

## Universitas Negeri Surabaya Faculty of Mathematics and Natural Sciences Science Education Doctoral Study Program

Document Code

## SEMESTER LEARNING PLAN

| Courses                       |  |  | CODE   | CODE   |  |   | Course Family  |   |  | Crec   | lit We  | eight  |   | SEME  | STER   | Cor<br>Dat  | npilatio<br>e   |  |  |
|-------------------------------|--|--|--|--|--|---|--|---|--|--|---|--|---|---|--|---|---|--|--|
| Advanced Learn                | ning Theory  |  | 840010202  | 8400102026   |  |   | Com<br>Subje   | pulsor<br>ects  | / Study  | y Pro  | ogram   | T=2  | P=0   | ECTS=5  | .04  |   | 1   | Jun<br>202   | e 20,<br>2   |
| AUTHORIZATIO                  | N  |  | SP Develo  | per  |  |   |  |   |  | C  | Course Cluster Coordinator  |  |   |   |  | Study<br>Coord  | Progra<br>linator   | am   |  |
|                               |  |  | Prof. Dr. Er<br>Dr. Wahond   | Prof. Dr. Endang Susantini, M.Pd. dan Pr<br>Dr. Wahono Widodo, M.Si.               |  |   | Prof.  | FN  | Prof. Dr. Endang Susantini,<br>M.Pd.   |  |   |  | Prof. Dr. Suyatno, M.Si.  |   |  |   |   |  |  |
| Learning<br>model             | Case Studies   |  |  |  |  |   |  |   |  |  |   |  |   |   |  |   |   |  |  |
| Program                       | PLO study prog   | Irai   | m which is ch  | arge   | d to t   | he co   | ours   | е   |  |  |   |  |   |   |  |   |   |  |  |
| Learning<br>Outcomes<br>(PLO) | PLO-8  | 2.<br>tha<br>int                                     | Able to prepare<br>at can be justifie<br>ernational journ  | e scier<br>ed scir<br>als  | ntific a<br>entifica   | rgume<br>ally ar  | ents<br>nd ac  | and so<br>ademi   | lutions<br>cally, a  | s bas<br>and c   | ed on a<br>commur   | a critica<br>nicate  | al viev<br>them   | v of facts,<br>through so   | con  | cepts, p<br>tific pub   | principle   | s or th<br>s in re   | neories<br>putable   |
|                               | PLO-12   | 2.   | Master the lates   | st the   | ories r  | elated  | d to s   | cientif   | ic knov  | vledą  | ge and  | scienc   | e edu   | cation  |  |   |   |  |  |
|                               | Program Object   | tive   | es (PO)  |  |  |   |  |   |  |  |   |  |   |   |  |   |   |  |  |
|                               | PO - 1   | Stu<br>lea   | udents can prov<br>Irning.   | vide a   | irgume   | ents fo   | or th  | e impo  | ortance  | e of u   | underst   | andinę   | g lear  | ning theori   | es i   | n the c   | levelopi  | nent   | of scien   |
|                               | PO - 2   | Stı<br>lea   | udents can deve<br>Irning and resea  | elop a<br>arch fe  | an und<br>or diss  | dersta<br>sertatio  | ndin<br>on w   | g of th<br>riting.  | e mair   | n ide  | as of c   | urrent   | learn   | ing theorie   | es a   | nd thei   | r applic  | ation  | in scier   |
|                               | PO - 3   | Stu<br>the   | udents can writ<br>eories relevant t   | e a d<br>o the   | lisserta<br>disser   | ation<br>tation   | pre-p<br>topi  | oropos<br>c indep   | al for<br>bender   | Chaj<br>ntly a   | pter I a<br>and resp  | nd Cł<br>onsib   | napter<br>ly.   | II which  | emp  | hasize  | s the s   | tudy o   | of learni  |
|                               | PLO-PO Matrix  |  |  |  |  |   |  |   |  |  |   |  |   |   |  |   |   |  |  |
|                               |  |  |  |  |  |   |  |   |  |  |   |  |   |   |  |   |   |  |  |
|                               |  |  | P.0  |  | PL   | O-8   |  | PI  | 0-12   |  | ]   |  |   |   |  |   |   |  |  |
|                               |  | Ī  | PO-1   |  |  |   |  |   |  |  | ]   |  |   |   |  |   |   |  |  |
|                               |  | Ī  | PO-2   |  |  |   | Ì  |   |  |  | 1   |  |   |   |  |   |   |  |  |
|                               |  | Ī  | PO-3   |  |  |   |  |   |  |  | ]   |  |   |   |  |   |   |  |  |
|                               | PO Matrix at the   | e ei   | nd of each lea   | urning   | g stag   | ge (Si  | ub-F   | 90)   |  |  |   |  |   |   |  |   |   |  |  |
|                               |  |  |  |  |  |   |  |   |  |  |   |  |   |   |  |   |   |  |  |
|                               |  | ſ  | P.0  |  |  |   |  |   |  |  |   | Weel   | <   |   |  |   |   |  |  |
|                               |  |  |  | 1  | 2  | 3   | 4  | 5   | 6  | 7  | 8   | 9  | 10  | 11 1  | .2   | 13  | 14  | 15   | 16   |
|                               |  | Ī  | PO-1   | 1  | 1  | 1   |  | 1   |  |  |   |  |   |   |  |   |   |  |  |
|                               |  | ľ  | PO-2   |  | 1  | 1   |  | 1   |  |  |   |  |   |   |  |   |   |  |  |
|                               |  | ľ  | PO-3   |  |  |   |  |   |  |  |   |  |   |   |  |   |   |  |  |
| Short Course<br>Description   | This lecture discu<br>Behavioral Learni<br>Learning: What is<br>Taught? What Ma<br>Study Strategies J<br>How We Learn?:<br>Constructivism in<br>Some Theories C<br>Enhanced? How | isse<br>ing's ar<br>akes<br>Hel<br>In<br>The<br>of N | es Behavioral V<br>? How Has So<br>n Information-P<br>s Information M<br>p Students Lea<br>dividual Constr<br>e Classroom, C<br>Motivation? Ho<br>in Teachers Re | views<br>bocial I<br>roces<br>leanir<br>rn? H<br>uctivis<br>Coope<br>w Ca<br>eward | of Lea<br>Learning M<br>Ingful?<br>Iow Do<br>Iow | arning<br>ng Th<br>Model'<br>Comp<br>o Cog<br>ndividu<br>Learr<br>achers<br>orman | p: Wh<br>neory<br>? Wh<br>plex of<br>nitive<br>ual C<br>ning,<br>s Inc | nat Be<br>v Cont<br>nat Ca<br>Cognit<br>e Teac<br>Constru<br>Constru<br>rease<br>Effort | haviora<br>ributec<br>uses I<br>ive Pro<br>hing S<br>nctivisr<br>ructivisr<br>Stude<br>and I | al Le<br>l to<br>Peop<br>ocess<br>Strate<br>n in<br>st Pr<br>ents' | earning<br>Our Un<br>ble to R<br>ses: Ho<br>egies Ho<br>The C<br>inciples<br>Motiva | Theor<br>nderst<br>emen<br>w Do<br>elp Str<br>lassro<br>. Theo<br>tion to<br>t? An | ies H<br>andin<br>ber c<br>Meta<br>udents<br>om, S<br>ories<br>o Lea<br>drago | ave Evolv<br>g of Hum,<br>r Forget?<br>cognitive ?<br>s Learn? V<br>Social Cor<br>of Motivati<br>rn? How<br>gy, and S | ed?<br>an I<br>Hov<br>Skill<br>Vha<br>Stru<br>on:<br>Car<br>Sean | What A<br>Learnin<br>w Can<br>s Help<br>t is The<br>Ictivism<br>What is<br>n Achie<br>nless I | Are Son<br>g? Cog<br>Memor<br>Studen<br>e Consti<br>and V<br>s Motiva<br>evement<br>earning | ne Pri<br>Initive<br>y Stra<br>ts Lea<br>ructivi<br>'ygots<br>ation?<br>Moti | nciples<br>Views<br>ategies<br>arn? Wh<br>st View<br>ky, Soc<br>What a<br>vation |
| Deferences                    | conducted in the presentations and   | Or<br>dis  | nline Flipped C<br>scussions. Asse   | lassre   | oom n  | node<br>ludes   | with<br>asse   | the m<br>ssmer  | ain a<br>t of lea  | ctiviti<br>arnin   | ies beir<br>ıg activi   | ig the ties, a   | ssign   | al studies<br>ments, UT   | ani<br>S ar  | d relev<br>nd UAS   | ant res   | earch  | resear   |
| References                    | wan:   |  |  |  |  |   |  |   |  |  |   |  |   |   |  |   |   |  |  |
|                               |  |  |  |  |  |   |  |   |  |  |   |  |   |   |  |   |   |  |  |
|                               |  |  |  |  |  |   |  |   |  |  |   |  |   |   |  |   |   |  |  |
|                               |  |  |  |  |  |   |  |   |  |  |   |  |   |   |  |   |   |  |  |

