

Short Course Description	Study the distribution of distribution areas and the presence of animals in the world in general and in Indonesia. Also learn about the factors that influence and encourage the spread of animals and their distribution patterns. The material is delivered using a student-centered approach through discussions, presentations and assignments given in the form of research projects carried out by students honestly and independently.						
References	Main :						
	<ol style="list-style-type: none"> 1. Cox, C Barry and Moore, Peter D. 2000. Biogeography, An Ecological and Evolutionary Approach. London: Blackwell Science. 2. Darlington, Philip J. 1957. Zoogeography, The Geographical Distribution of Animals. New York: John Wiley & Sons, Inc. 3. Huggett, Richard John. 2004. Fundamentals of Biogeography. London: Routledge Taylor & Francis Group. 4. Losos, Jonathan B; Ricklefs, Robert E; MacArthur, Robert H. 2010. The Theory of Island Biogeography Revisited. New Jersey: Princeton University Press 5. Pielou, EC. 1979. Biogeography. New York: A Wiley-Interscience Publication 6. Whittaker, Robert J. 1998. Island Biogeograph: Ecology, Evolution, and Conservation. Oxford: Oxford University Press. 						
	Supporters:						
<ol style="list-style-type: none"> 1. Ambarwati, R., Rahayu, D. A., Rachmadiarti, F., & Khaleyra, F. (2021). DNA barcoding of lamp shells (Brachiopoda: Lingula anatina) from Probolinggo, East Java, Indonesia. Biodiversitas Journal of Biological Diversity, 22(4). 2. Lim, J. Y., Tay, T. S., Lim, C. S., Lee, S. S. C., Teo, S. L.-M., & Tan, K. S. (2018). Mytella strigata (Bivalvia: Mytilidae): an alien mussel recently introduced to Singapore and spreading rapidly. Molluscan Research, 1–17. https://doi.org/10.1080/13235818.2018.1423858 3. Rahayu D, Nugroho E, & Listyorini D, 2019. DNA Barcoding Ikan Introduksi Khas Telaga Sari, Kabupaten Pasuruan. Biotropika: Journal of Tropical Biology, 7(2), 51-62. 							
Supporting lecturer	Dra. Winarsih, M.Kes. Reni Ambarwati, S.Si., M.Sc. Dwi Anggorowati Rahayu, S.Si., 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	<ol style="list-style-type: none"> 1.Understanding the Relationship between Biogeography and Zoogeography 2.Able to apply transferable skills to develop eco-commitment in an effort to realize the character of "Faith, Smart, Independent, Honest, Caring and Tough 3.Able to be responsible both as an individual and as a group in carrying out tasks 	<ol style="list-style-type: none"> 1.Explain the meaning of biogeography and zoogeography and relevant terms 2.Explain the relationship between biogeography and zoogeography 3.Show honest and independent character 4.Demonstrate responsible character 	<p>Criteria: Participation is an assessment of students' positive activities as well as their honest, independent, responsible character (weight 2) UTS test as UTS score, carried out to assess all relevant indicators through written tests for meeting activities 1-7, (weight 2) Assignments per topic as assignments (weight 3) Project assignments are equivalent to UAS (weight 3) The final NA is (participation value x2) (Assignment value x3) (UTS x2 value) (UAS x3 value) divided by 10</p> <p>Form of Assessment : Participatory Activities, Tests</p>	Discussion, Presentation, 2x50		<p>Material: Biogeography Bibliography: <i>Cox, C Barry and Moore, Peter D. 2000. Biogeography, An Ecological and Evolutionary Approach. London: Blackwell Science.</i></p>	5%

