

## Universitas Negeri Surabaya Faculty of Mathematics and Natural Sciences Undergraduate Physics Study Program

Document Code

## SEMESTER LEARNING PLAN

| Courses         CODE         Course<br>Family<br>Family<br>Practicum II         Course<br>Family<br>Practicum II         Course<br>Family<br>Practicum II         SEMESTER<br>Data<br>Program<br>Median         Desination<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protection<br>Protectio |                         |     |  |   |              |       |     |     |   |           |                   |         |               |       |
|---|-------------------------|-----|--|---|--------------|-------|-----|-----|---|-----------|-------------------|---------|---------------|-------|
| Practicum II       SP Developer       Course Cluster<br>Coordinator       Study Program<br>Coordinator         AUTHORIZATION       SP Developer       Course Cluster<br>Coordinator       Study Program<br>Coordinator         Learning<br>model       Case Studies       Prof. Dr. Munasir, S. Si.,<br>M.SI.         Program<br>Learning<br>(PLO)       PLO study program that is charged to the course       Prof. Dr. Munasir, S. Si.,<br>M.SI.         Program<br>Detectives (PO)       PLO-PO Matrix       PO         PO Matrix at the end of each learning stage (Sub-PO)       PO         PO Matrix at the end of each learning stage (Sub-PO)       PO         PO Matrix at the end of each learning stage (Sub-PO)       PO         PO Matrix at the end of each learning stage (Sub-PO)       PO         Description       Pert Course includes: a. Emitter Amplifier Grounded. b. Amplifier with<br>feedback, c. JFET charactensics, d. JFET amplifier, e. Operational Amplifier (O-Amp) Inverting, f.<br>Deparational Amplifier (O-Amp) Non Inverting, g. Oscillator and h. Digital Electronic Circuits.         References       Main :<br>1.       1.         11.       13. Boylestad, R., and Nashelsky, L. Electronics Devices and Circuits:<br>Theory. Seventh Edition. Prentice Hall.<br>[3]. Tim. 2010. Panduan Praktikum Elektronika Dasar 2 .         Supporting<br>Des. Imam Sucaliyo, M.Si.<br>Dzukifihi, S.Si, M.T.<br>Add. Khola, S.Fd. M.T.<br>Ad   | Courses                 |     |  |   | COD          | E     |     |     | Cred                                      | it We     | ight              | SEMEST  | ER            |       |
| Learning<br>Outcomes<br>(PLO)         Case Studies         Prof. Dr. Munasir, S. Si.,<br>M.Si.           Program<br>Outcomes<br>(PLO)         Case Studies         Prof. Dr. Munasir, S. Si.,<br>M.Si.           Program<br>Outcomes<br>(PLO)         PLO study program that is charged to the course         Prof. Dr. Munasir, S. Si.,<br>M.Si.           Program<br>Outcomes<br>(PLO)         PLO study program that is charged to the course         Prof. Dr. Munasir, S. Si.,<br>M.Si.           Prof. Dr. Munasir, S. Si.,<br>(PLO)         Prof. Dr. Munasir, S. Si.,<br>Prof. Dr. Munasir, S. Si., M.T.,<br>Ad. Khoin, S. Sr., M.T.,<br>Ad. Khoin, S. Sr., M.T.,<br>Ad. Khoin, S. Sr., M.T.,<br>Ad. Khoin, S. Sr., M.S.,<br>Final<br>abilities of<br>Babilities of Babilities of<br>Babilities of Babilit   |                         |     |  |   | 4520101231   |       |     | Т=0 | P=1                                       | ECTS=1.59 | 4                 |         | July 18, 2024 |       |
| M.Si.       Learning<br>model     PLO     Studies       Program<br>Learning<br>Outcomes     PLO study program that is charged to the course     Program Objectives (PO)       Program Objectives (PO)     PLO-PO Matrix     PLO       PO     PLO-PO Matrix     PLO       PO     Matrix at the end of each learning stage (Sub-PO)       PO     Matrix at the end of each learning stage (Sub-PO)       PO     PLO       Week     1       P.O     Week       Po     PLO       Po     Veek       Po     PLO       Po     Week       Po     Veek       Po     Veek       Po     PLO       Po     Veek       Po     Veek <td colspan="3">AUTHORIZATION</td> <td></td> <td colspan="3">SP Developer</td> <td></td> <td colspan="3"></td> <td></td> <td colspan="2"></td>   | AUTHORIZATION           |     |  |   | SP Developer |       |     |     |   |           |                   |         |               |       |