| Support  | ting                                     | <ol> <li>Nur, Moh</li> <li>Arends, F</li> <li>Slavin, R</li> <li>Moreno,</li> <li>Slavin, R</li> <li>Moreno,</li> <li>Svoolfolk,</li> <li>Santrock</li> <li>Eggen, P</li> <li>Dale H. S</li> <li>Chee-Kit<br/>Opportur</li> <li>Wendy C</li> <li>adult lear</li> <li>Susantini<br/>Review, 1</li> <li>Susantini<br/>Biology E</li> <li>Wahyuni<br/>dalam Pe</li> <li>Justus, F</li> <li>2014.</li> <li>Supporters:</li> <li>Widodo,<br/>Gadget-E</li> <li>256. 10.1</li> <li>Prof. Dr. Endang</li> </ol> | amad. 2011. Modul<br>Richards I. 20012. Le<br>obert E. 2006. Johns<br>Roxana. 2010. Educ<br>Anita. 2008. Psychh-<br>, John W. 2011. Unit-<br>, Kauchak, D. 2010<br>Schunk. 2012. Learn<br>Looi, Lung-Hsiang<br>iities. Singapore: Pe<br>conaway. (2009). An<br>ners of all ages. Dis<br>i, E., dkk. Improving<br>19 (3), 2018.<br>, E., dkk. Designing<br>Education Biochemis<br>, Sri. 2020. Model (<br>embelajaran IPA di S<br>Randolph. A Guide to<br>Wahono & Sudibyo,<br>Based Interactive M<br>5294/jpii.v9i2.23208 | Keterampilan-keterampilan<br>earning to Teach. New Yor<br>s Hopkins University. Eight<br>:ational Psychology. Printe<br>ology in Education. Londor<br>versity of Texas Dallas. Ed<br>. Educational Psychology:<br>ing Theories an Education<br>g Wong, Christian Glahr<br>arson<br>dragogy: Does one size f<br>sertation of Walden Univer<br>g Learning Process in Ger<br>Easy DNA Extraction: Tea<br>try and Molecular Biology<br>Critical Thinking Blended<br>GMP. Disertasi. Pascasarja<br>o Writing the Dissertation I<br>Elok & Suryanti, Suryanti<br>ultimedia in Improving Ge<br>3. | n Proses Sains. Pu<br>k: McGraw-Hill<br>t Edition. Educatior<br>d in the United Sta<br>t: Pearson, Longm<br>lucational Psycholo<br>Windows on Class<br>al Perspective (Six<br>h, Su Cai. (2019)<br>fit all? A study to c<br>rsity.<br>netics Classroom t<br>aching Creativity th<br>Education, 45 (3), 2<br>Learning (CTBL) H<br>au Universitas Neg<br>Literature Review. | Isat Sains dan Metematika<br>nal Psychology: Theory an<br>tes of America: John Wile<br>an<br>Igy. Fith Edition. New Yorl<br>room. Eight Edition. New<br>th Edition). Boston: Pears<br>). Seamless Learning F<br>letermine the applicability<br>by Using Metacognitve St<br>arough Laboratory Practic<br>2017.<br>untuk Meningkatkan Kete<br>jeri Surabaya.<br>Practical Assessment, Re | a Sekolah Unesa<br>d Practice. Bost<br>y & Sons, Inc.<br>c: McGraw-Hill.<br>Jersey: Merril<br>on<br>Perspectives, Cl<br>r of andragogica<br>rategy. Asia Pac<br>e. Biochemistry<br>erampilan Berpik<br>research & Evalua   | a.<br>on:Pearson<br>hallenges and<br>I principles to<br>cific Education<br>and Molecular<br>dir Kritis Siswa<br>ation, 14 (13),<br>ffectiveness of<br>nesia. 9. 248- |
|----------|--|--|---|--|---|--|--|--|
| lecturer |  | Prof.Dr. Wahono  | Widodo, M.Si.   |  | Hel   | p Learning,  |  |  |
| Week-    | Final<br>each<br>(Sub                    | abilities of<br>learning stage<br>PO)  | Ev  | aluation   | Learn<br>Student<br>[ Est   | ing methods,<br>t Assignments,<br>imated time]   | Learning<br>materials<br>[References   | Assessment<br>Weight (%)   |
|          | (Sup-                                    | 10)  | Indicator   | Criteria & Form  | Offline ( <i>offline</i><br>)   | Online ( online )  | ]  |  |
| (1)      | Stuc                                     | (2)  | (3)   | (4)  | (5)   | (6)  | (7)  | (8)  |
|          | prov<br>for ti<br>unde<br>learr<br>learr | ide arguments<br>ne importance of<br>erstanding<br>ning theories in<br>ning development  | examples of<br>events that<br>demonstrate<br>learning<br>events and<br>those that do<br>not<br>2.Explain in<br>outline<br>various<br>learning<br>theories<br>3.Recognizing<br>learning<br>theory for<br>seamless<br>learning<br>4.Shows the<br>role of<br>various<br>learning<br>theories in<br>learning<br>development   | Based on the<br>assessment rubric that<br>has been created by<br>the teaching lecturer<br>Forms of Assessment<br>Participatory Activities,<br>Project Results<br>Assessment / Product<br>Assessment, Tests   | learning<br>examples and<br>various learning<br>theories based<br>on source books<br>through case<br>studies.<br>• Provide<br>responses<br>regarding<br>various learning<br>theories and<br>their role in<br>learning<br>development.<br>2 x 50 minutes   | related to learning<br>theory and cases<br>relevant to the analysis<br>of the application of<br>learning theory in<br>science learning, study<br>information and upload<br>assignments on SIDIA,<br>including online<br>synchronous for face to<br>face.<br>2x 50 minutes  | Literature 1 to<br>10 Power<br>point<br><b>Reference:</b><br><i>Nur,</i><br><i>Mohamad.</i><br>2011.<br><i>Science</i><br><i>Process Skills</i><br><i>Module.</i><br><i>Unesa School</i><br><i>Science and</i><br><i>Mathematics</i><br><i>Center</i><br><b>Material:</b><br>References 1<br>to 10 Power<br>point<br><b>Reference:</b><br><i>Arends,</i><br><i>Richards I.</i><br>2012.<br><i>Learning to</i><br><i>Teach. New</i><br><i>York:</i><br><i>McGraw-Hill.</i><br><b>Material:</b><br>References 1<br>to 10 Power<br>point<br><b>Reference:</b><br><i>Slavin,</i><br><i>Robert E.</i><br>2006. Johns<br><i>Hopkins</i><br><i>University.</i><br><i>Eight Edition.</i><br><i>Educational</i><br><i>Psychology:</i><br><i>Theory and</i><br><i>Practice.</i><br><i>Boston:</i><br><i>Pearson.</i><br><b>Material:</b><br>References 1<br>to 10 Power<br>point<br><i>References</i> 1<br><i>to</i> 10 Power<br><i>psychology:</i><br><i>Theory and</i><br><i>Practice.</i><br><i>Boston:</i><br><i>Pearson.</i><br><b>Material:</b><br>References 1<br>to 10 Power<br><i>point</i><br><i>References</i> 1<br>to 10 Power<br><i>point</i><br><i>References</i> 1<br><i>to</i> 10 Power<br><i>point</i><br><i>Ref</i> |  |

