

|  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <div> Universitas Negeri Surabaya<br/> Fakultas Ekonomika dan Bisnis<br/> Program Studi S2 Bisnis Digital </div>                                                                                                                                                                                                                                                                                                                    |                                 |                 |             |     |                           | Kode Dokumen |                 |           |       |       |       |        |        |    |   |  |  |        |  |  |   |  |        |   |   |   |   |        |   |   |   |   |    |    |    |    |    |    |    |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |   |  |  |  |  |   |   |  |  |        |  |   |   |   |   |   |  |  |  |   |   |   |  |  |  |  |  |        |  |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |   |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|-----------------|-------------|-----|---------------------------|--------------|-----------------|-----------|-------|-------|-------|--------|--------|----|---|--|--|--------|--|--|---|--|--------|---|---|---|---|--------|---|---|---|---|----|----|----|----|----|----|----|--------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--------|--|--|--|--|--|--|--|--|---|--|--|--|--|---|---|--|--|--------|--|---|---|---|---|---|--|--|--|---|---|---|--|--|--|--|--|--------|--|--|--|--|--|--|---|--|--|--|--|--|---|--|--|--|---|
| <div>RENCANA PEMBELAJARAN SEMESTER</div>                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                 |                 |             |     |                           |              |                 |           |       |       |       |        |        |    |   |  |  |        |  |  |   |  |        |   |   |   |   |        |   |   |   |   |    |    |    |    |    |    |    |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |   |  |  |  |  |   |   |  |  |        |  |   |   |   |   |   |  |  |  |   |   |   |  |  |  |  |  |        |  |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |   |
| MATA KULIAH (MK)                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | KODE                                                                                                                                                                                                                                                                                                                                                                                                                                | Rumpun MK                       |                 | BOBOT (sks) |     |                           | SEMESTER     | Tgl Penyusunan  |           |       |       |       |        |        |    |   |  |  |        |  |  |   |  |        |   |   |   |   |        |   |   |   |   |    |    |    |    |    |    |    |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |   |  |  |  |  |   |   |  |  |        |  |   |   |   |   |   |  |  |  |   |   |   |  |  |  |  |  |        |  |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |   |
| Business Data Analytics and Visualization for Business                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 6112303017                                                                                                                                                                                                                                                                                                                                                                                                                          | Mata Kuliah Wajib Program Studi |                 | T=1         | P=2 | ECTS=6.72                 | 1            | 5 Februari 2026 |           |       |       |       |        |        |    |   |  |  |        |  |  |   |  |        |   |   |   |   |        |   |   |   |   |    |    |    |    |    |    |    |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |   |  |  |  |  |   |   |  |  |        |  |   |   |   |   |   |  |  |  |   |   |   |  |  |  |  |  |        |  |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |   |
| OTORISASI                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Pengembang RPS                                                                                                                                                                                                                                                                                                                                                                                                                      |                                 | Koordinator RMK |             |     | Koordinator Program Studi |              |                 |           |       |       |       |        |        |    |   |  |  |        |  |  |   |  |        |   |   |   |   |        |   |   |   |   |    |    |    |    |    |    |    |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |   |  |  |  |  |   |   |  |  |        |  |   |   |   |   |   |  |  |  |   |   |   |  |  |  |  |  |        |  |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |   |
|                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Nanang H                                                                                                                                                                                                                                                                                                                                                                                                                            |                                 | Nanang H        |             |     | NADIA ASANDIMITRA HARYONO |              |                 |           |       |       |       |        |        |    |   |  |  |        |  |  |   |  |        |   |   |   |   |        |   |   |   |   |    |    |    |    |    |    |    |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |   |  |  |  |  |   |   |  |  |        |  |   |   |   |   |   |  |  |  |   |   |   |  |  |  |  |  |        |  |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |   |
| Model Pembelajaran                                                                | Project Based Learning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                 |                 |             |     |                           |              |                 |           |       |       |       |        |        |    |   |  |  |        |  |  |   |  |        |   |   |   |   |        |   |   |   |   |    |    |    |    |    |    |    |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |   |  |  |  |  |   |   |  |  |        |  |   |   |   |   |   |  |  |  |   |   |   |  |  |  |  |  |        |  |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |   |