| M.Si.       Learning<br>model     PLO     Studies       Program<br>Learning<br>Outcomes     PLO study program that is charged to the course     Program Objectives (PO)       Program Objectives (PO)     PLO-PO Matrix     PLO       PO     PLO-PO Matrix     PLO       PO Matrix at the end of each learning stage (Sub-PO)     PO       PO Matrix at the end of each learning stage (Sub-PO)     PO       PO Matrix at the end of each learning stage (Sub-PO)     PO       Poperational Amplifier (O-Amp) Non Inverting. 1     Operational Amplifier (O-Amp) Non Inverting. 9. Oscillator and h. Digital Electronic Circuits.       References     Main :     1.       I.     [1]. Sutrisno. 1978. Elektronika 2. Teori dan Penerapannya . Penerbit ITB<br>Bandung.       [2]. Tooley, M. 2006. Electronics Circuit: Fundamnetals and Applications .<br>Third Edition. Plesevier Ltd.       [3]. Boylestad, R., and Nashelsky, L. Electronics Devices and Circuits:<br>Theory. Seventh Edition. Prentice Hall.       [4]. Floyd, T. L. 2012. Electronics Devices . Prentice Hall.       [5]. Tim. 2010. Panduan Praktikum Elektronika Dasar 2 .       Supporting     Drs. Imam Sucahyo, M.Si.<br>Dzukifin, S.Si, M.Si.       Final<br>abilities of<br>each     Evaluation       Final<br>abilities of<br>each     Evaluation  |                         |     |  | Ī   |              |       |     |     |   |           |                   |         |               |       |
| M.Si.       Learning<br>model     PLO     Studies       Program<br>Learning<br>Outcomes     PLO study program that is charged to the course     Program Objectives (PO)       Program Objectives (PO)     PLO-PO Matrix     PLO       PO     PLO-PO Matrix     PLO       PO Matrix at the end of each learning stage (Sub-PO)     PO       PO Matrix at the end of each learning stage (Sub-PO)     PO       PO Matrix at the end of each learning stage (Sub-PO)     PO       Poperational Amplifier (O-Amp) Non Inverting. 1     Operational Amplifier (O-Amp) Non Inverting. 9. Oscillator and h. Digital Electronic Circuits.       References     Main :     1.       I.     [1]. Sutrisno. 1978. Elektronika 2. Teori dan Penerapannya . Penerbit ITB<br>Bandung.       [2]. Tooley, M. 2006. Electronics Circuit: Fundamnetals and Applications .<br>Third Edition. Plesevier Ltd.       [3]. Boylestad, R., and Nashelsky, L. Electronics Devices and Circuits:<br>Theory. Seventh Edition. Prentice Hall.       [4]. Floyd, T. L. 2012. Electronics Devices . Prentice Hall.       [5]. Tim. 2010. Panduan Praktikum Elektronika Dasar 2 .       Supporting     Drs. Imam Sucahyo, M.Si.<br>Dzukifin, S.Si, M.Si.       Final<br>abilities of<br>each     Evaluation       Final<br>abilities of<br>each     Evaluation  |                         |     |  |   |              |       |     |     |   |           |                   |         |               |       |
| model       Program<br>Learning<br>Outcomes       PLO Study program that is charged to the course         Program Objectives (PO)       PLO-PO Matrix         P.O       PLO-PO Matrix         PO       PO         PO       Matrix at the end of each learning stage (Sub-PO)         PO       PO         PO       Matrix at the end of each learning stage (Sub-PO)         PO       PO         PO       P.O         PO       P.O         PO       Week         PO       P.O         PO       P.O         PO       Week         PO       P.O         PO       Week         PO       Week         PO       Week         PO       P.O         PO       Week         PO       Operational Amplifier (O-Amp) Non Inverting, e. Operational Amplifier (O-Amp) Inverting, f.         Operational Amplifier (O-Amp) Non Inverting, g. Oscillator and h. Digital Electronic Circuits.         References       Main :         1.       [1]. Sutrisno. 1978. Elektronika 2. Teori dan Penerapannya . Penerbit ITB Bandung, [2]. Tooley, M. 2006. Electronics Circuit: Fundamnetals and Applications . Third Edition. Elesevier Ltd.         [3]. Boylestad, R., and Nashelsky, L. Electronics Devices and Circuits: Theory . Seventh E   |                         |     |  |   |              |       |     |     |   |           |                   |         |               |       |
