



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

Document Code

### SEMESTER LEARNING PLAN

| Courses            | CODE       | Course Family | Credit Weight         | SEMESTER | Compilation Date |
|--------------------|------------|---------------|-----------------------|----------|------------------|
| ICT Based Learning | 8420502176 |               | T=2   P=0   ECTS=3.18 | 5        | July 18, 2024    |

| AUTHORIZATION | SP Developer | Course Cluster Coordinator | Study Program Coordinator            |
|---------------|--------------|----------------------------|--------------------------------------|
|               | .....        | .....                      | Dr. Rinie Pratiwi Puspitawati, M.Si. |

|                       |                               |
|-----------------------|-------------------------------|
| <b>Learning model</b> | <b>Project Based Learning</b> |
|-----------------------|-------------------------------|

|  |   |      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |
|--|---|------|---|---|---|---|---|---|---|---|----|----|----|----|----|----|
| <b>Program Learning Outcomes (PLO)</b> | <b>PLO study program that is charged to the course</b>      |      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |
|  | <b>Program Objectives (PO)</b>                              |      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |
|  | <b>PLO-PO Matrix</b>  |      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |
|  |   | P.O  |   |   |   |   |   |   |   |   |    |    |    |    |    |    |
|  | <b>PO Matrix at the end of each learning stage (Sub-PO)</b> |      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |
|  | P.O   | Week |   |   |   |   |   |   |   |   |    |    |    |    |    |    |
|  |   | 1    | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |

**Short Course Description** Study of the meaning, types/classification, functions and basics of ICT-based learning development. Media development emphasizes innovative ICT-based learning as a solution to biology learning management problems. The development of ICT-based learning takes into account the principles of utilizing the surrounding environment (contextual) and ICT. Lectures are delivered through presentations, discussions and assignments.

|                   |   |
|-------------------|---|
| <b>References</b> | <p><b>Main :</b></p> <ol style="list-style-type: none"> <li>1. Asra, Deni Darmawan &amp; Cepi Riyana. 2007. Komputer dan Media Pembelajaran. Jakarta. DIKTI, Depdiknas</li> <li>2. Budi Sutedjo Dharma Oetomo. 2002. E-education; konsep TI dan aplikasi internet pendidikan. Yogyakarta: Andi Offset</li> <li>3. Sri Anitah. 2008. Media Pembelajaran. Surakarta: UPT UNS Press Universitas Sebelas Maret</li> <li>4. Depdiknas. 2006. Keterampilan Dasar Teknologi Informasi Dan Komunikasi; Konsorsium Program PJJ S-1 PGSD. Jakarta: Depdiknas</li> <li>5. Hartono Jogiyanto. 2000. Pengenalan Komputer; dasar ilmu komputer, pemrograman, sistem informasi dan intelegensi buatan. Yogyakarta: Andi Offset</li> <li>6. Kadir Abdul &amp; Triwahyuni Terra CH. 2005. Pengenalan Teknologi Informasi. Yogyakarta: Andi Offset</li> <li>7. Abdul Kadir . 2003. Pengenalan Sistem Informasi. Yogyakarta: Andi Offset</li> <li>8. Sadiman, A. S, dkk. 2006. Media Pendidikan. Jakarta: PT. Raja Grafindo Perkasa</li> </ol> <p><b>Supporters:</b></p> |
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|----------------------------|---|
| <b>Supporting lecturer</b> | Dr. Wisanti, M.S.<br>Dr. Raharjo, M.Si.<br>Dr. Muji Sri Pratiwi, S.Pd., 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 | Understand the general description of the course (learning contract) and explanation of the course. Have a responsible attitude towards performance in ICT-Based Learning lectures | <ol style="list-style-type: none"> <li>1.Explaining the ICT- Based Learning learning contract</li> <li>2.Describe the content of ICT-based learning lecture material</li> <li>3.Be present on time according to the lecture schedule</li> <li>4.Collect assignments on time</li> </ol>   | <p><b>Criteria:</b><br/>Assessment is based on benchmarks (PAP). The assessment components consist of sub-summative, assignment, summative and participation grades. Participation assessment is an assessment of attitudes. Performance assessment in the form of presentation performance is carried out integrated during learning as an assignment grade</p> | Presentation, discussion<br>2 X 50                    |  |  | 0% |
| 2 | Understand learning media. Have a responsible attitude towards performance in ICT-based learning courses   | <ol style="list-style-type: none"> <li>1.Explain the meaning of learning media</li> <li>2.Describe the benefits of developing learning media</li> <li>3.Describe the types and classifications of learning media</li> <li>4.Be present on time according to the lecture schedule</li> <li>5.Collect assignments on time</li> </ol>             | <p><b>Criteria:</b><br/>Assessment is based on benchmarks (PAP). The assessment components consist of sub-summative, assignment, summative and participation grades. Participation assessment is an assessment of attitudes. Performance assessment in the form of presentation performance is carried out integrated during learning as an assignment grade</p> | Presentation, discussion<br>2 X 50                    |  |  | 0% |
| 3 | Understand learning innovation. Have a responsible attitude towards performance in ICT-based learning courses  | <ol style="list-style-type: none"> <li>1.Describe the meaning of learning innovation</li> <li>2.Providing arguments for the need for learning innovation</li> <li>3.Providing arguments for ICT/ICT as a learning innovation</li> <li>4.Be present on time according to the lecture schedule</li> <li>5.Collect assignments on time</li> </ol> | <p><b>Criteria:</b><br/>Assessment is based on benchmarks (PAP). The assessment components consist of sub-summative, assignment, summative and participation grades. Participation assessment is an assessment of attitudes. Performance assessment in the form of presentation performance is carried out integrated during learning as an assignment grade</p> | Presentations, discussions and assignments<br>2 X 50  |  |  | 0% |
| 4 | Explain the basic concepts of ICT  | <ol style="list-style-type: none"> <li>1.Describe the meaning of ICT</li> <li>2.Describe the role of ICT in learning.</li> <li>3.Be present on time according to the lecture schedule</li> <li>4.Collect assignments on time</li> </ol>  | <p><b>Criteria:</b><br/>Assessment is based on benchmarks (PAP). The assessment components consist of sub-summative, assignment, summative and participation grades. Participation assessment is an assessment of attitudes. Performance assessment in the form of presentation performance is carried out integrated during learning as an assignment grade</p> | Presentations, discussions and assignments.<br>2 X 50 |  |  | 0% |