| Capaian Pembelajaran (CP)                                                         | CPL-PRODI yang dibebankan pada MK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                 |                 |             |     |                           |              |                 |           |       |       |       |        |        |    |   |  |  |        |  |  |   |  |        |   |   |   |   |        |   |   |   |   |    |    |    |    |    |    |    |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |   |  |  |  |  |   |   |  |  |        |  |   |   |   |   |   |  |  |  |   |   |   |  |  |  |  |  |        |  |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |   |
|                                                                                   | CPL-2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Menunjukkan karakter tangguh, kolaboratif, adaptif, inovatif, inklusif, belajar sepanjang hayat, dan berjiwa kewirausahaan                                                                                                                                                                                                                                                                                                          |                                 |                 |             |     |                           |              |                 |           |       |       |       |        |        |    |   |  |  |        |  |  |   |  |        |   |   |   |   |        |   |   |   |   |    |    |    |    |    |    |    |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |   |  |  |  |  |   |   |  |  |        |  |   |   |   |   |   |  |  |  |   |   |   |  |  |  |  |  |        |  |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |   |
|                                                                                   | CPL-6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Menguasai sistem teknologi informasi dan strategi TI dalam implementasi manajemen, pemasaran, keuangan, dan SDM.                                                                                                                                                                                                                                                                                                                    |                                 |                 |             |     |                           |              |                 |           |       |       |       |        |        |    |   |  |  |        |  |  |   |  |        |   |   |   |   |        |   |   |   |   |    |    |    |    |    |    |    |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |   |  |  |  |  |   |   |  |  |        |  |   |   |   |   |   |  |  |  |   |   |   |  |  |  |  |  |        |  |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |   |
|                                                                                   | CPL-7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Menguasai strategi tata kelola TI, teknologi keuangan, inovasi, serta transformasi bisnis digital untuk menciptakan keunggulan kompetitif                                                                                                                                                                                                                                                                                           |                                 |                 |             |     |                           |              |                 |           |       |       |       |        |        |    |   |  |  |        |  |  |   |  |        |   |   |   |   |        |   |   |   |   |    |    |    |    |    |    |    |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |   |  |  |  |  |   |   |  |  |        |  |   |   |   |   |   |  |  |  |   |   |   |  |  |  |  |  |        |  |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |   |
|                                                                                   | CPL-10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Mampu melakukan analisis keputusan secara kritis dan kreatif, serta bisa mengelola organisasi dengan baik dalam menerapkan teori bisnis digital                                                                                                                                                                                                                                                                                     |                                 |                 |             |     |                           |              |                 |           |       |       |       |        |        |    |   |  |  |        |  |  |   |  |        |   |   |   |   |        |   |   |   |   |    |    |    |    |    |    |    |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |   |  |  |  |  |   |   |  |  |        |  |   |   |   |   |   |  |  |  |   |   |   |  |  |  |  |  |        |  |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |   |
|                                                                                   | Capaian Pembelajaran Mata Kuliah (CPMK)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                 |                 |             |     |                           |              |                 |           |       |       |       |        |        |    |   |  |  |        |  |  |   |  |        |   |   |   |   |        |   |   |   |   |    |    |    |    |    |    |    |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |   |  |  |  |  |   |   |  |  |        |  |   |   |   |   |   |  |  |  |   |   |   |  |  |  |  |  |        |  |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |   |
|                                                                                   | CPMK - 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Menganalisis dataset kompleks menggunakan teknik analitik lanjutan.                                                                                                                                                                                                                                                                                                                                                                 |                                 |                 |             |     |                           |              |                 |           |       |       |       |        |        |    |   |  |  |        |  |  |   |  |        |   |   |   |   |        |   |   |   |   |    |    |    |    |    |    |    |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |   |  |  |  |  |   |   |  |  |        |  |   |   |   |   |   |  |  |  |   |   |   |  |  |  |  |  |        |  |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |   |
