



**Universitas Negeri Surabaya**  
**Fakultas Matematika dan Ilmu Pengetahuan Alam**  
**Program Studi S2 Pendidikan Matematika**

Kode  
Dokumen

## RENCANA PEMBELAJARAN SEMESTER

| MATA KULIAH (MK)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | KODE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Rumpun MK                                                         | BOBOT (sks)       | SEMESTER | Tgl Penyusunan            |           |        |        |        |    |    |    |    |    |    |    |  |  |  |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|-------------------|----------|---------------------------|-----------|--------|--------|--------|----|----|----|----|----|----|----|--|--|--|--|--|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|--------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Pemodelan Matematika (Mathematical Modeling)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 8410202162                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                   | T=2 P=0 ECTS=4.48 | 2        | 28 April 2023             |           |        |        |        |    |    |    |    |    |    |    |  |  |  |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| OTORISASI                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Pengembang RPS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                   | Koordinator RMK   |          | Koordinator Program Studi |           |        |        |        |    |    |    |    |    |    |    |  |  |  |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Dr. Abadi                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                   | .....             |          | Dr. Agung Lukito, M.S.    |           |        |        |        |    |    |    |    |    |    |    |  |  |  |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Model Pembelajaran                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Project Based Learning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                   |                   |          |                           |           |        |        |        |    |    |    |    |    |    |    |  |  |  |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Capaian Pembelajaran (CP)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | CPL-PRODI yang dibebankan pada MK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                   |                   |          |                           |           |        |        |        |    |    |    |    |    |    |    |  |  |  |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Capaian Pembelajaran Mata Kuliah (CPMK)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                   |                   |          |                           |           |        |        |        |    |    |    |    |    |    |    |  |  |  |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | CPMK - 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | memahami prinsip-prinsip pemodelan                                |                   |          |                           |           |        |        |        |    |    |    |    |    |    |    |  |  |  |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | CPMK - 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | memahami suatu model matematika dan penerapannya.                 |                   |          |                           |           |        |        |        |    |    |    |    |    |    |    |  |  |  |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | CPMK - 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Mampu menjelaskan penerapan pemodelan matematika dalam pendidikan |                   |          |                           |           |        |        |        |    |    |    |    |    |    |    |  |  |  |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Matrik CPL - CPMK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                   |                   |          |                           |           |        |        |        |    |    |    |    |    |    |    |  |  |  |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <table border="1" style="margin: auto;"> <tr><td>CPMK</td></tr> <tr><td>CPMK-1</td></tr> <tr><td>CPMK-2</td></tr> <tr><td>CPMK-3</td></tr> </table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                   |                   |          |                           | CPMK      | CPMK-1 | CPMK-2 | CPMK-3 |    |    |    |    |    |    |    |  |  |  |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | CPMK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                   |                   |          |                           |           |        |        |        |    |    |    |    |    |    |    |  |  |  |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | CPMK-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                   |                   |          |                           |           |        |        |        |    |    |    |    |    |    |    |  |  |  |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | CPMK-2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                   |                   |          |                           |           |        |        |        |    |    |    |    |    |    |    |  |  |  |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CPMK-3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                   |                   |          |                           |           |        |        |        |    |    |    |    |    |    |    |  |  |  |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Matrik CPMK pada Kemampuan akhir tiap tahapan belajar (Sub-CPMK)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                   |                   |          |                           |           |        |        |        |    |    |    |    |    |    |    |  |  |  |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <table border="1" style="width: 100%; text-align: center;"> <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> <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> </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> </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> </tr> </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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Minggu Ke                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                   |                   |          |                           |           |        |        |        |    |    |    |    |    |    |    |  |  |  |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 2                                                                 | 3                 | 4        | 5                         | 6         | 7      | 8      | 9      | 10 | 11 | 12 | 13 | 14 | 15 | 16 |  |  |  |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CPMK-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                   |                   |          |                           |           |        |        |        |    |    |    |    |    |    |    |  |  |  |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CPMK-2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                   |                   |          |                           |           |        |        |        |    |    |    |    |    |    |    |  |  |  |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CPMK-3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                   |                   |          |                           |           |        |        |        |    |    |    |    |    |    |    |  |  |  |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Deskripsi Singkat MK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Matakuliah ini memberikan bekal mahasiswa wawasan, pengetahuan, dan keterampilan pemodelan matematis suatu fenomena dan penyelesaiannya. Cakupan materi meliputi pengertian model dan model matematika, tahap-tahap pemodelan matematika, dan pemodelan matematika dalam pembelajaran matematika. Perkuliahan diawali dengan paparan konsep dan prinsip pemodelan, penggunaan pemodelan dalam memecahkan masalah, pemodelan matematika dalam pembelajaran matematika, dan pemodelan matematika sebagai pendekatan pembelajaran matematika. Perkuliahan dilakukan secara hibrid, penugasan dan diskusi mahasiswa berdasarkan contoh-contoh yang ada. melalui pembelajaran berbasis tugas individu dan kelompok serta presentasi hasil kajian. |                                                                   |                   |          |                           |           |        |        |        |    |    |    |    |    |    |    |  |  |  |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Pustaka                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <b>Utama :</b> <ol style="list-style-type: none"> <li>Giordano F.R, Fox W.P, and Horton. S.B, 2014, A First Course in Mathematical Modeling, Fifth Edition, Brooks/Cole, Cengage Learning, Boston, MA 02210 USA</li> <li>Mass, J., et.al. 2018. Mathematical Modelling for Teachers: A Practical Guide to Applicable Mathematics Education. Cham: Switzerland.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                    |                                                                   |                   |          |                           |           |        |        |        |    |    |    |    |    |    |    |  |  |  |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>Pendukung :</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                   |                   |          |                           |           |        |        |        |    |    |    |    |    |    |    |  |  |  |  |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|                       |                                                   | <ol style="list-style-type: none"> <li>1. Meyer W.J, 1984, Concepts of Mathematical Modeling, Dover Publications, inc. Mineola, New York.</li> <li>2. PISA Mathematics Framework 2022</li> <li>3. Blum &amp; Ferri (2009) Mathematical Modelling: Can it be Taught and Learnt.</li> <li>4. Design research in statistics education On symbolizing and computer tools</li> <li>5. STEM Education</li> </ol> |                                                     |                                                                                                                                |                                                            |                                                                                                                                                                                                                                    |                     |
|-----------------------|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| <b>Dosen Pengampu</b> |                                                   | Prof. Dr. Abadi, M.Sc.                                                                                                                                                                                                                                                                                                                                                                                     |                                                     |                                                                                                                                |                                                            |                                                                                                                                                                                                                                    |                     |
| Mg Ke-                | Kemampuan akhir tiap tahapan belajar (Sub-CPMK)   | Penilaian                                                                                                                                                                                                                                                                                                                                                                                                  |                                                     | Bantuk 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                     | memahami prinsip pemodelan                        | <ol style="list-style-type: none"> <li>1.menjelaskan tahapan pemodelan</li> <li>2.Memeberi contoh masalah yang dapat dibuat model matematikanya</li> <li>3.mengubah masalah dalam bentuk model matematika</li> </ol>                                                                                                                                                                                       | <b>Bentuk Penilaian</b><br>: Aktifitas Partisipasif | Ekspositori, Diskusi dan tanya jawab<br>2 x 50                                                                                 |                                                            | <b>Materi:</b> Prinsip-prinsip pemodelan matematika<br><b>Pustaka:</b> Giordano F.R, Fox W.P, and Horton. S.B, 2014, A First Course in Mathematical Modeling, Fifth Edition, Brooks/Cole, Cengage Learning, Boston, MA 02210 USA   | 2%                  |
| 2                     | memahami suatu model matematika dan penerapannya. | <ol style="list-style-type: none"> <li>1.menjelaskan contoh proses pemodelan suatu fenomena menjadi sebuah model matematika.</li> <li>2.Menentukan penyelesaian model matematika yang dibahas dan interpretasinya.</li> </ol>                                                                                                                                                                              | <b>Bentuk Penilaian</b><br>: Aktifitas Partisipasif | Penugasan (pemberian kasus pemodelan) Kerja individu mempelajari pre-existing materials terkait tugas masing-masing.<br>2 x 50 | Diskusi asynchronous dan pengumpulan hasil kerja di Vinesa | <b>Materi:</b> Kasus-kasus dalam pemodelan matematika<br><b>Pustaka:</b> Giordano F.R, Fox W.P, and Horton. S.B, 2014, A First Course in Mathematical Modeling, Fifth Edition, Brooks/Cole, Cengage Learning, Boston, MA 02210 USA | 7%                  |
| 3                     | memahami suatu model matematika dan penerapannya. | <ol style="list-style-type: none"> <li>1.menjelaskan contoh proses pemodelan suatu fenomena menjadi sebuah model matematika.</li> <li>2.Menentukan penyelesaian model matematika yang dibahas dan interpretasinya.</li> </ol>                                                                                                                                                                              | <b>Bentuk Penilaian</b><br>: Aktifitas Partisipasif | Penugasan (pemberian kasus pemodelan) Analisis kasus pemodelan dan konsultasi<br>2 x 50                                        | Diskusi asynchronous dan pengumpulan hasil kerja di Vinesa | <b>Materi:</b> Kasus-kasus dalam pemodelan matematika<br><b>Pustaka:</b> Giordano F.R, Fox W.P, and Horton. S.B, 2014, A First Course in Mathematical Modeling, Fifth Edition, Brooks/Cole, Cengage Learning, Boston, MA 02210 USA | 7%                  |

