 2 X 50	**Material:** Explaining the procedures for attending a seminar **Reference:** *Rowe, N., 2018. 'When You Get What You Want, but Not What You Need': The Motivations, Affordances and Shortcomings of Attending Academic/Scientific Conferences. International Journal of Research in Education and Science, 4(2), pp.714-729.* **Material:** Skilled in presenting a review of articles that have been written **. References:** *Pedwell, RK, Hardy, JA and Rowland, SL, 2017. Effective visual design and communication practices for research posters: Exemplars based on the theory and practice of multimedia learning and rhetoric. Biochemistry and Molecular Biology Education, 45(3), pp.249-261.*	5%
8	Midterm exam		**Criteria:** USS/UTS weight 20% Student activities and responses during learning activities, especially practicums, are assessed as participation, weight 20% US weight 30% Essay and multiple choice questions are assessed jointly on USS and USS Performance questions are integrated during learning **Form of Assessment** : Participatory Activities	UTS 2 X 50			10%

9	Presenting proposal work in seminar forums	1. Skilled in creating presentation media to present research proposals 2. Skilled in making presentations 3. Skilled in managing seminar forums as a moderator 4. Ask quality questions as a buffer	**Criteria:** USS/UTS weight 20% Student activities and responses during learning activities, especially practicums, are assessed as participation, weight 20% US weight 30% Essay and multiple choice questions are assessed jointly on USS and USS Performance questions are integrated during learning **Forms of Assessment** : Participatory Activities, Project Results Assessment / Product Assessment	Student centered learning: Students present 2 X 50 thesis research proposals	Student centered learning: Students present their thesis research proposals via LMS or zoom/g-meet 2 X 50	**Material:** Presentation skills **Reference:** *Rowe, N., 2018. 'When You Get What You Want, but Not What You Need': The Motivations, Affordances and Shortcomings of Attending Academic/Scientific Conferences. International Journal of Research in Education and Science, 4(2), pp.714-729.* **Material:** Skilled in creating presentation media to present research proposals **. References:** *Pedwell, RK, Hardy, JA and Rowland, SL, 2017. Effective visual design and communication practices for research posters: Exemplars based on the theory and practice of multimedia learning and rhetoric. Biochemistry and Molecular Biology Education, 45(3), pp.249-261.* **Material:** Skilled in managing seminar forums as a moderator, Asking quality questions as support. **Reference:** *Rowe, N., 2018. 'When You Get What You Want, but Not What You Need': The Motivations, Affordances and Shortcomings of Attending Academic/Scientific Conferences . International Journal of Research in Education and Science, 4(2), pp.714-729.*	5%

10	Presenting proposal work in seminar forums	1. Skilled in creating presentation media to present research proposals 2. Skilled in making presentations 3. Skilled in managing seminar forums as a moderator 4. Ask quality questions as a buffer	**Criteria:** USS/UTS weight 20% Student activities and responses during learning activities, especially practicums, are assessed as participation, weight 20% US weight 30% Essay and multiple choice questions are assessed jointly on USS and USS Performance questions are integrated during learning **Forms of Assessment** : Participatory Activities, Project Results Assessment / Product Assessment	Student centered learning: Students present 2 X 50 thesis research proposals	Student centered learning: Students present their thesis research proposals via LMS or zoom/g-meet 2 X 50	**Material:** Presentation skills **Reference:** *Rowe, N., 2018. 'When You Get What You Want, but Not What You Need': The Motivations, Affordances and Shortcomings of Attending Academic/Scientific Conferences. International Journal of Research in Education and Science, 4(2), pp.714-729.* **Material:** Skilled in creating presentation media to present research proposals **. References:** *Pedwell, RK, Hardy, JA and Rowland, SL, 2017. Effective visual design and communication practices for research posters: Exemplars based on the theory and practice of multimedia learning and rhetoric. Biochemistry and Molecular Biology Education, 45(3), pp.249-261.* **Material:** Skilled in managing seminar forums as a moderator, Asking quality questions as support. **Reference:** *Rowe, N., 2018. 'When You Get What You Want, but Not What You Need': The Motivations, Affordances and Shortcomings of Attending Academic/Scientific Conferences . International Journal of Research in Education and Science, 4(2), pp.714-729.*	5%

11	Presenting proposal work in seminar forums	1. Skilled in creating presentation media to present research proposals 2. Skilled in making presentations 3. Skilled in managing seminar forums as a moderator 4. Ask quality questions as a buffer	**Criteria:** USS/UTS weight 20% Student activities and responses during learning activities, especially practicums, are assessed as participation, weight 20% US weight 30% Essay and multiple choice questions are assessed jointly on USS and USS Performance questions are integrated during learning **Forms of Assessment** : Participatory Activities, Project Results Assessment / Product Assessment	Student centered learning: Students present 2 X 50 thesis research proposals	Student centered learning: Students present their thesis research proposals via LMS or zoom/g-meet 2 X 50	**Material:** Presentation skills **Reference:** *Rowe, N., 2018. 'When You Get What You Want, but Not What You Need': The Motivations, Affordances and Shortcomings of Attending Academic/Scientific Conferences. International Journal of Research in Education and Science, 4(2), pp.714-729.* **Material:** Skilled in creating presentation media to present research proposals **. References:** *Pedwell, RK, Hardy, JA and Rowland, SL, 2017. Effective visual design and communication practices for research posters: Exemplars based on the theory and practice of multimedia learning and rhetoric. Biochemistry and Molecular Biology Education, 45(3), pp.249-261.* **Material:** Skilled in managing seminar forums as a moderator, Asking quality questions as support. **Reference:** *Rowe, N., 2018. 'When You Get What You Want, but Not What You Need': The Motivations, Affordances and Shortcomings of Attending Academic/Scientific Conferences . International Journal of Research in Education and Science, 4(2), pp.714-729.*	5%