|                                                                                   | CPMK - 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Membangun visualisasi data interaktif untuk menyampaikan insight bisnis.                                                                                                                                                                                                                                                                                                                                                            |                                 |                 |             |     |                           |              |                 |           |       |       |       |        |        |    |   |  |  |        |  |  |   |  |        |   |   |   |   |        |   |   |   |   |    |    |    |    |    |    |    |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |   |  |  |  |  |   |   |  |  |        |  |   |   |   |   |   |  |  |  |   |   |   |  |  |  |  |  |        |  |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |   |
|                                                                                   | CPMK - 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Menggunakan alat visualisasi modern (Tableau, Power BI, Python) dalam konteks studi kasus nyata.                                                                                                                                                                                                                                                                                                                                    |                                 |                 |             |     |                           |              |                 |           |       |       |       |        |        |    |   |  |  |        |  |  |   |  |        |   |   |   |   |        |   |   |   |   |    |    |    |    |    |    |    |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |   |  |  |  |  |   |   |  |  |        |  |   |   |   |   |   |  |  |  |   |   |   |  |  |  |  |  |        |  |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |   |
|                                                                                   | CPMK - 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Menyajikan hasil analitik dalam bentuk laporan naratif berbasis data.                                                                                                                                                                                                                                                                                                                                                               |                                 |                 |             |     |                           |              |                 |           |       |       |       |        |        |    |   |  |  |        |  |  |   |  |        |   |   |   |   |        |   |   |   |   |    |    |    |    |    |    |    |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |   |  |  |  |  |   |   |  |  |        |  |   |   |   |   |   |  |  |  |   |   |   |  |  |  |  |  |        |  |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |   |
|                                                                                   | Matrik CPL - CPMK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                 |                 |             |     |                           |              |                 |           |       |       |       |        |        |    |   |  |  |        |  |  |   |  |        |   |   |   |   |        |   |   |   |   |    |    |    |    |    |    |    |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |   |  |  |  |  |   |   |  |  |        |  |   |   |   |   |   |  |  |  |   |   |   |  |  |  |  |  |        |  |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |   |
|                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <table border="1"> <thead> <tr> <th>CPMK</th> <th>CPL-2</th> <th>CPL-6</th> <th>CPL-7</th> <th>CPL-10</th> </tr> </thead> <tbody> <tr> <td>CPMK-1</td> <td>✓</td> <td></td> <td></td> <td></td> </tr> <tr> <td>CPMK-2</td> <td></td> <td></td> <td>✓</td> <td></td> </tr> <tr> <td>CPMK-3</td> <td></td> <td>✓</td> <td></td> <td></td> </tr> <tr> <td>CPMK-4</td> <td></td> <td></td> <td></td> <td>✓</td> </tr> </tbody> </table> |                                 |                 |             |     |                           |              |                 | CPMK      | CPL-2 | CPL-6 | CPL-7 | CPL-10 | CPMK-1 | ✓  |   |  |  | CPMK-2 |  |  | ✓ |  | CPMK-3 |   | ✓ |   |   | CPMK-4 |   |   |   | ✓ |    |    |    |    |    |    |    |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |   |  |  |  |  |   |   |  |  |        |  |   |   |   |   |   |  |  |  |   |   |   |  |  |  |  |  |        |  |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |   |
|                                                                                   | CPMK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | CPL-2                                                                                                                                                                                                                                                                                                                                                                                                                               | CPL-6                           | CPL-7           | CPL-10      |     |                           |              |                 |           |       |       |       |        |        |    |   |  |  |        |  |  |   |  |        |   |   |   |   |        |   |   |   |   |    |    |    |    |    |    |    |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |   |  |  |  |  |   |   |  |  |        |  |   |   |   |   |   |  |  |  |   |   |   |  |  |  |  |  |        |  |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |   |
|                                                                                   | CPMK-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | ✓                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                 |                 |             |     |                           |              |                 |           |       |       |       |        |        |    |   |  |  |        |  |  |   |  |        |   |   |   |   |        |   |   |   |   |    |    |    |    |    |    |    |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |   |  |  |  |  |   |   |  |  |        |  |   |   |   |   |   |  |  |  |   |   |   |  |  |  |  |  |        |  |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |   |
|                                                                                   | CPMK-2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                 | ✓               |             |     |                           |              |                 |           |       |       |       |        |        |    |   |  |  |        |  |  |   |  |        |   |   |   |   |        |   |   |   |   |    |    |    |    |    |    |    |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |   |  |  |  |  |   |   |  |  |        |  |   |   |   |   |   |  |  |  |   |   |   |  |  |  |  |  |        |  |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |   |