| Learning<br>Outcomes<br>(PLO)       Program Objectives (PO)         PLO-PO Matrix         P.O         PO Matrix at the end of each learning stage (Sub-PO)         PO Matrix at the end of each learning stage (Sub-PO)         PO         P.O         P.O         P.O         P.O         Week         P.O         P.O         Week         P.O         P.O         Week         P.O   |                         |     | Case Stud  | dies  | · · · · ·    |       |     |     |   |           |                   |         |               |       |
| Outcomes<br>(PLO)       Program Objectives (PO)         PLO-PO Matrix         P.O         PO Matrix at the end of each learning stage (Sub-PO)         PO Matrix at the end of each learning stage (Sub-PO)         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         Short<br>Course<br>Description       Basic Electronics Practicum 2 course includes: a. Emitter Amplifier Grounded. b. Amplifier (Week)         I.       [1]. Sutrisno. 1978. Elektronika 2. Teori dan Penerapannya . Penerbit ITB<br>Bandung.         [2]. Tooley, M. 2006. Electronics Circuit: Fundamnetals and Applications .<br>Third Edition. 1978. Elektronika 2. Teori dan Penerapannya . Penerbit ITB<br>Bandung.         [2]. Tooley, M. 2006. Electronics Circuit: Fundamnetals and Applications .<br>Third Edition. Elesvier Ltd.         [3]. Boylestad, R., and Nashelsky, L. Electronics Devices and Circuits:<br>Theory . Seventh Edition, Prentice Hall.         [4]. Floyd, T. L. 2012. Electronics Devices . Prentice Hall.         [5]. Tim. 2010. Panduan Praktikum Elektronika Dasar 2 .         Supporting<br>lecturer       Drs. Imam Sucahyo, M.Si.<br>Dzulkitin, S.Si., M.T.<br>Abd. Kholg, S.P.d., T.<br>Meta Yanidewi, S.Si., M.Si.         Week.       Evaluation       Learning methods.<br>Studem Assignments,<br>[Estimated time]       Learning materials         Assessment       Studem Assignments,       Learning materials       Assessment   |                         |     | PLO study program that is charged to the course  |   |              |       |     |     |   |           |                   |         |               |       |
| PLO-PO Matrix         P.O         PO Matrix at the end of each learning stage (Sub-PO)         PO Matrix at the end of each learning stage (Sub-PO)         P.O       Week         Description         Basic Electronics Practicum 2 course includes: a. Emitter Amplifier Grounded. b. Amplifier (V-Amp) Inverting, f. Operational Amplifier (O-Amp) Inverting, g. Oscillator and h. Digital Electronic Circuits.         References       Main :         1.       [1]. Sutrisno. 1978. Elektronika 2. Teori dan Penerapannya . Penerbit ITB Bandung.         [2]. Tooley, M. 2006. Electronics Circuit: Fundamnetals and Applications . Third Edition. Elesevier Ltd.         [3]. Boylestad, R., and Nashelsky, L. Electronics Devices and Circuits: Theory . Seventh Edition, Prentice Hall.         [4]. Floyd, T. 2010. Panduan Praktikum Elektronika Dasar 2 .         Supporting         Drs. Imam Sucahyo, M.Si.         Dzukifin, S.Si., M.Si.         Ecturer         Final abilities of each         Each         Evaluation       Learning methods, Student Assignments, [Estimated time]         Learning matrix         Assessment   | Outcom                  |     | Program Objectives (PO)  |   |              |       |     |     |   |           |                   |         |               |       |
| PO Matrix at the end of each learning stage (Sub-PO)         PO Matrix at the end of each learning stage (Sub-PO)         Week  | (FLO)                   | -   | PLO-PO Matrix  |   |              |       |     |     |   |           |                   |         |               |       |
| PO Matrix at the end of each learning stage (Sub-PO)         PO Matrix at the end of each learning stage (Sub-PO)         Week  |                         |     |  | Г   |              |       |     |     |   |           |                   |         |               |       |