| I |  |  |  | Psycholoav.  |
|---|--|--|--|--|
|   |  |  |  | Printed in the<br>United States<br>of America:<br>John Wiley &   |
|   |  |  |  | Sons, Inc.   |
|   |  |  |  | Material:<br>References 1<br>to 10 Power<br>point<br>References:<br>Woolfolk,<br>Anita. 2008.<br>Psychology in |
|   |  |  |  | Education.<br>London:<br>Pearson,<br>Longman.  |
|   |  |  |  | Material:<br>References 1<br>to 10 Power   |
|   |  |  |  | point<br><b>Reference:</b><br>Santrock,<br>John W.   |
|   |  |  |  | 2011.<br>University of<br>Texas Dallas.<br>Educational<br>Psychology.<br>Fith Edition.                         |
|   |  |  |  | McGraw-Hill.   |
|   |  |  |  | Material:<br>References 1<br>to 10 Power<br>point<br>Reference:<br>Eggen, P.,<br>Kauchak, D.<br>2010           |
|   |  |  |  | Educational<br>Psychology:<br>Windows on<br>Classroom.<br>Eight Edition.<br>New Jersey:<br>Merrill.            |
|   |  |  |  | Material:<br>References 1<br>to 10 Power<br>point  |
|   |  |  |  | Reference:<br>Dale H.<br>Schunk.<br>2012.<br>Learning  |
|   |  |  |  | Theories and<br>Educational<br>Perspective<br>(Sixth<br>Edition).<br>Boston:<br>Pearson                        |
|   |  |  |  | Material:<br>Literature 1 to<br>10 Power   |
|   |  |  |  | point<br><b>Reference:</b><br><i>Chee-Kit</i><br><i>Looi, Lung-</i><br><i>Hsiang Wong,</i><br><i>Christian</i> |
|   |  |  |  | Glahn, Su<br>Cai. (2019).<br>Seamless<br>Learning<br>Perspectives  |
|   |  |  |  | Challenges<br>and<br>Opportunities.<br>Singapore:<br>Pearson   |
|   |  |  |  | Material:<br>Readers 1 to<br>10 Power  |
|   |  |  |  | point<br><b>Reader:</b><br>Wendy<br>Conaway.   |