2	<p>1.Understanding the biogeography of regional divisions in the world. Understanding the division of the six (six) distribution regions of animals in the world</p> <p>2.Able to apply transferable skills to develop eco-commitment in an effort to realize the character of "Faith, Smart, Independent, Honest, Caring and Tough</p> <p>3.Able to be responsible both as an individual and as a group in carrying out tasks</p>	<p>1.Explains the distribution of animals in 6 (six) animal distribution areas in the world</p> <p>2.Show honest and independent character</p> <p>3.Demonstrate responsible character</p>	<p>Form of Assessment : Participatory Activities, Tests</p>	<p>Discussion, Presentation 2 X 50</p>		<p>Material: Animal distribution in 6 (six) animal distribution areas in the world. Reference: <i>Huggett, Richard John. 2004. Fundamentals of Biogeography. London: Routledge Taylor & Francis Group.</i></p>	5%
3	<p>1.Understand the division of three animal distribution areas in Indonesia</p> <p>2.Able to apply transferable skills to develop eco-commitment in an effort to realize the character of "Faith, Smart, Independent, Honest, Caring and Tough</p> <p>3.Able to be responsible both as an individual and as a group in carrying out tasks</p>	<p>1.Explain the grouping of animals in Indonesia based on regional division</p> <p>2.Explain the types of animals in each region</p> <p>3.Show honest and independent character</p> <p>4.Demonstrate responsible character</p>	<p>Criteria: Participation is an assessment of students' positive activities as well as their honest, independent, responsible character (weight 2) UTS test as UTS score, carried out to assess all relevant indicators through written tests for meeting activities 1-7, (weight 2) Assignments per topic as assignments (weight 3) Project assignments are equivalent to UAS (weight 3) The final NA is (participation value x 2) (Assignment value x 3) (UTS x 2 value) (UAS x 3 value) divided by 10</p> <p>Form of Assessment : Participatory Activities, Tests</p>	<p>Discussion, Presentation 2 X 50</p>		<p>Material: Grouping of animals in Indonesia based on regional divisions References: <i>Cox, C Barry and Moore, Peter D. 2000. Biogeography, An Ecological and Evolutionary Approach. London: Blackwell Science.</i></p>	5%

4	<p>1.Understand the relationship between zoogeography and continental drift</p> <p>2.Participation is an assessment of students' positive activities as well as their honest, independent, responsible character (weight 2) UTS test as UTS score, carried out to assess all relevant indicators through written tests for meeting activities 1-7, (weight 2) Assignments per topic as assignments (weight 3) Project assignments are equivalent to UAS (weight 3) The final NA is (participation value x2) (Assignment value x3) (UTS x2 value) (UAS x3 value) divided by 10</p> <p>3.Able to be responsible both as an individual and as a group in carrying out tasks</p>	<p>1.Explain the effect of continental drift on the distribution of invertebrates</p> <p>2.Explain the effect of continental drift on the distribution of vertebrates</p> <p>3.Show honest and independent character</p> <p>4.Demonstrate responsible character</p>	<p>Criteria: Participation is an assessment of students' positive activities as well as their honest, independent, responsible character (weight 2) UTS test as UTS score, carried out to assess all relevant indicators through written tests for meeting activities 1-7, (weight 2) Assignments per topic as assignments (weight 3) Project assignments are equivalent to UAS (weight 3) The final NA is (participation value x2) (Assignment value x3) (UTS x2 value) (UAS x3 value) divided by 10</p> <p>Form of Assessment : Participatory Activities, Tests</p>	<p>Presentation Discussion 2 X 50</p>	<p>Material: relationship between zoogeography and continental drift</p> <p>References: <i>Cox, C Barry and Moore, Peter D. 2000. Biogeography, An Ecological and Evolutionary Approach. London: Blackwell Science.</i></p>	5%
5	<p>1.Understand the factors that influence the existence of animals</p> <p>2.Able to be responsible both as an individual and as a group in carrying out tasks</p> <p>3.Able to apply transferable skills to develop eco-commitment in an effort to realize the character of "Faith, Smart, Independent, Honest, Caring and Tough</p>	<p>1.Explain the factors that influence the existence of animals</p> <p>2.Show honest and independent character</p> <p>3.Demonstrate responsible character</p>	<p>Criteria: Participation is an assessment of students' positive activities as well as their honest, independent, responsible character (weight 2) UTS test as UTS score, carried out to assess all relevant indicators through written tests for meeting activities 1-7, (weight 2) Assignments per topic as assignments (weight 3) Project assignments are equivalent to UAS (weight 3) The final NA is (participation value x2) (Assignment value x3) (UTS x2 value) (UAS x3 value) divided by 10</p> <p>Form of Assessment : Participatory Activities, Tests</p>	<p>Discussion, Presentation 2 X 50</p>	<p>Material: Factors that influence the existence of animals</p> <p>References: <i>Cox, C Barry and Moore, Peter D. 2000. Biogeography, An Ecological and Evolutionary Approach. London: Blackwell Science.</i></p>	5%