|   |   |  |  |  |  |  |    |
|---|---|--|--|--|--|--|----|
| 5 | Explain several examples of the implementation or use of ICT in the world of education/learning in schools, especially high schools. Have a responsible attitude towards performance in ICT-Based Learning lectures | <ol style="list-style-type: none"> <li>1. Describe ICT as a supporter of mass/classical learning</li> <li>2. Describe ICT as a supporter of independent learning</li> <li>3. Describe ICT as supporting administration and personality development</li> <li>4. Be present on time according to the lecture schedule</li> <li>5. Collect assignments on time</li> </ol> | <b>Criteria:</b><br>Assessment is based on benchmarks (PAP). The assessment components consist of sub-summative, assignment, summative and participation grades. Participation assessment is an assessment of attitudes. Performance assessment in the form of presentation performance is carried out integrated during learning as an assignment grade | Presentation and discussion<br>2 X 50                  |  |  | 0% |
| 6 | Analyzing the Impact of ICT Implementation in learning. Having a responsible attitude towards performance in ICT-Based Learning lectures  | <ol style="list-style-type: none"> <li>1. Explain the negative impacts of ICT/ICT</li> <li>2. Explain the positive impact of ICT/ICT</li> <li>3. Be present on time according to the lecture schedule</li> <li>4. Collect assignments on time</li> </ol>   | <b>Criteria:</b><br>Assessment is based on benchmarks (PAP). The assessment components consist of sub-summative, assignment, summative and participation grades. Participation assessment is an assessment of attitudes. Performance assessment in the form of presentation performance is carried out integrated during learning as an assignment grade | Presentations, discussions and assignments<br>2 X 50   |  |  | 0% |
| 7 | Explaining ICT-Based Media Development. Having a responsible attitude towards performance in ICT-Based Learning lectures  | <ol style="list-style-type: none"> <li>1. Explain the role of computers as a learning medium</li> <li>2. Skilled in compiling computer-based media</li> <li>3. Be present on time according to the lecture schedule</li> <li>4. Collect assignments on time</li> </ol>   | <b>Criteria:</b><br>Assessment is based on benchmarks (PAP). The assessment components consist of sub-summative, assignment, summative and participation grades. Participation assessment is an assessment of attitudes. Performance assessment in the form of presentation performance is carried out integrated during learning as an assignment grade | Lectures, discussion-information, Assignment<br>2 X 50 |  |  | 0% |
| 8 | U.S.S   |  | <b>Criteria:</b><br>Assessment is based on benchmarks (PAP). The assessment components consist of sub-summative, assignment, summative and participation grades. Participation assessment is an assessment of attitudes. Performance assessment in the form of presentation performance is carried out integrated during learning as an assignment grade | 2 X 50   |  |  | 0% |