|   |                                                   |                                                                                                                                                                         |                                                                                                                        |                                                                                                |                                                            |                                                                                                                                                                                                                                                 |     |
|---|---------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| 4 | memahami suatu model matematika dan penerapannya. | 1. menjelaskan contoh proses pemodelan suatu fenomena menjadi sebuah model matematika.<br>2. Menentukan penyelesaian model matematika yang dibahas dan interpretasinya. | <b>Bentuk Penilaian :</b><br>Aktifitas Partisipasif                                                                    | Penugasan (pemberian kasus pemodelan) Analisis kasus pemodelan dan konsultasi 2 x 50           | Diskusi asynchronous dan pengumpulan hasil kerja di Vinesa | <b>Materi:</b><br>Kasus-kasus dalam pemodelan matematika<br><b>Pustaka:</b><br><i>Giordano F.R, Fox W.P, and Horton. S.B, 2014, A First Course in Mathematical Modeling, Fifth Edition, Brooks/Cole, Cengage Learning, Boston, MA 02210 USA</i> | 7%  |
| 5 | memahami suatu model matematika dan penerapannya. | 1. menjelaskan contoh proses pemodelan suatu fenomena menjadi sebuah model matematika.<br>2. Menentukan penyelesaian model matematika yang dibahas dan interpretasinya. | <b>Bentuk Penilaian :</b><br>Aktifitas Partisipasif                                                                    | Penugasan (pemberian kasus pemodelan) Analisis kasus pemodelan dan konsultasi 2 x 50           | Diskusi asynchronous dan pengumpulan hasil kerja di Vinesa | <b>Materi:</b><br>Kasus-kasus dalam pemodelan matematika<br><b>Pustaka:</b><br><i>Giordano F.R, Fox W.P, and Horton. S.B, 2014, A First Course in Mathematical Modeling, Fifth Edition, Brooks/Cole, Cengage Learning, Boston, MA 02210 USA</i> | 7%  |
| 6 | memahami suatu model matematika dan penerapannya. | 1. menjelaskan contoh proses pemodelan suatu fenomena menjadi sebuah model matematika.<br>2. Menentukan penyelesaian model matematika yang dibahas dan interpretasinya. | <b>Bentuk Penilaian :</b><br>Aktifitas Partisipasif, Penilaian Hasil Project / Penilaian Produk                        | Penugasan (pemberian kasus pemodelan) Presentasi hasil studi kasus pemodelan matematika 2 x 50 | Diskusi asynchronous dan pengumpulan hasil kerja di Vinesa | <b>Materi:</b><br>Kasus-kasus dalam pemodelan matematika<br><b>Pustaka:</b><br><i>Giordano F.R, Fox W.P, and Horton. S.B, 2014, A First Course in Mathematical Modeling, Fifth Edition, Brooks/Cole, Cengage Learning, Boston, MA 02210 USA</i> | 2%  |
| 7 | memahami suatu model matematika dan penerapannya. | 1. menjelaskan contoh proses pemodelan suatu fenomena menjadi sebuah model matematika.<br>2. Menentukan penyelesaian model matematika yang dibahas dan interpretasinya. | <b>Bentuk Penilaian :</b><br>Aktifitas Partisipasif, Penilaian Hasil Project / Penilaian Produk, Praktik / Unjuk Kerja | Penugasan (pemberian kasus pemodelan) Presentasi hasil studi kasus pemodelan matematika 2 x 50 | Diskusi asynchronous dan pengumpulan hasil kerja di Vinesa | <b>Materi:</b><br>Kasus-kasus dalam pemodelan matematika<br><b>Pustaka:</b><br><i>Giordano F.R, Fox W.P, and Horton. S.B, 2014, A First Course in Mathematical Modeling, Fifth Edition, Brooks/Cole, Cengage Learning, Boston, MA 02210 USA</i> | 18% |