|                                                                                   | CPMK-3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                     | ✓                               |                 |             |     |                           |              |                 |           |       |       |       |        |        |    |   |  |  |        |  |  |   |  |        |   |   |   |   |        |   |   |   |   |    |    |    |    |    |    |    |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |   |  |  |  |  |   |   |  |  |        |  |   |   |   |   |   |  |  |  |   |   |   |  |  |  |  |  |        |  |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |   |
|                                                                                   | CPMK-4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                 |                 | ✓           |     |                           |              |                 |           |       |       |       |        |        |    |   |  |  |        |  |  |   |  |        |   |   |   |   |        |   |   |   |   |    |    |    |    |    |    |    |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |   |  |  |  |  |   |   |  |  |        |  |   |   |   |   |   |  |  |  |   |   |   |  |  |  |  |  |        |  |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |   |
| Matrik CPMK pada Kemampuan akhir tiap tahapan belajar (Sub-CPMK)                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                 |                 |             |     |                           |              |                 |           |       |       |       |        |        |    |   |  |  |        |  |  |   |  |        |   |   |   |   |        |   |   |   |   |    |    |    |    |    |    |    |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |   |  |  |  |  |   |   |  |  |        |  |   |   |   |   |   |  |  |  |   |   |   |  |  |  |  |  |        |  |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |   |
|                                                                                   | <table border="1"> <thead> <tr> <th rowspan="2">CPMK</th> <th colspan="16">Minggu Ke</th> </tr> <tr> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> <th>6</th> <th>7</th> <th>8</th> <th>9</th> <th>10</th> <th>11</th> <th>12</th> <th>13</th> <th>14</th> <th>15</th> <th>16</th> </tr> </thead> <tbody> <tr> <td>CPMK-1</td> <td>✓</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>CPMK-2</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>✓</td> <td></td> <td></td> <td></td> <td></td> <td>✓</td> <td>✓</td> <td></td> <td></td> </tr> <tr> <td>CPMK-3</td> <td></td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> <td></td> <td></td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>CPMK-4</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>✓</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>✓</td> <td></td> <td></td> <td></td> <td>✓</td> </tr> </tbody> </table> |                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                 |                 |             |     |                           |              | CPMK            | Minggu Ke |       |       |       |        |        |    |   |  |  |        |  |  |   |  |        | 1 | 2 | 3 | 4 | 5      | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | CPMK-1 | ✓ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | CPMK-2 |  |  |  |  |  |  |  |  | ✓ |  |  |  |  | ✓ | ✓ |  |  | CPMK-3 |  | ✓ | ✓ | ✓ | ✓ | ✓ |  |  |  | ✓ | ✓ | ✓ |  |  |  |  |  | CPMK-4 |  |  |  |  |  |  | ✓ |  |  |  |  |  | ✓ |  |  |  | ✓ |
| CPMK                                                                              | Minggu Ke                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                 |                 |             |     |                           |              |                 |           |       |       |       |        |        |    |   |  |  |        |  |  |   |  |        |   |   |   |   |        |   |   |   |   |    |    |    |    |    |    |    |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |   |  |  |  |  |   |   |  |  |        |  |   |   |   |   |   |  |  |  |   |   |   |  |  |  |  |  |        |  |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |   |
|                                                                                   | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 2                                                                                                                                                                                                                                                                                                                                                                                                                                   | 3                               | 4               | 5           | 6   | 7                         | 8            | 9               | 10        | 11    | 12    | 13    | 14     | 15     | 16 |   |  |  |        |  |  |   |  |        |   |   |   |   |        |   |   |   |   |    |    |    |    |    |    |    |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |   |  |  |  |  |   |   |  |  |        |  |   |   |   |   |   |  |  |  |   |   |   |  |  |  |  |  |        |  |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |   |
| CPMK-1                                                                            | ✓                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                 |                 |             |     |                           |              |                 |           |       |       |       |        |        |    |   |  |  |        |  |  |   |  |        |   |   |   |   |        |   |   |   |   |    |    |    |    |    |    |    |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |   |  |  |  |  |   |   |  |  |        |  |   |   |   |   |   |  |  |  |   |   |   |  |  |  |  |  |        |  |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |   |
| CPMK-2                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                 |                 |             |     |                           |              | ✓               |           |       |       |       | ✓      | ✓      |    |   |  |  |        |  |  |   |  |        |   |   |   |   |        |   |   |   |   |    |    |    |    |    |    |    |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |   |  |  |  |  |   |   |  |  |        |  |   |   |   |   |   |  |  |  |   |   |   |  |  |  |  |  |        |  |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |   |