|  |  |  | (2009).<br>Andragogy:<br>Does one<br>size fit all? A<br>study to<br>determine the<br>applicability of<br>andragogical<br>principles to<br>adult learners<br>of all ages.<br>Dissertation |  |
|--|--|--|--|--|
|  |  |  | of Walden<br>University.   |  |

| 2 | Students are able to summarize the main   | 1.Identify main non-   | Criteria:<br>Based on the  | The stages of the case study   | Browse information related to learning  | Material:<br>Literature 1 to   | 5% |
|---|---|--|--|--|---|--|----|
|   | non-tneoretical ideas<br>and main ideas in the<br>form of theories about<br>Behavioral Views of<br>Learning and their | theoretical<br>ideas and<br>main ideas in<br>the form of                               | assessment rubric that<br>has been created by<br>the teaching lecturer | are as follows:<br>1. Orientation to<br>students:<br>Showing articles  | theory and cases<br>relevant to the analysis<br>of the application of<br>learning theory in         | 6 Power point<br><b>Reference:</b><br><i>Nur,</i><br><i>Mohamad.</i>   |    |
|   | application in learning<br>and research in the<br>context of writing a<br>dissertation                                | theories<br>about<br>Behavioral  | :<br>Participatory Activities,<br>Project Results                      | with the theme<br>of character<br>formation to   | science learning, study<br>information and upload<br>assignments on SIDIA,<br>including synchronous | 2011.<br>Science<br>Process Skills<br>Module   |    |
|   |   | Views of<br>Learning<br>2.Provide<br>examples of                                       | Assessment / Product<br>Assessment, Tests                              | the articles are<br>in accordance<br>with behavioral<br>theory? and give   | online.<br>2 x 50 minutes   | Unesa School<br>Science and<br>Mathematics<br>Center   |    |
|   |   | theories<br>about<br>Behavioral<br>Views of<br>Learning in<br>learning and<br>research |  | reasons?<br>2. Organizing<br>students: Helps<br>understand<br>problems and<br>what is needed.<br>3. Guiding the<br>investigation:<br>gathering |   | Material:<br>References 1<br>to 6 Power<br>point<br>Reference:<br>Arends,<br>Richards I.<br>2012.<br>Learning to<br>Teach. New   |    |
|   |   |  |  | information and<br>discussing the<br>article.  |   | York:<br>McGraw-Hill.  |    |
|   |   |  |  | and presenting<br>the work:<br>compiling a<br>report and<br>preparing a<br>presentation<br>regarding the<br>article.                           |   | Material:<br>References 1<br>to 6 Power<br>point<br>References:<br>Moreno,<br>Roxana.<br>2010.<br>Educational  |    |
|   |   |  |  | 5. Analyze and<br>evaluate:<br>monitor and<br>provide input to<br>students<br>regarding the<br>articles being                                  |   | Psychology.<br>Printed in the<br>United States<br>of America:<br>John Wiley &<br>Sons, Inc.  |    |
|   |   |  |  | analyzed.<br>2 x 50 minutes  |   | References 1<br>to 6 Power<br>point<br><b>References:</b><br>Moreno,<br>Roxana.<br>2010.<br>Educational<br>Psychology.<br>Printed in the<br>United States<br>of America:<br>John Wiley &<br>Sons, Inc.           |    |
|   |   |  |  |  |   | Material:<br>References 1<br>to 6 Power<br>point<br>References:<br>Woolfolk,<br>Anita. 2008.<br>Psychology in<br>Education.<br>London:<br>Pearson,<br>Longman.   |    |
|   |   |  |  |  |   | Material:<br>References 1<br>to 6 Power<br>point<br>Reference:<br>Santrock,<br>John W.<br>2011.<br>University of<br>Texas Dallas.<br>Educational<br>Psychology.<br>Fith Edition.<br>New York:<br>Mac Servic Liff |    |