|   |                                                                   |                                                       |                                                                            |                                                 |                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |    |
|---|-------------------------------------------------------------------|-------------------------------------------------------|----------------------------------------------------------------------------|-------------------------------------------------|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| 8 | Mampu menjelaskan penerapan pemodelan matematika dalam pendidikan | Penerapan aspek pemodelan dalam pendidikan matematika | <b>Bentuk Penilaian</b><br>: Aktifitas Partisipasif, Praktik / Unjuk Kerja | Ekspositori, diskusi dan tanya jawab.<br>2 x 50 | diskusi asynchronous di Vinesa | <b>Materi:</b> Penerapan pemodelan matematika dalam PISA<br><b>Pustaka:</b> PISA <i>Mathematics Framework 2022</i><br><hr/> <b>Materi:</b> Penerapan pemodelan matematika dalam pengajaran<br><b>Pustaka:</b> Blum & Ferri (2009) <i>Mathematical Modelling: Can it be Taught and Learnt.</i><br><hr/> <b>Materi:</b> Penerapan pemodelan matematika dalam RME<br><b>Pustaka:</b> Design research in statistics education On symbolizing and computer tools<br><hr/> <b>Materi:</b> Penerapan pemodelan matematika dalam olimpiade matematika<br><b>Pustaka:</b> Mass, J., et.al. 2018. <i>Mathematical Modelling for Teachers: A Practical Guide to Applicable Mathematics Education.</i> Cham: Switzerland. | 2% |
|---|-------------------------------------------------------------------|-------------------------------------------------------|----------------------------------------------------------------------------|-------------------------------------------------|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|

|   |                                                                   |                                                       |                                                        |                                                                                                                                               |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |    |
|---|-------------------------------------------------------------------|-------------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| 9 | Mampu menjelaskan penerapan pemodelan matematika dalam pendidikan | Penerapan aspek pemodelan dalam pendidikan matematika | <b>Bentuk Penilaian</b><br>: Aktifitas<br>Partisipasif | Penugasan kasus penerapan pemodelan dalam pendidikan matematika<br>Tugas individu mempelajari pre-existing materials dan konsultasi<br>2 x 50 | diskusi dan konsultasi asynchronous di Vinesa | <b>Materi:</b><br>Penerapan pemodelan matematika dalam PISA<br><b>Pustaka:</b><br>PISA<br><i>Mathematics Framework 2022</i><br><hr/> <b>Materi:</b><br>Penerapan pemodelan matematika dalam pengajaran<br><b>Pustaka:</b><br>Blum & Ferri (2009)<br><i>Mathematical Modelling: Can it be Taught and Learnt.</i><br><hr/> <b>Materi:</b><br>Penerapan pemodelan matematika dalam RME<br><b>Pustaka:</b><br><i>Design research in statistics education On symbolizing and computer tools</i><br><hr/> <b>Materi:</b><br>Penerapan pemodelan matematika dalam olimpiade matematika<br><b>Pustaka:</b><br>Mass, J., et.al. 2018.<br><i>Mathematical Modelling for Teachers: A Practical Guide to Applicable Mathematics Education. Cham: Switzerland.</i> | 7% |
|---|-------------------------------------------------------------------|-------------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|

