## MODULE HANDBOOK

| Module name   |                            | Facility Planning  | and Lavout Desig | n                     |    |  |  |  |  |  |
|---|----------------------------|--|------------------|-----------------------|----|--|--|--|--|--|
| Module level, if applicable                                 |                            | 3 <sup>rd</sup> year   |                  |                       |    |  |  |  |  |  |
| Code, if applicable   |                            | SST-617  |                  |                       |    |  |  |  |  |  |
| Semester(s) in which the                                    |                            |  |                  |                       |    |  |  |  |  |  |
| module is taug  |                            | 6 <sup>th</sup> (sixth)  |                  |                       |    |  |  |  |  |  |
| Person respons  |                            | D. T.W. 1 G.S. 14 S.   |                  |                       |    |  |  |  |  |  |
| module  |                            | Dina Tri Utari, S.Si., M.Si.   |                  |                       |    |  |  |  |  |  |
| Lecturer  |                            | Abdullah 'Azzam, S.T., M.T.  |                  |                       |    |  |  |  |  |  |
| Language  |                            | Bahasa Indonesia   |                  |                       |    |  |  |  |  |  |
| Relation to curriculum                                      |                            | Elective course in the third year (6 <sup>th</sup> semester) Bachelor Degree       |                  |                       |    |  |  |  |  |  |
| Types of  | Class size                 | Attendance time   Form of active   Workload  |                  |                       |    |  |  |  |  |  |
| teaching and  |                            | (hours per week  | participation    | (hours per semester)  |    |  |  |  |  |  |
| learning  |                            | per semester)  |                  |                       |    |  |  |  |  |  |
| Lecture   | 50-60                      | 2.5  | Discussion       | Face to face teaching | 35 |  |  |  |  |  |
|   |                            |  |                  | Structured activities | 48 |  |  |  |  |  |
|   |                            |  |                  | Independent study     | 48 |  |  |  |  |  |
|   |                            |  |                  | Exam                  | 5  |  |  |  |  |  |
| Total Workloa   | d                          | 136 hours  |                  |                       |    |  |  |  |  |  |
| Credit points   |                            | 3 CUs / 5.1 ECTS   |                  |                       |    |  |  |  |  |  |
| Requirements  | according to               | Minimum attendance at lectures is 75%. Final score is evaluated based              |                  |                       |    |  |  |  |  |  |
| the examinatio  | n regulations              | on quiz, assignment, mid-term exam, and final exam.                                |                  |                       |    |  |  |  |  |  |
| Recommended   | 1                          |  |                  |                       |    |  |  |  |  |  |
| prerequisites   |                            | -  |                  |                       |    |  |  |  |  |  |
| Related course  | ;                          | Statistical Consulting (SST-603)   |                  |                       |    |  |  |  |  |  |
|   |                            | After completing this course, the students have ability to:                        |                  |                       |    |  |  |  |  |  |
|   |                            | CO 1. conduct experimental design for facility planning and layout                 |                  |                       |    |  |  |  |  |  |
| Module object   | Module objectives/intended |  | design           |                       |    |  |  |  |  |  |
| learning outcome  |                            | CO 2. collect data related to facility planning and layout design                  |                  |                       |    |  |  |  |  |  |
| learning outcom   | ines                       | CO 3. document experimental designs that have been done                            |                  |                       |    |  |  |  |  |  |
|   |                            | CO 4. reuse the experimental designs that has been documented to be a              |                  |                       |    |  |  |  |  |  |
|   |                            | clearer implementation   |                  |                       |    |  |  |  |  |  |
|   |                            | Basic concept of facility layout   |                  |                       |    |  |  |  |  |  |
|   |                            | Facility planning function   |                  |                       |    |  |  |  |  |  |
|   |                            | Facility planning and layout design systematics                                    |                  |                       |    |  |  |  |  |  |
| G   |                            | Systematics of the facility planning and layout design: analysis                   |                  |                       |    |  |  |  |  |  |
| Content   |                            | techniques for material flow planning  |                  |                       |    |  |  |  |  |  |
|   |                            | Planning for products, processes, and schedules                                    |                  |                       |    |  |  |  |  |  |
|   |                            | Material handling  |                  |                       |    |  |  |  |  |  |
|   |                            | Quantitative models of facility planning   |                  |                       |    |  |  |  |  |  |
|   |                            | Design layout with computer  The final mark will be weighted as follows:           |                  |                       |    |  |  |  |  |  |
|   |                            | The final mark will be weighted as follows:  No Assessment Assessment types Weight |                  |                       |    |  |  |  |  |  |
| Study and examination requirements and forms of examination |                            | 71 &   |                  |                       |    |  |  |  |  |  |
|   |                            | components (percentage) 1 CO 1 25%   |                  |                       |    |  |  |  |  |  |
|   |                            | 1 CO 1 25%<br>2 CO 2 25%   |                  |                       |    |  |  |  |  |  |
|   |                            | 2 CO 2 25%<br>3 CO 3 25%   |                  |                       |    |  |  |  |  |  |
|   |                            | 4 CO 4 25%   |                  |                       |    |  |  |  |  |  |
| Media employed  |                            | Google Classroom, relevant websites, slides (power points), video,                 |                  |                       |    |  |  |  |  |  |
|   |                            | interactive media, white-board, laptop, LCD projector                              |                  |                       |    |  |  |  |  |  |
| Reading list  |                            | 1. Apple, J., M., Plant Layout and Material Handling, John Willey &                |                  |                       |    |  |  |  |  |  |
|   |                            | Sons, New York 1977  |                  |                       |    |  |  |  |  |  |
|   |                            | Sons, New 1  |                  |                       |    |  |  |  |  |  |

| 2. | Francis, R., L., White, J., A., Facility Layout and Location:<br>Analytical Approach, Prentice Hall, Englewood Cliffs, New Jersey,<br>1974 |  |  |  |  |  |
|----|--|--|--|--|--|--|
| 3. | Thompkins, J., A., White, JA., Facility Planning, John Willey &  |  |  |  |  |  |
|    | Sons, New York 1994  |  |  |  |  |  |

Mapping CO, PLO, and ASIIN's SSC

| ASIIN      |   | PLO |   |   |   |   |   |   |   |   |   |            |   |
|------------|---|-----|---|---|---|---|---|---|---|---|---|------------|---|
|            |   | E   | N | T | H | U | S | I | A | S | T | I          | C |
| Knowledge  | a |     |   |   |   |   |   |   |   |   |   |            |   |
|            | b |     |   |   |   |   |   |   |   |   |   |            |   |
|            | c |     |   |   |   |   |   |   |   |   |   |            |   |
|            | d |     |   |   |   |   |   |   |   |   |   |            |   |
| Ability    | e |     |   |   |   |   |   |   |   |   |   | CO2<br>CO3 |   |
|            | f |     |   |   |   |   |   |   |   |   |   |            |   |
| Competency | g |     |   |   |   |   |   |   |   |   |   |            |   |
|            | h |     |   |   |   |   |   |   |   |   |   |            |   |
|            | i |     |   |   |   |   |   |   |   |   |   | CO1<br>CO4 |   |
|            | j |     |   |   |   |   |   |   |   |   |   |            |   |
|            | k |     |   |   |   |   |   |   |   |   |   |            |   |
|            | 1 |     |   |   |   |   |   |   |   |   |   |            |   |