|    |  |   |  |   |  |  |    |
|----|--|---|--|---|--|--|----|
| 9  | Understand and be skilled at making ICT-Based Learning in the form of PPT-based slides. Have a responsible attitude towards performance in ICT-Based Learning lectures | <ol style="list-style-type: none"> <li>1.Explains how to design computer-based media</li> <li>2.Explain how to put together a story board</li> <li>3.Skilled in developing flowcharts</li> <li>4.Collect assignments on time</li> </ol>   | <p><b>Criteria:</b><br/>Assessment is based on benchmarks (PAP). The assessment components consist of sub-summative, assignment, summative and participation grades. Participation assessment is an assessment of attitudes. Performance assessment in the form of presentation performance is carried out integrated during learning as an assignment grade</p> | Lectures, discussion-information, Assignment 2 X 50 |  |  | 0% |
| 10 | Skilled in using ICT-Based Learning in the form of PPT-based slides. Have a responsible attitude towards performance in ICT-Based Learning lectures                    | <ol style="list-style-type: none"> <li>1.Designing ICT-based learning in the form of PPT and macromedia-based slides or others.</li> <li>2.Working on the designed design.</li> <li>3.Presenting and at the same time practicing ICT-based learning</li> <li>4.Be present on time according to the lecture schedule</li> <li>5.Collect assignments on time</li> </ol> | <p><b>Criteria:</b><br/>Assessment is based on benchmarks (PAP). The assessment components consist of sub-summative, assignment, summative and participation grades. Participation assessment is an assessment of attitudes. Performance assessment in the form of presentation performance is carried out integrated during learning as an assignment grade</p> | Lecture, discussion-information, 2 X 50             |  |  | 0% |
| 11 | Skilled in using ICT-Based Learning in the form of PPT-based slides. Have a responsible attitude towards performance in ICT-Based Learning lectures                    | <ol style="list-style-type: none"> <li>1.Designing ICT-based learning in the form of PPT and macromedia-based slides or others.</li> <li>2.Working on the designed design.</li> <li>3.Presenting and at the same time practicing ICT-based learning</li> <li>4.Be present on time according to the lecture schedule</li> <li>5.Collect assignments on time</li> </ol> | <p><b>Criteria:</b><br/>Assessment is based on benchmarks (PAP). The assessment components consist of sub-summative, assignment, summative and participation grades. Participation assessment is an assessment of attitudes. Performance assessment in the form of presentation performance is carried out integrated during learning as an assignment grade</p> | Lecture, discussion-information, 2 X 50             |  |  | 0% |
| 12 | Skilled in using ICT-Based Learning in the form of PPT-based slides. Have a responsible attitude towards performance in ICT-Based Learning lectures                    | <ol style="list-style-type: none"> <li>1.Designing ICT-based learning in the form of PPT and macromedia-based slides or others.</li> <li>2.Working on the designed design.</li> <li>3.Presenting and at the same time practicing ICT-based learning</li> <li>4.Be present on time according to the lecture schedule</li> <li>5.Collect assignments on time</li> </ol> | <p><b>Criteria:</b><br/>Assessment is based on benchmarks (PAP). The assessment components consist of sub-summative, assignment, summative and participation grades. Participation assessment is an assessment of attitudes. Performance assessment in the form of presentation performance is carried out integrated during learning as an assignment grade</p> | Lecture, discussion-information, 2 X 50             |  |  | 0% |

|    |   |   |  |   |  |  |    |
|----|---|---|--|---|--|--|----|
| 13 | Skilled in using ICT-Based Learning in the form of PPT-based slides. Have a responsible attitude towards performance in ICT-Based Learning lectures                         | <ol style="list-style-type: none"> <li>1.Designing ICT-based learning in the form of PPT and macromedia-based slides or others.</li> <li>2.Working on the designed design.</li> <li>3.Presenting and at the same time practicing ICT-based learning</li> <li>4.Be present on time according to the lecture schedule</li> <li>5.Collect assignments on time</li> </ol>   | <b>Criteria:</b><br>Assessment is based on benchmarks (PAP). The assessment components consist of sub-summative, assignment, summative and participation grades. Participation assessment is an assessment of attitudes. Performance assessment in the form of presentation performance is carried out integrated during learning as an assignment grade | Lecture, discussion-information, 2 X 50             |  |  | 0% |
| 14 | Understand and be skilled in creating distance (online) learning media for Biology learning. Have a responsible attitude towards performance in ICT-Based Learning lectures | <ol style="list-style-type: none"> <li>1.Explains the meaning, types/classification, functions and basics of using distance (online) learning media for learning Biology</li> <li>2.Create and evaluate online (website) for Biology learning that is valid, practical, effective and safe.</li> <li>3.Be present on time according to the lecture schedule</li> <li>4.Collect assignments on time</li> </ol> | <b>Criteria:</b><br>Assessment is based on benchmarks (PAP). The assessment components consist of sub-summative, assignment, summative and participation grades. Participation assessment is an assessment of attitudes. Performance assessment in the form of presentation performance is carried out integrated during learning as an assignment grade | Lectures, discussion-information, Assignment 2 X 50 |  |  | 0% |
| 15 | Skilled in using distance (online) learning media for Biology learning. Have a responsible attitude towards performance in ICT-Based Learning lectures                      | <ol style="list-style-type: none"> <li>1.Using distance (online) learning media for Biology learning.</li> <li>2.Be present on time according to the lecture schedule</li> <li>3.Collect assignments on time</li> </ol>   | <b>Criteria:</b><br>Assessment is based on benchmarks (PAP). The assessment components consist of sub-summative, assignment, summative and participation grades. Participation assessment is an assessment of attitudes. Performance assessment in the form of presentation performance is carried out integrated during learning as an assignment grade | Lecture, discussion-information, 2 X 50             |  |  | 0% |
| 16 |   |   |  |   |  |  | 0% |

**Evaluation Percentage Recap: Project Based Learning**

| No | Evaluation | Percentage |
|----|------------|------------|
|    |            | 0%         |

**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.