| 3 | Students are able to<br>summarize the main<br>non-theoretical ideas<br>and main ideas in the<br>form of theories about<br>Cognitive Views of<br>Learning and their<br>application in learning<br>and research in the<br>context of writing a<br>dissertation | <ol> <li>Identify non-<br/>theoretical<br/>main ideas<br/>and main<br/>ideas in the<br/>form of<br/>theories<br/>about<br/>Cognitive<br/>Views of<br/>Learning</li> <li>Provides<br/>examples of<br/>theories<br/>about<br/>Cognitive<br/>Views of<br/>Learning and<br/>research</li> </ol>                     | Criteria:<br>Based on the<br>assessment rubric that<br>has been created by<br>the teaching lecturer<br>Forms of Assessment<br>:<br>Participatory Activities,<br>Project Results<br>Assessment / Product<br>Assessment, Tests | The case study<br>stages are as<br>follows:<br>1. Orientation to<br>students:<br>Showing<br>examples of<br>science<br>worksheets<br>related to<br>cognitive theory<br>to analyze<br>whether the<br>worksheets are<br>in accordance<br>with cognitive<br>theory or not?<br>and give<br>reasons.<br>2. Organizing<br>students: Helps<br>understand<br>problems and<br>what is needed.<br>3. Guiding the<br>investigation:<br>gathering<br>information and<br>discussing the<br>LKS.<br>4. Developing<br>and presenting<br>the work:<br>compiling a<br>group report and<br>preparing a<br>presentation of<br>the results of the<br>discussion<br>regarding the<br>analysis of the<br>LKS.<br>5. Analyze and<br>evaluate:<br>monitor and<br>provide input to<br>students<br>regarding the<br>analysis of the<br>worksheet.<br>2 x 50 minutes | Browse information<br>related to learning<br>theory and cases<br>relevant to the analysis<br>of the application of<br>learning theory in<br>science learning, study<br>information and upload<br>assignments on SIDIA,<br>including online<br>synchronous for face to<br>face<br>2 x 50 minutes | Material:<br>Reference 5<br>Chapter 8<br>Power Point<br><b>Reference:</b><br><i>Woolfolk,</i><br><i>Anita. 2008.</i><br><i>Psychology in</i><br><i>Education.</i><br><i>London:</i><br><i>Pearson,</i><br><i>Longman.</i> | 7% |
|---|--|---|--|--|---|---|----|
| 4 | Students are able to<br>summarize the main<br>non-theoretical ideas<br>and main ideas in the<br>form of theories about<br>Complex Cognitive<br>Processes and their<br>application in learning<br>and research in the<br>context of writing a<br>dissertation | <ol> <li>Identify the<br/>main non-<br/>theoretical<br/>ideas and<br/>main ideas in<br/>the form of<br/>theories<br/>about<br/>Complex<br/>Cognitive<br/>Processes</li> <li>Provides<br/>examples of<br/>theories<br/>about<br/>Complex<br/>Cognitive<br/>Processes in<br/>learning and<br/>research</li> </ol> | Criteria:<br>Based on the<br>assessment rubric that<br>has been created by<br>the teaching lecturer<br>Forms of Assessment<br>:<br>Participatory Activities,<br>Project Results<br>Assessment / Product<br>Assessment, Tests | Presentation,<br>discussing main<br>ideas in the form<br>of theories about<br>Complex<br>Cognitive<br>Processes<br>based on<br>reference books,<br>and questions<br>and answers<br>through case<br>studies.<br>2 x 50 minutes  | Browse information<br>related to learning<br>theory and cases<br>relevant to the analysis<br>of the application of<br>learning theory in<br>science learning, study<br>information and upload<br>assignments on SIDIA,<br>including online<br>synchronous for face to<br>face<br>2 x 50 minutes | Material:<br>Reference 5<br>Chapter 9<br>Power Point<br><b>Reference:</b><br>Woolfolk,<br>Anita. 2008.<br>Psychology in<br>Education.<br>London:<br>Pearson,<br>Longman.  | 8% |

| 5 | Students are able to                       | 1.Identify non-            | Criteria:   | The stages of                    | Browse information      | Material:                       | 8% |
|---|--|----------------------------|---|----------------------------------|-------------------------|---------------------------------|----|
|   | theoretical ideas and<br>main ideas in the | theoretical main ideas     | assessment rubric that has been created by        | are as follows:                  | theory and cases        | 6 Power point                   |    |
|   | form of theory about<br>What is The        | and main<br>ideas in the   | the teaching lecturer                             | students:                        | of the application of   | Nur,<br>Mohamad                 |    |
|   | How We Learn and                           | form of theories           | Form of Assessment :<br>Participatory Activities, | science                          | science learning, study | 2011.                           |    |
|   | learning and research<br>in the context of | about What<br>is The       | Tests   | analyze whether                  | assignments on SIDIA,   | Process Skills                  |    |
|   | writing a dissertation                     | Constructivist             |   | in accordance                    | synchronous for face to | Unesa School                    |    |
|   |  | We Learn                   |   | constructivist                   | 2 x 50 minutes          | Mathematics                     |    |
|   |  | 2.Provides<br>examples of  |   | theory or not?<br>Give a reason? |                         | Center                          |    |
|   |  | theories<br>about What     |   | 2. Organizing                    |                         | Material:<br>References 1       |    |
|   |  | is The<br>Constructivist   |   | students: Helps<br>understand    |                         | to 6 Power<br>point             |    |
|   |  | View of How<br>We Learn in |   | what is needed.                  |                         | Reference:<br>Arends,           |    |
|   |  | learning and<br>research   |   | 3. Guiding the                   |                         | Richards I.<br>2012.            |    |
|   |  |                            |   | gathering                        |                         | Learning to<br>Teach. New       |    |
|   |  |                            |   | discussing                       |                         | York:<br>McGraw-Hill.           |    |
|   |  |                            |   | whether the worksheet is in      |                         | Material:                       |    |
|   |  |                            |   | constructivism                   |                         | References 1 to 6 Power         |    |
|   |  |                            |   | theory or not.<br>4. Develop and |                         | point<br><b>Reference:</b>      |    |
|   |  |                            |   | work: prepare a                  |                         | Slavin,<br>Robert E.            |    |
|   |  |                            |   | group report and prepare a       |                         | 2006. Johns<br>Hopkins          |    |
|   |  |                            |   | the results of the               |                         | University.<br>Eighth           |    |
|   |  |                            |   | regarding the                    |                         | Edition.<br>Educational         |    |
|   |  |                            |   | analysis of the science          |                         | Psychology:<br>Theorv and       |    |
|   |  |                            |   | worksheet in accordance with     |                         | Practice.<br>Boston:            |    |
|   |  |                            |   | theory or not.                   |                         | Pearson.                        |    |
|   |  |                            |   | 5. Analyze and evaluate:         |                         | Material:<br>References 1       |    |
|   |  |                            |   | monitor and provide input to     |                         | to 6 Power                      |    |
|   |  |                            |   | regarding the                    |                         | References:<br>Moreno.          |    |
|   |  |                            |   | worksheet                        |                         | Roxana.<br>2010.                |    |
|   |  |                            |   | 2 x 50 minutes                   |                         | Educational<br>Psychology.      |    |
|   |  |                            |   |                                  |                         | Printed in the<br>United States |    |
|   |  |                            |   |                                  |                         | of America:<br>John Wiley &     |    |
|   |  |                            |   |                                  |                         | Sons, Inc.                      |    |
|   |  |                            |   |                                  |                         | Material:                       |    |
|   |  |                            |   |                                  |                         | to 6 Power                      |    |
|   |  |                            |   |                                  |                         | References:                     |    |
|   |  |                            |   |                                  |                         | Anita. 2008.<br>Psychology in   |    |
|   |  |                            |   |                                  |                         | Education.                      |    |
|   |  |                            |   |                                  |                         | Pearson,<br>Longman             |    |
|   |  |                            |   |                                  |                         | Material                        |    |
|   |  |                            |   |                                  |                         | References 1                    |    |
|   |  |                            |   |                                  |                         | point                           |    |
|   |  |                            |   |                                  |                         | Santrock,                       |    |
|   |  |                            |   |                                  |                         | 2011.                           |    |
|   |  |                            |   |                                  |                         | Texas Dallas.                   |    |
|   |  |                            |   |                                  |                         | Psychology.                     |    |
|   |  |                            |   |                                  |                         | New York:                       |    |
|   |  |                            | 1   | 1                                |                         | wicolaw-Hill.                   |    |