| CPMK-3                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | ✓                                                                                                                                                                                                                                                                                                                                                                                                                                   | ✓                               | ✓               | ✓           | ✓   |                           |              |                 | ✓         | ✓     | ✓     |       |        |        |    |   |  |  |        |  |  |   |  |        |   |   |   |   |        |   |   |   |   |    |    |    |    |    |    |    |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |   |  |  |  |  |   |   |  |  |        |  |   |   |   |   |   |  |  |  |   |   |   |  |  |  |  |  |        |  |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |   |
| CPMK-4                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                 |                 |             |     | ✓                         |              |                 |           |       |       | ✓     |        |        |    | ✓ |  |  |        |  |  |   |  |        |   |   |   |   |        |   |   |   |   |    |    |    |    |    |    |    |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |   |  |  |  |  |   |   |  |  |        |  |   |   |   |   |   |  |  |  |   |   |   |  |  |  |  |  |        |  |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |   |
| Deskripsi Singkat MK                                                              | Mata kuliah ini membekali mahasiswa dengan kemampuan analisis data dan visualisasi data untuk mendukung pengambilan keputusan bisnis. Mahasiswa akan belajar menggunakan alat modern seperti Tableau, Power BI, dan pustaka Python visualisasi seperti Plotly dan Seaborn untuk menginterpretasikan data dalam konteks bisnis strategis.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                 |                 |             |     |                           |              |                 |           |       |       |       |        |        |    |   |  |  |        |  |  |   |  |        |   |   |   |   |        |   |   |   |   |    |    |    |    |    |    |    |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |   |  |  |  |  |   |   |  |  |        |  |   |   |   |   |   |  |  |  |   |   |   |  |  |  |  |  |        |  |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |   |
| Pustaka                                                                           | Utama :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                 |                 |             |     |                           |              |                 |           |       |       |       |        |        |    |   |  |  |        |  |  |   |  |        |   |   |   |   |        |   |   |   |   |    |    |    |    |    |    |    |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |   |  |  |  |  |   |   |  |  |        |  |   |   |   |   |   |  |  |  |   |   |   |  |  |  |  |  |        |  |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |   |
|                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                 |                 |             |     |                           |              |                 |           |       |       |       |        |        |    |   |  |  |        |  |  |   |  |        |   |   |   |   |        |   |   |   |   |    |    |    |    |    |    |    |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |   |  |  |  |  |   |   |  |  |        |  |   |   |   |   |   |  |  |  |   |   |   |  |  |  |  |  |        |  |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |   |

| <ol style="list-style-type: none"> <li>1. Knaflic, C. N. (2015). <i>Storytelling with Data: A Data Visualization Guide for Business Professionals</i>. Wiley.</li> <li>2. Murray, D. (2016). <i>Tableau Your Data!: Fast and Easy Visual Analysis with Tableau Software</i>. Wiley.</li> <li>3. Cairo, A. (2019). <i>How Charts Lie: Getting Smarter about Visual Information</i>. W. W. Norton &amp; Company.</li> <li>4. Dokumentasi Resmi Tableau/Power BI &amp; Python Libraries.</li> </ol> |                                                 |                                                                                               |                                                                                                   |                                                                                                                                                    |                 |                                                                                                                                                                                                                                                                                                                                                     |                     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|-----------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| <b>Pendukung :</b> <ol style="list-style-type: none"> <li>1. McKinney, W. (2022). <i>Python for Data Analysis</i> (Wajib untuk materi Python).</li> <li>2. Few, S. (2009). <i>Now You See It</i> (Standar visualisasi bisnis).</li> <li>3. Dokumentasi Resmi Tableau/Power BI &amp; Python Libraries.</li> </ol>                                                                                                                                                                                 |                                                 |                                                                                               |                                                                                                   |                                                                                                                                                    |                 |                                                                                                                                                                                                                                                                                                                                                     |                     |
| <b>Dosen Pengampu</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                 | Dr. Nanang Hoesen Hidroes Abbrori, S.T., M.T.I.<br>Ibnu Febry Kurniawan, S.Kom., M.Sc., Ph.D. |                                                                                                   |                                                                                                                                                    |                 |                                                                                                                                                                                                                                                                                                                                                     |                     |