|    |                                                                   |                                                       |                                                        |                                                                                                                                               |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |    |
|----|-------------------------------------------------------------------|-------------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| 10 | Mampu menjelaskan penerapan pemodelan matematika dalam pendidikan | Penerapan aspek pemodelan dalam pendidikan matematika | <b>Bentuk Penilaian</b><br>: Aktifitas<br>Partisipasif | Penugasan kasus penerapan pemodelan dalam pendidikan matematika<br>Tugas individu mempelajari pre-existing materials dan konsultasi<br>2 x 50 | diskusi dan konsultasi asynchronous di Vinesa | <b>Materi:</b><br>Penerapan pemodelan matematika dalam PISA<br><b>Pustaka:</b><br>PISA<br><i>Mathematics Framework 2022</i><br><hr/> <b>Materi:</b><br>Penerapan pemodelan matematika dalam pengajaran<br><b>Pustaka:</b><br>Blum & Ferri (2009)<br><i>Mathematical Modelling: Can it be Taught and Learnt.</i><br><hr/> <b>Materi:</b><br>Penerapan pemodelan matematika dalam RME<br><b>Pustaka:</b><br>Design research in statistics education On symbolizing and computer tools<br><hr/> <b>Materi:</b><br>Penerapan pemodelan matematika dalam olimpiade matematika<br><b>Pustaka:</b><br>Mass, J., et.al. 2018.<br><i>Mathematical Modelling for Teachers: A Practical Guide to Applicable Mathematics Education.</i><br>Cham: Switzerland. | 7% |
|----|-------------------------------------------------------------------|-------------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|

|    |                                                                   |                                                       |                                                                            |                                                                                                                                                                          |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |    |
|----|-------------------------------------------------------------------|-------------------------------------------------------|----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| 11 | Mampu menjelaskan penerapan pemodelan matematika dalam pendidikan | Penerapan aspek pemodelan dalam pendidikan matematika | <b>Bentuk Penilaian :</b><br>Aktifitas Partisipasif, Praktik / Unjuk Kerja | Penugasan kasus penerapan pemodelan dalam pendidikan matematika<br>Tugas individu mempelajari pre-existing materials dan konsultasi presentasi progress report<br>2 x 50 | diskusi dan konsultasi asynchronous di Vinesa | <b>Materi:</b><br>Penerapan pemodelan matematika dalam PISA<br><b>Pustaka:</b><br>PISA<br><i>Mathematics Framework 2022</i><br><hr/> <b>Materi:</b><br>Penerapan pemodelan matematika dalam pengajaran<br><b>Pustaka:</b><br>Blum & Ferri (2009)<br><i>Mathematical Modelling: Can it be Taught and Learnt.</i><br><hr/> <b>Materi:</b><br>Penerapan pemodelan matematika dalam RME<br><b>Pustaka:</b><br>Design research in statistics education On symbolizing and computer tools<br><hr/> <b>Materi:</b><br>Penerapan pemodelan matematika dalam olimpiade matematika<br><b>Pustaka:</b><br>Mass, J., et.al. 2018.<br><i>Mathematical Modelling for Teachers: A Practical Guide to Applicable Mathematics Education.</i><br>Cham: Switzerland. | 7% |
|----|-------------------------------------------------------------------|-------------------------------------------------------|----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|