| 6  | Students are able to<br>summarize the main<br>non-theoretical ideas<br>and main ideas in the<br>form of theory about<br>andragogy and its<br>application in learning<br>and research in the<br>context of writing a<br>dissertation                             | <ol> <li>Identify the<br/>main non-<br/>theoretical<br/>ideas and<br/>main ideas in<br/>the form of<br/>theories<br/>about<br/>Andragogy</li> <li>Provide<br/>examples of<br/>theories<br/>about<br/>Andragogy in<br/>learning and<br/>research</li> </ol>   | Criteria:<br>Based on the<br>assessment rubric that<br>has been created by<br>the teaching lecturer<br>Forms of Assessment<br>:<br>Participatory Activities,<br>Project Results<br>Assessment / Product<br>Assessment, Tests | Presentation,<br>Discussing the<br>main ideas in<br>the form of<br>theories about<br>Andragogy<br>based on<br>reference books<br>and questions<br>and answers<br>through case<br>studies<br>2 x 50 minutes  | Browse information<br>related to learning<br>theory and cases<br>relevant to the analysis<br>of the application of<br>learning theory in<br>science learning, study<br>information and upload<br>assignments on SIDIA,<br>including online<br>synchronous for face to<br>face.<br>2 x 50 minutes | Material:<br>Library no. 10<br>and Power<br>point<br>Reader:<br>Wendy<br>Conaway.<br>(2009).<br>Andragogy:<br>Does one<br>size fit all? A<br>study to<br>determine the<br>applicability of<br>andragogical<br>principles to<br>adult learners<br>of all ages.<br>Dissertation<br>of Walden<br>University. | 7%  |
|----|---|--|--|---|--|---|-----|
| 7  | Students are able to<br>summarize the main<br>non-theoretical ideas<br>and main ideas in the<br>form of theory about<br>andragogy and its<br>application in learning<br>and research in the<br>context of writing a<br>dissertation                             | <ol> <li>Identify the<br/>main non-<br/>theoretical<br/>ideas and<br/>main ideas in<br/>the form of<br/>theories<br/>about<br/>Andragogy</li> <li>Provide<br/>examples of<br/>theories<br/>about<br/>Andragogy in<br/>learning and<br/>research</li> </ol>   | Criteria:<br>Based on the<br>assessment rubric that<br>has been created by<br>the teaching lecturer<br>Forms of Assessment<br>:<br>Participatory Activities,<br>Project Results<br>Assessment / Product<br>Assessment, Tests | Presentation,<br>Discussing the<br>main ideas in<br>the form of<br>theories about<br>Andragogy<br>based on<br>reference books<br>and questions<br>and answers<br>through case<br>studies<br>2 x 50 minutes  | Browse information<br>related to learning<br>theory and cases<br>relevant to the analysis<br>of the application of<br>learning theory in<br>science learning, study<br>information and upload<br>assignments on SIDIA,<br>including online<br>synchronous for face to<br>face.<br>2 x 50 minutes | Material:<br>Library no. 10<br>and Power<br>point<br>Reader:<br>Wendy<br>Conaway.<br>(2009).<br>Andragogy:<br>Does one<br>size fit all? A<br>study to<br>determine the<br>applicability of<br>andragogical<br>principles to<br>adult learners<br>of all ages.<br>Dissertation<br>of Walden<br>University. | 10% |
| 8  | Final Capabilities<br>from TM-1 to TM-7   | TM-1 indicators<br>up to TM-7<br>indicators  | Criteria:<br>Based on the<br>assessment rubric that<br>has been created by<br>the teaching lecturer<br>Form of Assessment :<br>Test  | Written test or<br>giving substitute<br>assignments for<br>UTS<br>2 x 50 minutes  | Written test or<br>assignment to replace<br>UTS<br>2x50 minutes  |   | 0%  |
| 9  | Students are able to<br>summarize the main<br>non-theoretical ideas<br>and main ideas in the<br>form of theories about<br>connectivist/seamless<br>learning and their<br>application in learning<br>and research in the<br>context of writing a<br>dissertation | <ol> <li>I.Identify main<br/>non-<br/>theoretical<br/>ideas and<br/>main ideas in<br/>the form of<br/>theories<br/>about<br/>connectivist /<br/>seamless<br/>learning</li> <li>Provide<br/>examples of<br/>theories<br/>about<br/>connectivist /<br/>seamless<br/>learning in<br/>learning and<br/>research</li> </ol> | Criteria:<br>Based on the<br>assessment rubric that<br>has been created by<br>the teaching lecturer<br>Form of Assessment :<br>Participatory Activities,<br>Practice/Performance   | Presentation,<br>Discussion,<br>question and<br>answer (Make a<br>decision to<br>determine<br>whether a<br>science learning<br>case can be<br>solved using<br>cognitive<br>learning<br>theory/Seamless<br>learning or not)<br>through case<br>study<br>2 x 50 minutes | Browse information<br>related to learning<br>theory and cases<br>relevant to the analysis<br>of the application of<br>learning theory in<br>science learning, study<br>information and upload<br>assignments on SIDIA,<br>including online<br>synchronous for face to<br>face.<br>2 x 50 minutes | Material:<br>Library No. 9<br>and Power<br>point<br>Reader:<br>Chee-Kit<br>Looi, Lung-<br>Hsiang Wong,<br>Christian<br>Glahn, Su<br>Cai. (2019).<br>Seamless<br>Learning<br>Perspectives,<br>Challenges<br>and<br>Opportunities.<br>Singapore:<br>Pearson   | 5%  |
| 10 | Students are able to<br>summarize the main<br>non-theoretical ideas<br>and main ideas in the<br>form of theories about<br>connectivist/seamless<br>learning and their<br>application in learning<br>and research in the<br>context of writing a<br>dissertation | 1.Identify main<br>non-<br>theoretical<br>ideas and<br>main ideas in<br>the form of<br>theories<br>about<br>connectivist /<br>seamless<br>learning<br>2.Provide<br>examples of<br>theories   | Criteria:<br>Based on the<br>assessment rubric that<br>has been created by<br>the teaching lecturer<br>Form of Assessment :<br>Participatory Activities  | Presentation,<br>Discussion,<br>question and<br>answer (Make a<br>decision to<br>determine<br>whether a<br>science learning<br>case can be<br>solved using<br>cognitive<br>learning<br>theory/Seamless<br>learning or not)<br>through case                            | Browse information<br>related to learning<br>theory and cases<br>relevant to the analysis<br>of the application of<br>learning theory in<br>science learning, study<br>information and upload<br>assignments on SIDIA,<br>including online<br>synchronous for face to<br>face.<br>2 x 50 minutes | Material:<br>Library No. 9<br>and Power<br>point<br>Reader:<br>Chee-Kit<br>Looi, Lung-<br>Hsiang Wong,<br>Christian<br>Glahn, Su<br>Cai. (2019).<br>Seamless<br>Learning<br>Perspectives,<br>Challenges   | 5%  |