| Mg Ke-                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Kemampuan akhir tiap tahapan belajar (Sub-CPMK) | Penilaian                                                                                     |                                                                                                   | Bantuan Pembelajaran, Metode Pembelajaran, Penugasan Mahasiswa, [Estimasi Waktu]                                                                   |                 | Materi Pembelajaran [Pustaka]                                                                                                                                                                                                                                                                                                                       | Bobot Penilaian (%) |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                 | Indikator                                                                                     | Kriteria & Bentuk                                                                                 | Luring (offline)                                                                                                                                   | Daring (online) |                                                                                                                                                                                                                                                                                                                                                     |                     |
| (1)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | (2)                                             | (3)                                                                                           | (4)                                                                                               | (5)                                                                                                                                                | (6)             | (7)                                                                                                                                                                                                                                                                                                                                                 | (8)                 |
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Pengantar Big Data dan Visualisasi              | Menjelaskan perbedaan big data dan data biasa; mengenali peran visualisasi dalam bisnis       | <b>Kriteria:</b><br>Penguasaan konsep<br><br><b>Bentuk Penilaian :</b><br>Aktifitas Partisipatif  | Konsep dasar big data, perbedaan data tradisional dan big data, peran visualisasi dalam pemrosesan dan pengambilan keputusan bisnis berbasis data. |                 | <b>Materi:</b><br>Introduction & Chap 1<br><b>Pustaka:</b><br>Cairo, A. (2019). <i>How Charts Lie: Getting Smarter about Visual Information</i> . W. W. Norton & Company.<br><hr/> <b>Materi:</b> Chap 1-2 (Dasar Analisis Visual).<br><b>Pustaka:</b> Few, S. (2009). <i>Now You See It</i> (Standar visualisasi bisnis).                          | 3%                  |
| 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Eksplorasi Dataset Kompleks                     | Mengidentifikasi anomali, tren, dan pola dari dataset kompleks                                | <b>Kriteria:</b><br>Ketepatan analisis<br><br><b>Bentuk Penilaian :</b><br>Aktifitas Partisipatif | Teknik eksplorasi data besar (data cleaning, normalisasi, missing value treatment), deteksi pola dan outlier dari berbagai jenis dataset.          |                 | <b>Materi:</b> Chap 2 (Working with Data)<br><b>Pustaka:</b><br>Murray, D. (2016). <i>Tableau Your Data!: Fast and Easy Visual Analysis with Tableau Software</i> . Wiley.<br><hr/> <b>Materi:</b> Chap 5 (Pandas), Chap 7 (Data Cleaning).<br><b>Pustaka:</b><br>McKinney, W. (2022). <i>Python for Data Analysis</i> (Wajib untuk materi Python). | 4%                  |

|   |                                          |                                                            |                                                                                                       |                                                                                                                                |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |     |
|---|------------------------------------------|------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| 3 | Tools Visualisasi – Tableau dan Power BI | Menyusun visualisasi dasar dengan tools industri           | <b>Kriteria:</b><br>Unjuk Kerja<br><br><b>Bentuk Penilaian :</b><br>Aktifitas Partisipasif            | Dasar penggunaan Tableau dan Power BI untuk membuat grafik, mengimpor data, serta menggunakan filter dan dashboard interaktif. |  | <b>Materi:</b> Basic Charts & Formatting<br><b>Pustaka:</b><br>Murray, D. (2016). <i>Tableau Your Data!: Fast and Easy Visual Analysis with Tableau Software</i> . Wiley.<br><br><b>Materi:</b><br>Tutorial Resmi Tableau/Power BI.<br><b>Pustaka:</b><br>Dokumentasi Resmi Tableau/Power BI & Python Libraries.                                                                                                                                                                                                            | 4%  |
| 4 | Dashboard Design dan UX                  | Mendesain dashboard interaktif berbasis kebutuhan pengguna | <b>Kriteria:</b><br>Kreativitas & Estetika<br><br><b>Bentuk Penilaian :</b><br>Aktifitas Partisipasif | Prinsip desain dashboard informatif (data hierarchy, UX/UI best practices, pemilihan warna, dan visual cues).                  |  | <b>Materi:</b> Chap 3 (Clutter), Chap 4 (Focus)<br><b>Pustaka:</b><br>Knaflitz, C. N. (2015). <i>Storytelling with Data: A Data Visualization Guide for Business Professionals</i> . Wiley.<br><br><b>Materi:</b> Chap 7 (Dashboard Design).<br><b>Pustaka:</b><br>Murray, D. (2016). <i>Tableau Your Data!: Fast and Easy Visual Analysis with Tableau Software</i> . Wiley.<br><br><b>Materi:</b><br>Dashboard Design Principles.<br><b>Pustaka:</b> Few, S. (2009). <i>Now You See It (Standar visualisasi bisnis)</i> . | 10% |

|   |                                                          |                                                                |                                                                                                   |                                                                                                                                                  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |    |