6	Understand the factors driving the spread of animals	<ol style="list-style-type: none"> 1.Explain the factors driving the spread of animals 2.Explain examples of the existence of animals for each of these factors 	<p>Criteria: Participation is an assessment of students' positive activities as well as their honest, independent, responsible character (weight 2) UTS test as UTS score, carried out to assess all relevant indicators through written tests for meeting activities 1-7, (weight 2) Assignments per topic as assignments (weight 3) Project assignments are equivalent to UAS (weight 3) The final NA is (participation value x 2) (Assignment value x 3) (UTS x 2 value) (UAS x 3 value) divided by 10</p> <p>Form of Assessment : Participatory Activities</p>	Discussion, Presentation 2 X 50		<p>Material: factors driving the spread of animals References: <i>Cox, C Barry and Moore, Peter D. 2000. Biogeography, An Ecological and Evolutionary Approach. London: Blackwell Science.</i></p>	6%
7	<ol style="list-style-type: none"> 1.Understand the distribution patterns of animals in the world with examples 2.Able to apply transferable skills to develop eco-commitment in an effort to realize the character of "Faith, Smart, Independent, Honest, Caring and Tough 3.Able to be responsible both as an individual and as a group in carrying out tasks 	<ol style="list-style-type: none"> 1.Explain three patterns of animal distribution 2.Give examples of three animal distribution patterns 3.Show honest and independent character 4.Demonstrate responsible character 	<p>Criteria: Participation is an assessment of students' positive activities as well as their honest, independent, responsible character (weight 2) UTS test as UTS score, carried out to assess all relevant indicators through written tests for meeting activities 1-7, (weight 2) Assignments per topic as assignments (weight 3) Project assignments are equivalent to UAS (weight 3) The final NA is (participation value x 2) (Assignment value x 3) (UTS x 2 value) (UAS x 3 value) divided by 10</p> <p>Form of Assessment : Participatory Activities, Tests</p>	Discussion, Presentation 2 X 50			6%
8	UTS	UTS	<p>Criteria: UTS</p>	UTS 2 X 50	UTS	<p>Material: - Library:</p>	0%

9	Analyzing journal examples of the distribution of invertebrate animals	<ol style="list-style-type: none"> 1. Analyzing journal examples of the distribution of invertebrate animals 2. Show honest and independent character 3. Demonstrate responsible character 	<p>Criteria: Participation is an assessment of students' positive activities as well as their honest, independent, responsible character (weight 2) UTS test as UTS score, carried out to assess all relevant indicators through written tests for meeting activities 1-7, (weight 2) Assignments per topic as assignments (weight 3) Project assignments are equivalent to UAS (weight 3) The final NA is (participation value x 2) (Assignment value x 3) (UTS x 2 value) (UAS x 3 value) divided by 10</p> <p>Form of Assessment : Participatory Activities, Tests</p>	Discussion, presentation, article review 2 X 50	Discussions, presentations, article reviews	<p>Material: Journal Analysis Literature: Lim, JY, Tay, TS, Lim, CS, Lee, SSC, Teo, SL-M., & Tan, KS (2018). <i>Mytella strigata</i> (Bivalvia: Mytilidae): an alien mussel recently introduced to Singapore and spreading rapidly. <i>Molluscan Research</i>, 1–17. https://doi.org/...</p>	8%
10	<ol style="list-style-type: none"> 1. Analyzing journal examples of the distribution of vertebrate animals 2. Able to apply transferable skills to develop eco-commitment in an effort to realize the character of "Faith, Smart, Independent, Honest, Caring and Tough 3. Able to be responsible both as an individual and as a group in carrying out tasks 	<ol style="list-style-type: none"> 1. Analyzing journal examples of the distribution of vertebrate animals 2. Show honest and independent character 3. Demonstrate responsible character 	<p>Criteria: Participation is an assessment of students' positive activities as well as their honest, independent, responsible character (weight 2) UTS test as UTS score, carried out to assess all relevant indicators through written tests for meeting activities 1-7, (weight 2) Assignments per topic as assignments (weight 3) Project assignments are equivalent to UAS (weight 3) The final NA is (participation value x 2) (Assignment value x 3) (UTS x 2 value) (UAS x 3 value) divided by 10</p> <p>Form of Assessment : Participatory Activities, Tests</p>	Discussion, presentation 2 X 50	Discussions, presentations	<p>Material: Journal Analysis Literature: Rahayu D, Nugroho E, & Listyorini D, 2019. <i>DNA Barcoding of Typical Introduced Fish in Telaga Sari, Pasuruan Regency. Biotropics: Journal of Tropical Biology</i>, 7(2), 51-62.</p>	5%