| 11 | Students are able to<br>analyze learning<br>theories quoted in<br>reputable scientific<br>journals | Analyze learning<br>theories cited in<br>reputable<br>scientific<br>journals | Criteria:<br>Based on the<br>assessment rubric that<br>has been created by<br>the teaching lecturer<br>Forms of Assessment<br>:<br>Participatory Activities,<br>Project Results<br>Assessment / Product<br>Assessment | • Presentation<br>and discussion<br>of the results of<br>learning theory<br>analysis quoted<br>in reputable<br>scientific<br>journals through<br>case studies<br>• Portfolio<br>assignment<br>2 x 50 minutes | Browse information<br>related to learning<br>theory and cases<br>relevant to the analysis<br>of the application of<br>learning theory in<br>science learning, study<br>information and upload<br>assignments on SIDIA,<br>including online<br>synchronous for face to<br>face.<br>2 x 50 minutes | Material:<br>Reference 8<br>Power point<br>Reference:<br>Dale H.<br>Schunk.<br>2012.<br>Learning<br>Theories and<br>Educational<br>Perspective<br>(Sixth<br>Edition).<br>Boston:<br>Pearson.<br>Material:<br>Reference 9<br>Power point<br>Reference:<br>Chee-Kit<br>Looi, Lung-<br>Hsiang Wong,<br>Christian<br>Glahn, Su<br>Cai. (2019).<br>Seamless<br>Learning<br>Perspectives,<br>Challenges<br>and<br>Opportunities.<br>Singapore:<br>Pearson | 10% |
|----|--|--|---|--|--|---|-----|
| 12 | Students are able to<br>analyze learning<br>theories quoted in<br>reputable scientific<br>journals | Analyze learning<br>theories cited in<br>reputable<br>scientific<br>journals | Criteria:<br>Based on the<br>assessment rubric that<br>has been created by<br>the teaching lecturer<br>Forms of Assessment<br>:<br>Participatory Activities,<br>Project Results<br>Assessment / Product<br>Assessment | Presentation<br>and discussion<br>of the results of<br>learning theory<br>analysis quoted<br>in reputable<br>scientific<br>journals through<br>case studies<br>• Portfolio<br>assignment<br>2 x 50 minutes   | Browse information<br>related to learning<br>theory and cases<br>relevant to the analysis<br>of the application of<br>learning theory in<br>science learning, study<br>information and upload<br>assignments on SIDIA,<br>including online<br>synchronous for face to<br>face.<br>2 x 50 minutes | Material:<br>Reference 8<br>Power point<br>Reference:<br>Dale H.<br>Schunk.<br>2012.<br>Learning<br>Theories and<br>Educational<br>Perspective<br>(Sixth<br>Edition).<br>Boston:<br>Pearson.<br>Material:<br>Reference 9<br>Power point<br>Reference:<br>Chee-Kit<br>Looi, Lung-<br>Hsiang Wong,<br>Christian<br>Glahn, Su<br>Cai. (2019).<br>Seamless<br>Learning<br>Perspectives,<br>Challenges<br>and<br>Opportunities.<br>Singapore:<br>Pearson | 5%  |
| 13 | Students are able to<br>analyze learning<br>theories in Chapter I<br>of the Dissertation           | Analyzing<br>learning theories<br>in Chapter I of<br>the Dissertation        | Criteria:<br>Based on the<br>assessment rubric that<br>has been created by<br>the teaching lecturer<br>Forms of Assessment<br>:<br>Participatory Activities,<br>Project Results<br>Assessment / Product<br>Assessment | Presentation<br>and discussion<br>of the results of<br>learning theory<br>analysis in<br>Chapter I of the<br>Dissertation<br>through case<br>study<br>• Portfolio<br>assignment<br>2 x 50 minutes            | Browse information<br>related to learning<br>theory and cases<br>relevant to the analysis<br>of the application of<br>learning theory in<br>science learning, study<br>information and upload<br>assignments on SIDIA,<br>including online<br>synchronous for face to<br>face.<br>2 x 50 minutes | Material:<br>Library 10<br>Power point<br>Reader:<br>Wendy<br>Conaway.<br>(2009).<br>Andragogy:<br>Does one<br>size fit all? A<br>study to<br>determine the<br>applicability of<br>andragogical<br>principles to<br>adult learners<br>of al ages.<br>Dissertation<br>of Walden<br>University.   | 5%  |