| P.O       Week         I       2       3       4       5       6       7       8       9       10       11       12       13       14       15       16         Short<br>Course<br>Description       Basic Electronics Practicum 2 course includes: a. Emitter Amplifier Grounded. b. Amplifier with<br>feedback, c. JFET characteristics, d. JFET amplifier, e. Operational Amplifier (O-Amp) Inverting, f.<br>Operational Amplifier (O-Amp) Non Inverting, g. Oscillator and h. Digital Electronic Circuits.         References       Main :       1.       1.       1.       1.         1.       1.       Stort Circuits       Stort Circuits       Penerabina Amplifier (O-Amp) Inverting, f.<br>Operational Amplifier (O-Amp) Non Inverting, g. Oscillator and h. Digital Electronic Circuits.         References       Main :       1.       1.       1.       1.         1.       1.       1.       1.       1.       1.         1.       1.       1.       1.       1.       1.         1.       1.       1.       1.       1.       1.         1.       1.       1.       3. Boylestad, R., and Nashelsky, L. Electronics Devices and Circuits:<br>Theory . Seventh Edition. Prentice Hall.       1.       1.       1.       1.       1.0.2.       1.       1.       1.       1.       1.  |                         |     |  | L   | P.0          |       |     |     |   |           |                   |         |               |       |
| Main:       1       2       3       4       5       6       7       8       9       10       11       12       13       14       15       16         Short<br>Course<br>Description       Basic Electronics Practicum 2 course includes: a. Emitter Amplifier Gounded. b. Amplifier with<br>feedback, c. JFET characteristics, d. JFET amplifier, e. Operational Amplifier (O-Amp) Inverting, f.<br>Operational Amplifier (O-Amp) Non Inverting, g. Oscillator and h. Digital Electronic Circuits.         References       Main :       1.       [1]. Sutrisno. 1978. Elektronika 2. Teori dan Penerapannya . Penerbit ITB<br>Bandung.<br>[2]. Tooley, M. 2006. Electronics Circuit: Fundamnetals and Applications .<br>Third Edition. Elesevier Ltd.<br>[3]. Boylestad, R., and Nashelsky, L. Electronics Devices and Circuits:<br>Theory . Seventh Edition. Prentice Hall.<br>[4]. Floyd, T. L. 2012. Electronics Devices . Prentice Hall.<br>[5]. Tim. 2010. Panduan Praktikum Elektronika Dasar 2 .         Supporters:  |                         |     | PO Matrix  | trix at the end of each learning stage (Sub-PO) |              |       |     |     |   |           |                   |         |               |       |
| Main:       1       2       3       4       5       6       7       8       9       10       11       12       13       14       15       16         Short<br>Course<br>Description       Basic Electronics Practicum 2 course includes: a. Emitter Amplifier Gounded. b. Amplifier with<br>feedback, c. JFET characteristics, d. JFET amplifier, e. Operational Amplifier (O-Amp) Inverting, f.<br>Operational Amplifier (O-Amp) Non Inverting, g. Oscillator and h. Digital Electronic Circuits.         References       Main :       1.       [1]. Sutrisno. 1978. Elektronika 2. Teori dan Penerapannya . Penerbit ITB<br>Bandung.<br>[2]. Tooley, M. 2006. Electronics Circuit: Fundamnetals and Applications .<br>Third Edition. Elesevier Ltd.<br>[3]. Boylestad, R., and Nashelsky, L. Electronics Devices and Circuits:<br>Theory . Seventh Edition. Prentice Hall.<br>[4]. Floyd, T. L. 2012. Electronics Devices . Prentice Hall.<br>[5]. Tim. 2010. Panduan Praktikum Elektronika Dasar 2 .         Supporters:  |                         |     |  |   |              |       |     |     |   |           |                   |         |               |       |
| Short<br>Course<br>Description       Basic Electronics Practicum 2 course includes: a. Emitter Amplifier Grounded. b. Amplifier with<br>feedback, c. JFET characteristics, d. JFET amplifier, e. Operational Amplifier (O-Amp) Inverting, f.<br>Operational Amplifier (O-Amp) Non Inverting, g. Oscillator and h. Digital Electronic Circuits.         References       Main : <ul> <li>1.</li> <li>[1]. Sutrisno. 1978. Elektronika 2. Teori dan Penerapannya . Penerbit ITB<br/>Bandung.</li> <li>[2]. Tooley, M. 2006. Electronics Circuit: Fundamnetals and Applications .<br/>Third Edition. Elesevier Ltd.</li> <li>[3]. Boylestad, R., and Nashelsky, L. Electronics Devices and Circuits:<br/>Theory . Seventh Edition. Prentice Hall.</li> <li>[4]. Floyd, T. L. 2012. Electronics Devices . Prentice Hall.</li> <li>[5]. Tim. 2010. Panduan Praktikum Elektronika Dasar 2 .</li> </ul> <li>Supporting<br/>Iecturer</li> <li>Drs. Imam Sucahyo, M.Si.<br/>Dzulkfilin, S.Si., M.T.<br/>Meta Yantidewi, S.Si., M.Si.</li> <li>Evaluation</li> <li>Help Learning,<br/>Learning materials</li> <li>Week.</li>  |                         |     |  | Γ   | P.O Week     |       |     |     |   |           |                   |         |               |       |