|---|----------------------------------------------------------|----------------------------------------------------------------|---------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| 5 | Pustaka Python Visualisasi (Matplotlib, Seaborn, Plotly) | Membuat grafik dinamis berbasis Python                         | <b>Kriteria:</b><br>Ketepatan Syntax<br><br><b>Bentuk Penilaian :</b><br>Aktifitas Partisipatif   | Implementasi grafik bar, line, scatter, histogram, dan pie chart dalam Python. Perbandingan antar pustaka                                        |  | <b>Materi:</b> Chap 9 (Plotting and Visualization)<br><b>Pustaka:</b><br>McKinney, W. (2022). <i>Python for Data Analysis (Wajib untuk materi Python)</i> .<br><hr/> <b>Materi:</b><br>Dokumentasi Seaborn/Plotly.<br><b>Pustaka:</b><br>Dokumentasi Resmi<br>Tableau/Power BI & Python Libraries.                                                                                                                                                                             | 5% |
| 6 | Visualisasi Multivariat dan Korelasi                     | Menyusun heatmap, pairplot, scatter matrix dan interpretasinya | <b>Kriteria:</b><br>Kedalaman Analisis<br><br><b>Bentuk Penilaian :</b><br>Aktifitas Partisipatif | Teknik membuat visualisasi multivariat seperti heatmap, pairplot, jointplot, scatter-matrix untuk analisis korelasi dan asosiasi antar variabel. |  | <b>Materi:</b><br>Advanced Charts<br><b>Pustaka:</b><br>Murray, D. (2016). <i>Tableau Your Data!: Fast and Easy Visual Analysis with Tableau Software</i> . Wiley.<br><hr/> <b>Materi:</b> Chap 9 (Multivariate Plots)<br><b>Pustaka:</b><br>McKinney, W. (2022). <i>Python for Data Analysis (Wajib untuk materi Python)</i> .<br><hr/> <b>Materi:</b> Chap 5 (Multivariate Analysis)<br><b>Pustaka:</b> Few, S. (2009). <i>Now You See It (Standar visualisasi bisnis)</i> . | 5% |

|   |                                         |                                                          |                                                                                                               |                                                                                                                                                 |  |                                                                                                                                                                                                                                                                                                                                                                           |     |
|---|-----------------------------------------|----------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| 7 | Data Storytelling & Business Narrative  | Menyusun narasi bisnis berbasis insight visual           | <b>Kriteria:</b><br>Komunikasi<br><br><b>Bentuk Penilaian :</b><br>Penilaian Hasil Project / Penilaian Produk | Teknik membangun narasi bisnis berbasis data: framing insight, penyesuaian audiens, serta penggunaan grafis dan teks secara terpadu             |  | <b>Materi:</b> Chap 1 (Context), Chap 7 (Storytelling)<br><b>Pustaka:</b><br><i>Knafllic, C. N. (2015). Storytelling with Data: A Data Visualization Guide for Business Professionals. Wiley.</i><br><hr/> <b>Materi:</b> Chap 2.<br><b>Pustaka:</b><br><i>Cairo, A. (2019). How Charts Lie: Getting Smarter about Visual Information. W. W. Norton &amp; Company.</i>    | 15% |
| 8 | UTS                                     |                                                          | <b>Bentuk Penilaian :</b><br>Aktifitas Partisipasif, Praktik / Unjuk Kerja                                    | Evaluasi                                                                                                                                        |  |                                                                                                                                                                                                                                                                                                                                                                           | 0%  |
| 9 | Studi Kasus Industri (Retail, Keuangan) | Menerapkan visualisasi dalam konteks data industri nyata | <b>Kriteria:</b><br>Problem Solving<br><br><b>Bentuk Penilaian :</b><br>Aktifitas Partisipasif                | Simulasi dan studi kasus data aktual dari sektor retail, e-commerce, dan keuangan. Diskusi insight berdasarkan visualisasi masing-masing sektor |  | <b>Materi:</b> Chap 9 (Case Studies)<br><b>Pustaka:</b><br><i>Knafllic, C. N. (2015). Storytelling with Data: A Data Visualization Guide for Business Professionals. Wiley.</i><br><hr/> <b>Materi:</b> Chap 12-14 (Real world use cases)<br><b>Pustaka:</b><br><i>Murray, D. (2016). Tableau Your Data!: Fast and Easy Visual Analysis with Tableau Software. Wiley.</i> | 4%  |

|    |                          |                                                                                  |                                                                                                                                            |                                                                                                              |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |    |
|----|--------------------------|----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| 10 | Predictive Visualization | Membuat grafik prediksi dengan regresi atau klasifikasi                          | <b>Kriteria:</b><br>Teknis & Logika<br><br><b>Bentuk Penilaian :</b><br>Aktifitas Partisipasif                                             | Integrasi hasil prediksi (regresi, klasifikasi) ke dalam visualisasi yang komunikatif dan berbasis skenario. |  | <b>Materi:</b> Chap 8 (Trends & Reference Lines)<br><b>Pustaka:</b><br><i>Murray, D. (2016). Tableau Your Data!: Fast and Easy Visual Analysis with Tableau Software. Wiley.</i><br><hr/> <b>Materi:</b> Chap 11 (Time Series)<br><b>Pustaka:</b><br><i>McKinney, W. (2022). Python for Data Analysis (Wajib untuk materi Python).</i><br><hr/> <b>Materi:</b> Scikit-learn Visualization<br><b>Pustaka:</b><br><i>Dokumentasi Resmi Tableau/Power BI &amp; Python Libraries.</i> | 5% |
| 11 | Geospatial Visualization | Menggunakan peta visual (choropleth, lat-long) untuk mendukung insight geografis | <b>Kriteria:</b><br>Kerapian Visual<br><br><b>Bentuk Penilaian :</b><br>Penilaian Hasil Project / Penilaian Produk                         | Visualisasi peta dengan data spasial menggunakan choropleth, bubble map, dan heatmap geospasial              |  | <b>Materi:</b> Chap 5 (Mapping)<br><b>Pustaka:</b><br><i>Murray, D. (2016). Tableau Your Data!: Fast and Easy Visual Analysis with Tableau Software. Wiley.</i><br><hr/> <b>Materi:</b> Plotly Maps documentation<br><b>Pustaka:</b><br><i>Dokumentasi Resmi Tableau/Power BI &amp; Python Libraries.</i>                                                                                                                                                                         | 5% |