| 14 | Students are able to<br>analyze learning<br>theories in Chapter II<br>of the Dissertation   | Analyzing<br>learning theories<br>in Chapter II of<br>the Dissertation  | Criteria:<br>Based on the<br>assessment rubric that<br>has been created by<br>the teaching lecturer<br>Form of Assessment :<br>Project Results<br>Assessment / Product<br>Assessment                             | <ul> <li>Presentation<br/>and discussion<br/>of the results of<br/>learning theory<br/>analysis in<br/>Chapter II of the<br/>Dissertation<br/>through case<br/>studies</li> <li>Portfolio<br/>assignment<br/>2 x 50 minutes</li> </ul>                                | Browse information<br>related to learning<br>theory and cases<br>relevant to the analysis<br>of the application of<br>learning theory in<br>science learning, study<br>information and upload<br>assignments on SIDIA,<br>including online<br>synchronous for face to<br>face.<br>2 x 50 minutes | Material:<br>Reference 11<br>Power point<br>Reference:<br>Susantini, E.,<br>et al.<br>Improving<br>Learning<br>Process in<br>Genetics<br>Classroom by<br>Using<br>Metacognitive<br>Strategy. Asia<br>Pacific<br>Education<br>Review,<br>19(3), 2018.<br>Material:<br>Reference 14<br>Power point<br>Reference:<br>Justus,<br>Randolph. A<br>Guide to<br>Writing the<br>Dissertation<br>Literature<br>Review.<br>Practical<br>Assessment,<br>Research &<br>Evaluation,<br>14 (13), 2014. | 10% |
|----|---|---|--|---|--|---|-----|
| 15 | Students are able to<br>write a dissertation<br>pre-proposal for<br>Chapter I and<br>Chapter II which<br>emphasizes how to<br>cite learning theories<br>relevant to the<br>dissertation topic<br>independently and<br>responsibly | Write a pre-<br>dissertation<br>proposal for<br>Chapter I which<br>emphasizes how<br>to cite learning<br>theories that are<br>relevant to the<br>dissertation topic | Criteria:<br>Based on the<br>assessment rubric that<br>has been created by<br>the teaching lecturer<br>Forms of Assessment<br>Participatory Activities,<br>Project Results<br>Assessment / Product<br>Assessment | Workshop and<br>seminar on pre-<br>proposal<br>dissertation<br>writing for<br>Chapter I<br>through project<br>assignments<br>Have an<br>independent and<br>responsible<br>attitude towards<br>completing<br>assignments<br>given by the<br>lecturer<br>2 x 50 minutes | Browse information<br>related to learning<br>theory and cases<br>relevant to the analysis<br>of the application of<br>learning theory in<br>science learning, study<br>information and upload<br>assignments on SIDIA,<br>including online<br>synchronous for face to<br>face.<br>2 x 50 minutes | Material:<br>Facilities for<br>browsing<br>references<br>from the<br>internet,<br>relevant<br>research<br>articles<br><b>References:</b>  | 10% |
| 16 | Final Capabilities<br>from TM-9 to TM-15  | TM-9 indicators<br>up to TM-15<br>indicators  | Criteria:<br>Based on the<br>assessment rubric that<br>has been created by<br>the teaching lecturer<br>Form of Assessment :<br>Project Results<br>Assessment / Product<br>Assessment                             | Written test or<br>giving substitute<br>assignments for<br>UAS<br>2 x 50 minutes  | Written test or<br>assignment to replace<br>UAS<br>2x50 minutes  |   | 0%  |

Evaluation Percentage Recap: Case Study

| No | Evaluation                                      | Percentage |
|----|---|------------|
| 1. | Participatory Activities                        | 40.5%      |
| 2. | Project Results Assessment / Product Assessment | 39%        |
| 3. | Practice / Performance                          | 2.5%       |
| 4. | Test  | 18%        |
|    |   | 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
- 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.
- 4. Subject Sub-PO (Sub-PO) is a capability that is specifically described from the PO that can be measured or observed and is the final ability that is planned at each learning stage, and is specific to the learning material of the course.
- 5. Indicators for assessing abilities in the process and student learning outcomes are specific and measurable statements that identify the abilities or performance of student learning outcomes accompanied by evidence.
- 6. Assessment Criteria are benchmarks used as a measure or measure of learning achievement in assessments based on predetermined indicators. Assessment criteria are guidelines for assessors so that assessments are consistent and unbiased. Criteria can be quantitative or qualitative.

- 7. Forms of assessment: test and non-test.
- 8. Forms of learning: Lecture, Response, Tutorial, Seminar or equivalent, Practicum, Studio Practice, Workshop Practice, Field
- Forms of learning: Lecture, Response, Futorial, Seminar of 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 evide trained.
- 10. Learning indernals are details or descriptions of study indernals much set as procedules and a set are set as a set are set are set as a set are s