| Course<br>Description       feedback, c. JFET characteristics, d. JFET amplifier, e. Operational Amplifier (0-Amp) Inverting, f.<br>Operational Amplifier (0-Amp) Non Inverting, g. Oscillator and h. Digital Electronic Circuits.         References       Main :         1.       [1]. Sutrisno. 1978. Elektronika 2. Teori dan Penerapannya . Penerbit ITB<br>Bandung.<br>[2]. Tooley, M. 2006. Electronics Circuit: Fundamnetals and Applications .<br>Third Edition. Elesevier Ltd.<br>[3]. Boylestad, R., and Nashelsky, L. Electronics Devices and Circuits:<br>Theory . Seventh Edition. Prentice Hall.<br>[4]. Floyd, T. L. 2012. Electronics Devices . Prentice Hall.<br>[5]. Tim. 2010. Panduan Praktikum Elektronika Dasar 2 .         Supporting<br>lecturer       Drs. Imam Sucahyo, M.Si.<br>Dzulkifih, S.Si., M.T.<br>Abd. Kholiq, S.Pd., M.T.<br>Meta Yantidewi, S.Si., M.Si.         Einal<br>abilities of<br>each       Evaluation   |                         |     |  |   |              | 1 2 3 | 4 5 | 6 7 | 8   | 9         | 10 11 1           | 2 13 1  | .4            | 15 16 |
| Course Description       feedback, c. JFET characteristics, d. JFET amplifier, e. Operational Amplifier (0-Amp) Inverting, f. Operational Amplifier (0-Amp) Non Inverting, g. Oscillator and h. Digital Electronic Circuits.         References       Main :         1.       [1]. Sutrisno. 1978. Elektronika 2. Teori dan Penerapannya . Penerbit ITB Bandung.         [2]. Tooley, M. 2006. Electronics Circuit: Fundamnetals and Applications . Third Edition. Elesevier Ltd.         [3]. Boylestad, R., and Nashelsky, L. Electronics Devices and Circuits: Theory . Seventh Edition. Prentice Hall.         [4]. Floyd, T. L. 2012. Electronics Devices . Prentice Hall.         [5]. Tim. 2010. Panduan Praktikum Elektronika Dasar 2 .         Supporting         Drs. Imam Sucahyo, M.Si.         Dzulkifilin, S.Si., M.T.         Abd. Kholiq, S.P.d., M.T.         Meta Yantidewi, S.Si., M.Si.         Final abilities of each         Evaluation         Help Learning, Learning methods, Student Assignments, [Estimated time]         Keeke   |                         |     |  |   |              |       |     |     |   |           |                   |         |               |       |
| 1.       [1]. Sutrisno. 1978. Elektronika 2. Teori dan Penerapannya . Penerbit ITB Bandung.         [2]. Tooley, M. 2006. Electronics Circuit: Fundamnetals and Applications . Third Edition. Elesevier Ltd.         [3]. Boylestad, R., and Nashelsky, L. Electronics Devices and Circuits: Theory . Seventh Edition. Prentice Hall.         [4]. Floyd, T. L. 2012. Electronics Devices . Prentice Hall.         [5]. Tim. 2010. Panduan Praktikum Elektronika Dasar 2 .         Supporters:         Supporters:         Image: Supporting lecturer         Drs. Imam Sucahyo, M.Si. Dzulkifilin, S.Si., M.T. Abd. Kholiq, S.Pd., M.T. Meta Yantidewi, S.Si., M.Si.         Final abilities of each         Evaluation         Help Learning, Learning methods, Student Assignments, [Estimated time]         Learning materials  | Course                  |     | feedback, c. JFET characteristics, d. JFET amplifier, e. Operational Amplifier (O-Amp) Inverting, f. |   |              |       |     |     |   |           |                   |         |               |       |
| Image: Supporting lecturer       Drs. Imam Sucahyo, M.Si. Dzulkifilh, S.Si., M.T. Abd. Kholiq, S.Si., M.Si.         Image: Supporting lecturer       Drs. Imam Sucahyo, M.Si. Dzulkifilh, S.Si., M.T. Meta Yantidewi, S.Si., M.Si.         Image: Supporting lecturer       Evaluation         Image: Supporting lecturer       Assessment         Image: Supporting lecturer       Evaluation         Image: Supporting lecturer       Assessment  | Reference               | ces | Main :   |   |              |       |     |     |   |           |                   |         |               |       |
