**Master in Mathematics**

Telp     : +62 274 552243

Email    : maths2@ugm.ac.id; kaprodi-s2-matematika.mipa@ugm.ac.id
           sekprodi-s2-matematika.mipa@ugm.ac.id

Website  : http://s2math.fmipa.ugm.ac.id/

**MODULE HANDBOOK**

| | |
|---|---|
| Module Name | *Linear Model* |
| Module level, if applicable | *Master* |
| Code, if applicable | *MMM 5406* |
| Subtitle, if applicable | - |
| Courses, if applicable | *Linear Model* |
| Semester(s) in which the module is taught | *4$^{th}$* |
| Person responsible for the module | Chair of Statistics Laboratory |
| Lecturer(s) | - |
| Language | *Bahasa Indonesia* |
| Relation to curriculum | *elective* |
| Teaching methods | *lecture* |
| Workload (incl. contact hours, self-study hours) | 3x50 menutes lecture, 6 hours individual study, 6 weeks per semester, include mid-term and final exam<br><br>Total workload   136  hours  a semester. |
| Credit points | *3* |
| Required and recommended prerequisites for joining the module | - |

| Module objectives/intended learning outcomes | After completing this course the students have ability to : <br><br> *CO 1. understand aspects of inverse generalized matrices and quadratic forms.* <br><br> *CO 2. estimates the linear rank model is not full.* <br><br> *CO 3. reduces the properties of the estimator.* <br><br> *CO 4. look for the estimated variance component.* |
|---|---|
| Content | *Generalized Inverse Matrices, Quadratic Forms and Their Distributions, Model Full Rank, Incomplete Rank Model, Two Element Model, Classification Two-Way Cross, Method of Estimating Component Variance of Data No Balanced, Generalized Linear Model (GLM)* |
| Examination forms | Mid-term exam, Final exam |
| Study and examination requirements | To pass the course, students are expected to get a minimum grade of D.  The final mark will be weighted as follows: <br><br> i. Class activity (Quiz, HW, presentation, computing session, etc)     25% <br> ii. Mid semester exam     30% <br> iii. Final exam     35% |
| Media employed | Slides and LCD  projectors, laptop, whiteboards |
| Reading list | *Searly, R., Linear  Model,  Wiley, 2012* <br><br> *Rencher A.C., Linear Models in Statistics,  Wiley 2008* |

**CO-PLO Mapping**

|  | PLO 1 | PLO 2 | PLO 3 | PLO 4 | PLO 5 | PLO 6 |
|---|---|---|---|---|---|---|
| **CO 1** | √ | √ |  |  |  |  |
| **CO 2** | √ |  | √ |  |  |  |
| **CO 3** | √ |  | √ |  |  |  |
| **CO 4** | √ |  | √ |  | √ |  |

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