11	<p>1.Reconstructing animal distribution using gene bank data</p> <p>2.Able to apply transferable skills to develop eco-commitment in an effort to realize the character of "Faith, Smart, Independent, Honest, Caring and Tough</p> <p>3.Able to be responsible both as an individual and as a group in carrying out tasks</p>	<p>1. Reconstructing animal distribution using gene bank data</p> <p>2.Show honest and independent character</p> <p>3.Demonstrate responsible character</p>	<p>Criteria: Participation is an assessment of students' positive activities as well as their honest, independent, responsible character (weight 2) UTS test as UTS score, carried out to assess all relevant indicators through written tests for meeting activities 1-7, (weight 2) Assignments per topic as assignments (weight 3) Project assignments are equivalent to UAS (weight 3) The final NA is (participation value\times2) (Assignment value\times3) (UTS\times2 value) (UAS\times3 value) divided by 10</p> <p>Form of Assessment : Project Results Assessment / Product Assessment</p>	Project Assignment 2 X 50	Project Assignments	<p>Material: article examples</p> <p>References: <i>Ambarwati, R., Rahayu, DA, Rachmadiarti, F., & Khaleyla, F. (2021). DNA barcoding of lamp shells (Brachiopoda: Lingula anatina) from Probolinggo, East Java, Indonesia. Biodiversity Journal of Biological Diversity, 22(4).</i></p>	10%
12	<p>1.Reconstructing animal distribution using gene bank data</p> <p>2.Able to apply transferable skills to develop eco-commitment in an effort to realize the character of "Faith, Smart, Independent, Honest, Caring and Tough</p> <p>3.Able to be responsible both as an individual and as a group in carrying out tasks</p>	<p>1. Reconstructing animal distribution using gene bank data</p> <p>2.Show honest and independent character</p> <p>3.Demonstrate responsible character</p>	<p>Criteria: Participation is an assessment of students' positive activities as well as their honest, independent, responsible character (weight 2) UTS test as UTS score, carried out to assess all relevant indicators through written tests for meeting activities 1-7, (weight 2) Assignments per topic as assignments (weight 3) Project assignments are equivalent to UAS (weight 3) The final NA is (participation value\times2) (Assignment value\times3) (UTS\times2 value) (UAS\times3 value) divided by 10</p> <p>Form of Assessment : Project Results Assessment / Product Assessment</p>	Project Assignment 2 X 50	Project Assignments	<p>Material: article examples</p> <p>References: <i>Ambarwati, R., Rahayu, DA, Rachmadiarti, F., & Khaleyla, F. (2021). DNA barcoding of lamp shells (Brachiopoda: Lingula anatina) from Probolinggo, East Java, Indonesia. Biodiversity Journal of Biological Diversity, 22(4).</i></p>	10%