|    |                                                                   |                                                       |                                                        |                                                                                                                                               |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |    |
|----|-------------------------------------------------------------------|-------------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| 12 | Mampu menjelaskan penerapan pemodelan matematika dalam pendidikan | Penerapan aspek pemodelan dalam pendidikan matematika | <b>Bentuk Penilaian</b><br>: Aktifitas<br>Partisipatif | Penugasan kasus penerapan pemodelan dalam pendidikan matematika<br>Tugas individu mempelajari pre-existing materials dan konsultasi<br>2 x 50 | diskusi dan konsultasi asynchronous di Vinesa | <b>Materi:</b><br>Penerapan pemodelan matematika dalam PISA<br><b>Pustaka:</b><br>PISA<br><i>Mathematics Framework 2022</i><br><hr/> <b>Materi:</b><br>Penerapan pemodelan matematika dalam pengajaran<br><b>Pustaka:</b><br>Blum & Ferri (2009)<br><i>Mathematical Modelling: Can it be Taught and Learnt.</i><br><hr/> <b>Materi:</b><br>Penerapan pemodelan matematika dalam RME<br><b>Pustaka:</b><br><i>Design research in statistics education On symbolizing and computer tools</i><br><hr/> <b>Materi:</b><br>Penerapan pemodelan matematika dalam olimpiade matematika<br><b>Pustaka:</b><br>Mass, J., et.al. 2018.<br><i>Mathematical Modelling for Teachers: A Practical Guide to Applicable Mathematics Education.</i><br>Cham: Switzerland. | 7% |
|----|-------------------------------------------------------------------|-------------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|

|    |                                                                   |                                                       |                                                     |                                                                                                                                               |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |    |
|----|-------------------------------------------------------------------|-------------------------------------------------------|-----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| 13 | Mampu menjelaskan penerapan pemodelan matematika dalam pendidikan | Penerapan aspek pemodelan dalam pendidikan matematika | <b>Bentuk Penilaian</b><br>: Aktifitas Partisipasif | Penugasan kasus penerapan pemodelan dalam pendidikan matematika<br>Tugas individu mempelajari pre-existing materials dan konsultasi<br>2 x 50 | diskusi dan konsultasi asynchronous di Vinesa | <b>Materi:</b> Penerapan pemodelan matematika dalam PISA<br><b>Pustaka:</b> PISA <i>Mathematics Framework 2022</i><br><hr/> <b>Materi:</b> Penerapan pemodelan matematika dalam pengajaran<br><b>Pustaka:</b> Blum & Ferri (2009) <i>Mathematical Modelling: Can it be Taught and Learnt.</i><br><hr/> <b>Materi:</b> Penerapan pemodelan matematika dalam RME<br><b>Pustaka:</b> Design research in statistics education On symbolizing and computer tools<br><hr/> <b>Materi:</b> Penerapan pemodelan matematika dalam olimpiade matematika<br><b>Pustaka:</b> Mass, J., et.al. 2018. <i>Mathematical Modelling for Teachers: A Practical Guide to Applicable Mathematics Education. Cham: Switzerland.</i> | 7% |
|----|-------------------------------------------------------------------|-------------------------------------------------------|-----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|

|    |                                                                   |                                                       |                                                        |                                                                                                                                               |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |    |
|----|-------------------------------------------------------------------|-------------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| 14 | Mampu menjelaskan penerapan pemodelan matematika dalam pendidikan | Penerapan aspek pemodelan dalam pendidikan matematika | <b>Bentuk Penilaian</b><br>: Aktifitas<br>Partisipatif | Penugasan kasus penerapan pemodelan dalam pendidikan matematika<br>Tugas individu mempelajari pre-existing materials dan konsultasi<br>2 x 50 | diskusi dan konsultasi asynchronous di Vinesa | <b>Materi:</b><br>Penerapan pemodelan matematika dalam PISA<br><b>Pustaka:</b><br>PISA<br><i>Mathematics Framework 2022</i><br><hr/> <b>Materi:</b><br>Penerapan pemodelan matematika dalam pengajaran<br><b>Pustaka:</b><br>Blum & Ferri (2009)<br><i>Mathematical Modelling: Can it be Taught and Learnt.</i><br><hr/> <b>Materi:</b><br>Penerapan pemodelan matematika dalam RME<br><b>Pustaka:</b><br><i>Design research in statistics education On symbolizing and computer tools</i><br><hr/> <b>Materi:</b><br>Penerapan pemodelan matematika dalam olimpiade matematika<br><b>Pustaka:</b><br>Mass, J., et.al. 2018.<br><i>Mathematical Modelling for Teachers: A Practical Guide to Applicable Mathematics Education.</i><br>Cham: Switzerland. | 7% |
|----|-------------------------------------------------------------------|-------------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|