12	Presenting proposal work in seminar forums	1. Skilled in creating presentation media to present research proposals 2. Skilled in making presentations 3. Skilled in managing seminar forums as a moderator 4. Ask quality questions as a buffer	**Criteria:** USS/UTS weight 20% Student activities and responses during learning activities, especially practicums, are assessed as participation, weight 20% US weight 30% Essay and multiple choice questions are assessed jointly on USS and USS Performance questions are integrated during learning **Forms of Assessment** : Participatory Activities, Project Results Assessment / Product Assessment	Student centered learning: Students present 2 X 50 thesis research proposals	Student centered learning: Students present their thesis research proposals via LMS or zoom/g-meet 2 X 50	**Material:** Presentation skills **Reference:** *Rowe, N., 2018. 'When You Get What You Want, but Not What You Need': The Motivations, Affordances and Shortcomings of Attending Academic/Scientific Conferences. International Journal of Research in Education and Science, 4(2), pp.714-729.* **Material:** Skilled in creating presentation media to present research proposals **. References:** *Pedwell, RK, Hardy, JA and Rowland, SL, 2017. Effective visual design and communication practices for research posters: Exemplars based on the theory and practice of multimedia learning and rhetoric. Biochemistry and Molecular Biology Education, 45(3), pp.249-261.* **Material:** Skilled in managing seminar forums as a moderator, Asking quality questions as support. **Reference:** *Rowe, N., 2018. 'When You Get What You Want, but Not What You Need': The Motivations, Affordances and Shortcomings of Attending Academic/Scientific Conferences . International Journal of Research in Education and Science, 4(2), pp.714-729.*	5%

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14	Presenting proposal work in seminar forums	1. Skilled in creating presentation media to present research proposals 2. Skilled in making presentations 3. Skilled in managing seminar forums as a moderator 4. Ask quality questions as a buffer	**Criteria:** USS/UTS weight 20% Student activities and responses during learning activities, especially practicums, are assessed as participation, weight 20% US weight 30% Essay and multiple choice questions are assessed jointly on USS and USS Performance questions are integrated during learning **Forms of Assessment** : Participatory Activities, Project Results Assessment / Product Assessment	Student centered learning: Students present 2 X 50 thesis research proposals	Student centered learning: Students present their thesis research proposals via LMS or zoom/g-meet 2 X 50	**Material:** Presentation skills **Reference:** *Rowe, N., 2018. 'When You Get What You Want, but Not What You Need': The Motivations, Affordances and Shortcomings of Attending Academic/Scientific Conferences. International Journal of Research in Education and Science, 4(2), pp.714-729.* **Material:** Skilled in creating presentation media to present research proposals **. References:** *Pedwell, RK, Hardy, JA and Rowland, SL, 2017. Effective visual design and communication practices for research posters: Exemplars based on the theory and practice of multimedia learning and rhetoric. Biochemistry and Molecular Biology Education, 45(3), pp.249-261.* **Material:** Skilled in managing seminar forums as a moderator, Asking quality questions as support. **Reference:** *Rowe, N., 2018. 'When You Get What You Want, but Not What You Need': The Motivations, Affordances and Shortcomings of Attending Academic/Scientific Conferences . International Journal of Research in Education and Science, 4(2), pp.714-729.*	5%

15	Presenting proposal work in seminar forums	1. Skilled in creating presentation media to present research proposals 2. Skilled in making presentations 3. Skilled in managing seminar forums as a moderator 4. Ask quality questions as a buffer	**Criteria:** USS/UTS weight 20% Student activities and responses during learning activities, especially practicums, are assessed as participation, weight 20% US weight 30% Essay and multiple choice questions are assessed jointly on USS and USS Performance questions are integrated during learning **Forms of Assessment** : Participatory Activities, Project Results Assessment / Product Assessment	Student centered learning: Students present 2 X 50 thesis research proposals	Student centered learning: Students present their thesis research proposals via LMS or zoom/g-meet 2 X 50	**Material:** Presentation skills **Reference:** *Rowe, N., 2018. 'When You Get What You Want, but Not What You Need': The Motivations, Affordances and Shortcomings of Attending Academic/Scientific Conferences. International Journal of Research in Education and Science, 4(2), pp.714-729.* **Material:** Skilled in creating presentation media to present research proposals **. References:** *Pedwell, RK, Hardy, JA and Rowland, SL, 2017. Effective visual design and communication practices for research posters: Exemplars based on the theory and practice of multimedia learning and rhetoric. Biochemistry and Molecular Biology Education, 45(3), pp.249-261.* **Material:** Skilled in managing seminar forums as a moderator, Asking quality questions as support. **Reference:** *Rowe, N., 2018. 'When You Get What You Want, but Not What You Need': The Motivations, Affordances and Shortcomings of Attending Academic/Scientific Conferences . International Journal of Research in Education and Science, 4(2), pp.714-729.*	5%
16		UAS 30%	**Form of Assessment** : Participatory Activities	UAS	UAS		10%

Evaluation Percentage Recap: Project Based Learning

No	Evaluation	Percentage
1.	Participatory Activities	47.5%
2.	Project Results Assessment / Product Assessment	50%
3.	Portfolio Assessment	2.5%
		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** 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.
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.