13	<p>1.Reconstructing animal distribution using gene bank data</p> <p>2.Able to apply transferable skills to develop eco-commitment in an effort to realize the character of "Faith, Smart, Independent, Honest, Caring and Tough</p> <p>3.Able to be responsible both as an individual and as a group in carrying out tasks</p>	<p>1. Reconstructing animal distribution using gene bank data</p> <p>2.Show honest and independent character</p> <p>3.Demonstrate responsible character</p>	<p>Criteria: Participation is an assessment of students' positive activities as well as their honest, independent, responsible character (weight 2) UTS test as UTS score, carried out to assess all relevant indicators through written tests for meeting activities 1-7, (weight 2) Assignments per topic as assignments (weight 3) Project assignments are equivalent to UAS (weight 3) The final NA is (participation value x 2) (Assignment value x 3) (UTS x 2 value) (UAS x 3 value) divided by 10</p> <p>Form of Assessment : Project Results Assessment / Product Assessment</p>	Project Assignment 2 X 50	Project Assignments	<p>Material: article examples</p> <p>References: <i>Ambarwati, R., Rahayu, DA, Rachmadiarti, F., & Khaleyla, F. (2021). DNA barcoding of lamp shells (Brachiopoda: Lingula anatina) from Probolinggo, East Java, Indonesia. Biodiversity Journal of Biological Diversity, 22(4).</i></p>	10%
14	<p>1.Communicate the results of animal distribution reconstruction</p> <p>2.Able to apply transferable skills to develop eco-commitment in an effort to realize the character of "Faith, Smart, Independent, Honest, Caring and Tough</p> <p>3.Able to be responsible both as an individual and as a group in carrying out tasks</p>	<p>1.Communicate the results of animal distribution reconstruction</p> <p>2.Show honest and independent character</p> <p>3.Demonstrate responsible character</p>	<p>Criteria: Participation is an assessment of students' positive activities as well as their honest, independent, responsible character (weight 2) UTS test as UTS score, carried out to assess all relevant indicators through written tests for meeting activities 1-7, (weight 2) Assignments per topic as assignments (weight 3) Project assignments are equivalent to UAS (weight 3) The final NA is (participation value x 2) (Assignment value x 3) (UTS x 2 value) (UAS x 3 value) divided by 10</p> <p>Form of Assessment : Project Results Assessment / Product Assessment</p>	Project Assignment 2 X 50	Project Assignments	<p>Material: article examples</p> <p>References: <i>Ambarwati, R., Rahayu, DA, Rachmadiarti, F., & Khaleyla, F. (2021). DNA barcoding of lamp shells (Brachiopoda: Lingula anatina) from Probolinggo, East Java, Indonesia. Biodiversity Journal of Biological Diversity, 22(4).</i></p>	10%

15	<p>1. Communicate the results of animal distribution reconstruction</p> <p>2. Able to apply transferable skills to develop eco-commitment in an effort to realize the character of "Faith, Smart, Independent, Honest, Caring and Tough</p> <p>3. Able to be responsible both as an individual and as a group in carrying out tasks</p>	<p>1. Write scientific articles on the results of reconstruction and analysis of animal distribution</p> <p>2. Show honest and independent character</p> <p>3. Demonstrate responsible character</p>	<p>Criteria: Participation is an assessment of students' positive activities as well as their honest, independent, responsible character (weight 2) UTS test as UTS score, carried out to assess all relevant indicators through written tests for meeting activities 1-7, (weight 2) Assignments per topic as assignments (weight 3) Project assignments are equivalent to UAS (weight 3) The final NA is (participation value x 2) (Assignment value x 3) (UTS x 2 value) (UAS x 3 value) divided by 10</p> <p>Form of Assessment : Project Results Assessment / Product Assessment</p>	Project Assignment 2 X 50	Project Assignments	<p>Material: article examples</p> <p>References: <i>Ambarwati, R., Rahayu, DA, Rachmadiarti, F., & Khaleyla, F. (2021). DNA barcoding of lamp shells (Brachiopoda: Lingula anatina) from Probolinggo, East Java, Indonesia. Biodiversity Journal of Biological Diversity, 22(4).</i></p>	10%
16				UAS	UAS	<p>Material: -</p> <p>Library:</p>	0%

Evaluation Percentage Recap: Project Based Learning

No	Evaluation	Percentage
1.	Participatory Activities	28%
2.	Project Results Assessment / Product Assessment	50%
3.	Test	22%
		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.