|    |                                                                   |                                                       |                                                                                                                                       |                                                                                                                                                 |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |     |
|----|-------------------------------------------------------------------|-------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| 15 | Mampu menjelaskan penerapan pemodelan matematika dalam pendidikan | Penerapan aspek pemodelan dalam pendidikan matematika | <b>Bentuk Penilaian :</b><br>Aktifitas<br>Partisipasif,<br>Penilaian Hasil<br>Project / Penilaian<br>Produk, Praktik /<br>Unjuk Kerja | Penugasan kasus penerapan pemodelan dalam pendidikan matematika<br>Presentasi hasil studi kasus pemodelan dalam pendidikan matematika<br>2 x 50 |  | <b>Materi:</b><br>Penerapan pemodelan matematika dalam PISA<br><b>Pustaka:</b><br>PISA<br><i>Mathematics Framework 2022</i><br><hr/> <b>Materi:</b><br>Penerapan pemodelan matematika dalam pengajaran<br><b>Pustaka:</b><br>Blum & Ferri (2009)<br><i>Mathematical Modelling: Can it be Taught and Learnt.</i><br><hr/> <b>Materi:</b><br>Penerapan pemodelan matematika dalam RME<br><b>Pustaka:</b><br><i>Design research in statistics education On symbolizing and computer tools</i><br><hr/> <b>Materi:</b><br>Penerapan pemodelan matematika dalam olimpiade matematika<br><b>Pustaka:</b><br>Mass, J., et.al. 2018.<br><i>Mathematical Modelling for Teachers: A Practical Guide to Applicable Mathematics Education.</i><br>Cham: Switzerland. | 10% |
|----|-------------------------------------------------------------------|-------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|

|    |                                                                   |                                                       |                                                                                                                                       |                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |     |
|----|-------------------------------------------------------------------|-------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| 16 | Mampu menjelaskan penerapan pemodelan matematika dalam pendidikan | Penerapan aspek pemodelan dalam pendidikan matematika | <b>Bentuk Penilaian :</b><br>Aktifitas<br>Partisipasif,<br>Penilaian Hasil<br>Project / Penilaian<br>Produk, Praktik /<br>Unjuk Kerja | Penugasan kasus penerapan pemodelan dalam pendidikan matematika<br>Presentasi hasil studi kasus pemodelan dalam pendidikan matematika<br>2 x 50 | <b>Materi:</b><br>Penerapan pemodelan matematika dalam PISA<br><b>Pustaka:</b><br>PISA<br><i>Mathematics Framework 2022</i><br><hr/> <b>Materi:</b><br>Penerapan pemodelan matematika dalam pengajaran<br><b>Pustaka:</b><br>Blum & Ferri (2009)<br><i>Mathematical Modelling: Can it be Taught and Learnt.</i><br><hr/> <b>Materi:</b><br>Penerapan pemodelan matematika dalam RME<br><b>Pustaka:</b><br>Design research in statistics education On symbolizing and computer tools<br><hr/> <b>Materi:</b><br>Penerapan pemodelan matematika dalam olimpiade matematika<br><b>Pustaka:</b><br>Mass, J., et.al. 2018.<br><i>Mathematical Modelling for Teachers: A Practical Guide to Applicable Mathematics Education.</i><br>Cham: Switzerland. | 10% |
|----|-------------------------------------------------------------------|-------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|

#### Rekap Persentase Evaluasi : Project Based Learning

| No | Evaluasi                                   | Persentase |
|----|--------------------------------------------|------------|
| 1. | Aktifitas Partisipasif                     | 83.16%     |
| 2. | Penilaian Hasil Project / Penilaian Produk | 13.66%     |
| 3. | Praktik / Unjuk Kerja                      | 17.16%     |
|    |                                            | 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 prodi 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.