| 12 | Evaluasi Insight Visual  | Menganalisis efektivitas komunikasi visual terhadap pengambilan keputusan        | <b>Kriteria:</b><br>Berpikir Kritis<br><br><b>Bentuk Penilaian :</b><br>Aktifitas Partisipasif, Penilaian Hasil Project / Penilaian Produk | Analisis efektivitas komunikasi visual: clarity, persuasiveness, relevansi, interpretasi bisnis              |  | <b>Materi:</b> Chap 6 (Think like a designer), Chap 8 (Putting it all together).<br><b>Pustaka:</b><br><i>Knafllic, C. N. (2015). Storytelling with Data: A Data Visualization Guide for Business Professionals. Wiley.</i>                                                                                                                                                                                                                                                       | 5% |

|    |                                                  |                                                              |                                                                                                                        |                                                                                                                      |  |                                                                                                                                                                                                                                                                                                                                           |     |
|----|--------------------------------------------------|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| 13 | Best Practices dan Data Ethics dalam Visualisasi | Mengidentifikasi manipulasi visualisasi dan dampaknya        | <b>Kriteria:</b><br>Analisis Etis<br><br><b>Bentuk Penilaian :</b><br>Penilaian Hasil Project / Penilaian Produk       | Etika dalam visualisasi data, termasuk misleading charts, cherry-picking, dan bias persepsi. Framework etika visual. |  | <b>Materi:</b> Chap 3-6 (Patterns of Deception, Dubious Data).<br><b>Pustaka:</b><br>Cairo, A. (2019). <i>How Charts Lie: Getting Smarter about Visual Information</i> . W. Norton & Company.<br><br><b>Materi:</b> Ethics in Data Visualization.<br><b>Pustaka:</b> Few, S. (2009). <i>Now You See It (Standar visualisasi bisnis)</i> . | 5%  |
| 14 | Presentasi Proyek Akhir                          | Menyampaikan visualisasi dan insight secara lisan dan visual | <b>Kriteria:</b><br>Produk & Presentasi<br><br><b>Bentuk Penilaian :</b><br>Penilaian Hasil Project / Penilaian Produk | Setiap mahasiswa mempresentasikan proyek akhir visualisasi data mereka dalam format laporan interaktif.              |  | <b>Materi:</b><br><b>Pustaka:</b><br>Knaflic, C. N. (2015). <i>Telling with Data: A Data Visualization Guide for Business Professionals</i> . Wiley.                                                                                                                                                                                      | 5%  |
| 15 | Revisi Proyek dan Feedback Peer Review           | Merevisi proyek berdasarkan umpan balik kolega               | <b>Kriteria:</b><br>Responsivitas<br><br><b>Bentuk Penilaian :</b><br>Penilaian Hasil Project / Penilaian Produk       | Revisi Proyek dan Feedback Peer Review                                                                               |  | <b>Materi:</b><br><b>Pustaka:</b><br>Knaflic, C. N. (2015). <i>Telling with Data: A Data Visualization Guide for Business Professionals</i> . Wiley.                                                                                                                                                                                      | 10% |
| 16 | UAS                                              |                                                              | <b>Bentuk Penilaian :</b><br>Penilaian Hasil Project / Penilaian Produk                                                | Evaluasi                                                                                                             |  |                                                                                                                                                                                                                                                                                                                                           | 15% |

#### Rekap Persentase Evaluasi : Project Based Learning

| No | Evaluasi                                   | Persentase |
|----|--------------------------------------------|------------|
| 1. | Aktivitas Partisipatif                     | 42.5%      |
| 2. | Penilaian Hasil Project / Penilaian Produk | 57.5%      |
|    |                                            | 100%       |

#### Catatan

1. **Capaian Pembelajaran Lulusan Prodi (CPL - Prodi)** adalah kemampuan yang dimiliki oleh setiap lulusan prodi yang merupakan internalisasi dari sikap, penguasaan pengetahuan dan ketrampilan sesuai dengan jenjang studinya yang diperoleh melalui proses pembelajaran.
2. **CPL yang dibebankan pada mata kuliah** adalah beberapa capaian pembelajaran lulusan program studi (CPL-Prodi) yang digunakan untuk pembentukan/pengembangan sebuah mata kuliah yang terdiri dari aspek sikap, ketrampilan umum, ketrampilan khusus dan pengetahuan.
3. **CP Mata kuliah (CPMK)** adalah kemampuan yang dijabarkan secara spesifik dari CPL yang dibebankan pada mata kuliah, dan bersifat spesifik terhadap bahan kajian atau materi pembelajaran mata kuliah tersebut.
4. **Sub-CPMK Mata kuliah (Sub-CPMK)** adalah kemampuan yang dijabarkan secara spesifik dari CPMK yang dapat diukur atau diamati dan merupakan kemampuan akhir yang direncanakan pada tiap tahap pembelajaran, dan bersifat spesifik terhadap materi pembelajaran mata kuliah tersebut.
5. **Indikator penilaian** kemampuan dalam proses maupun hasil belajar mahasiswa adalah pernyataan spesifik dan terukur yang mengidentifikasi kemampuan atau kinerja hasil belajar mahasiswa yang disertai bukti-bukti.

6. **Kreteria Penilaian** adalah patokan yang digunakan sebagai ukuran atau tolok ukur ketercapaian pembelajaran dalam penilaian berdasarkan indikator-indikator yang telah ditetapkan. Kreteria penilaian merupakan pedoman bagi penilai agar penilaian konsisten dan tidak bias. Kreteria dapat berupa kuantitatif ataupun kualitatif.
7. **Bentuk penilaian:** tes dan non-tes.
8. **Bentuk pembelajaran:** Kuliah, Responsi, Tutorial, Seminar atau yang setara, Praktikum, Praktik Studio, Praktik Bengkel, Praktik Lapangan, Penelitian, Pengabdian Kepada Masyarakat dan/atau bentuk pembelajaran lain yang setara.
9. **Metode Pembelajaran:** Small Group Discussion, Role-Play & Simulation, Discovery Learning, Self-Directed Learning, Cooperative Learning, Collaborative Learning, Contextual Learning, Project Based Learning, dan metode lainnya yg setara.
10. **Materi Pembelajaran** adalah rincian atau uraian dari bahan kajian yg dapat disajikan dalam bentuk beberapa pokok dan sub-pokok bahasan.
11. **Bobot penilaian** adalah prosentasi penilaian terhadap setiap pencapaian sub-CPMK yang besarnya proposional dengan tingkat kesulitan pencapaian sub-CPMK tsb., dan totalnya 100%.
12. TM=Tatap Muka, PT=Penugasan terstruktur, BM=Belajar mandiri.