| Bandung.       [2]. Tooley, M. 2006. Electronics Circuit: Fundamnetals and Applications .<br>Third Edition. Elesevier Ltd.         [3]. Boylestad, R., and Nashelsky, L. Electronics Devices and Circuits:<br>Theory . Seventh Edition. Prentice Hall.         [4]. Floyd, T. L. 2012. Electronics Devices . Prentice Hall.         [5]. Tim. 2010. Panduan Praktikum Elektronika Dasar 2 .         Supporting<br>lecturer         Drs. Imam Sucahyo, M.Si.<br>Dzulkifilin, S.Si., M.T.<br>Abd. Kholig, S.Pd., M.T.<br>Meta Yantidewi, S.Si., M.Si.         Final<br>abilities of<br>each         Week  |                         |     |  |   |              |       |     |     |   |           |                   |         |               |       |
| Third Edition. Elesevier Ltd.       [3]. Boylestad, R., and Nashelsky, L. Electronics Devices and Circuits:<br>Theory . Seventh Edition. Prentice Hall.         [4]. Floyd, T. L. 2012. Electronics Devices . Prentice Hall.       [5]. Tim. 2010. Panduan Praktikum Elektronika Dasar 2 .         Supporting<br>lecturer       Drs. Imam Sucahyo, M.Si.<br>Dzulkiflih, S.Si., M.T.<br>Abd. Kholiq, S.Pd., M.T.<br>Meta Yantidewi, S.Si., M.Si.         Final<br>abilities of<br>each       Evaluation         Help Learning,<br>Learning methods,<br>Student Assignments,<br>[Estimated time]         Learning<br>materials  |                         |     | Bandung.   |   |              |       |     |     |   |           |                   |         |               |       |
| [3]. Boylestad, R., and Nashelsky, L. Electronics Devices and Circuits:         Theory . Seventh Edition. Prentice Hall.         [4]. Floyd, T. L. 2012. Electronics Devices . Prentice Hall.         [5]. Tim. 2010. Panduan Praktikum Elektronika Dasar 2 .         Supporters:         Supporting lecturer         Drs. Imam Sucahyo, M.Si.         Dzulkiflih, S.Si., M.T.         Abd. Kholig, S.Pd., M.T.         Meta Yantidewi, S.Si., M.Si.         Final abilities of each         Keek.         Week.  |                         |     | [2]. Tooley, M. 2006. Electronics Circuit: Fundamnetals and Applications .                           |   |              |       |     |     |   |           |                   |         |               |       |
| [4]. Floyd, T. L. 2012. Electronics Devices . Prentice Hall.         [5]. Tim. 2010. Panduan Praktikum Elektronika Dasar 2 .         Supporters:         Supporting lecturer         Drs. Imam Sucahyo, M.Si.         Dzulkifilh, S.Si., M.T.         Abd. Kholig, S.Pd., M.T.         Meta Yantidewi, S.Si., M.Si.         Evaluation         Help Learning, Learning methods, Student Assignments, [Estimated time]         Learning materials         Assessment   |                         |     | [3]. Boylestad, R., and Nashelsky, L. Electronics Devices and Circuits:                              |   |              |       |     |     |   |           |                   |         |               |       |
| Supporting<br>lecturer     Drs. Imam Sucahyo, M.Si.<br>Dzulkiflih, S.Si., M.T.<br>Abd. Kholiq, S.Pd., M.T.<br>Meta Yantidewi, S.Si., M.Si.       Final<br>abilities of<br>each     Evaluation     Help Learning,<br>Learning methods,<br>Student Assignments,<br>[Estimated time]     Learning<br>materials   |                         |     | [4]. Floyd, T. L. 2012. <i>Electronics Devices</i> . Prentice Hall.                                  |   |              |       |     |     |   |           |                   |         |               |       |
| Supporting<br>lecturer     Drs. Imam Sucahyo, M.Si.<br>Dzulkifilh, S.Si., M.T.<br>Abd. Kholiq, S.Pd., M.T.<br>Meta Yantidewi, S.Si., M.Si.       Final<br>abilities of<br>each     Evaluation       Help Learning,<br>Learning methods,<br>Student Assignments,<br>[Estimated time]       Learning<br>materials   |                         |     | [5]. TIM. 2010. Panduan Praktikum Elektronika Dasar 2 .  |   |              |       |     |     |   |           |                   |         |               |       |
| Iecturer       Dzulkiflih, S.Si., M.T.<br>Abd. Kholig, S.Pd., M.T.<br>Meta Yantidewi, S.Si., M.Si.         Final<br>abilities of<br>each       Evaluation       Help Learning,<br>Learning methods,<br>Student Assignments,<br>[Estimated time]       Learning<br>materials   |                         |     | Supporters:  |   |              |       |     |     |   |           |                   |         |               |       |
| Iecturer       Dzulkiflih, S.Si., M.T.<br>Abd. Kholig, S.Pd., M.T.<br>Meta Yantidewi, S.Si., M.Si.         Final<br>abilities of<br>each       Evaluation       Help Learning,<br>Learning methods,<br>Student Assignments,<br>[Estimated time]       Learning<br>materials   |                         |     |  |   |              |       |     |     |   |           |                   |         |               |       |
| Meta Yantidewi, S.Si., M.Si.         Help Learning,<br>Learning methods,<br>Student Assignments,<br>[Estimated time]         Keek.       Learning<br>materials<br>Evaluation  |                         |     | Dzulkiflih, S.Si., M.T.  |   |              |       |     |     |   |           |                   |         |               |       |
| Evaluation     Learning methods,<br>Student Assignments,<br>[Estimated time]     Learning<br>materials       Week-     each     Learning  |                         |     |  |   |              |       |     |     |   |           | 1                 |         |               |       |
| abilities of each Learning materials Assessment   | abilities<br>week- each |     | I  |   | Evaluation   |       |     | Stu | Learning methods,<br>Student Assignments, |           | thods,<br>nments, |         |               |       |
|   |                         |     | ch   |   |              |       |     |     |   |           |                   | materia |               |       |

|     | stage<br>(Sub-PO) | Indicator | Criteria & Form | Offline<br>(<br>offline<br>) | Online ( <i>online</i> ) | References<br>] |     |
|-----|-------------------|-----------|-----------------|------------------------------|--------------------------|-----------------|-----|
| (1) | (2)               | (3)       | (4)             | (5)                          | (6)                      | (7)             | (8) |
| 1   |                   |           |                 |                              |                          |                 | 0%  |
| 2   |                   |           |                 |                              |                          |                 | 0%  |
| 3   |                   |           |                 |                              |                          |                 | 0%  |
| 4   |                   |           |                 |                              |                          |                 | 0%  |
| 5   |                   |           |                 |                              |                          |                 | 0%  |
| 6   |                   |           |                 |                              |                          |                 | 0%  |
| 7   |                   |           |                 |                              |                          |                 | 0%  |
| 8   |                   |           |                 |                              |                          |                 | 0%  |
| 9   |                   |           |                 |                              |                          |                 | 0%  |
| 10  |                   |           |                 |                              |                          |                 | 0%  |
| 11  |                   |           |                 |                              |                          |                 | 0%  |
| 12  |                   |           |                 |                              |                          |                 | 0%  |
| 13  |                   |           |                 |                              |                          |                 | 0%  |
| 14  |                   |           |                 |                              |                          |                 | 0%  |
| 15  |                   |           |                 |                              |                          |                 | 0%  |
| 16  |                   |           |                 |                              |                          |                 | 0%  |

**Evaluation Percentage Recap: Case Study** 

| 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.