ABSTRACT

Work Design Analysis and Ergonomic lab work is one of many subjects in IT Telkom Industrial Engineering Department. Determining the lab work schedules in the implementation of lab work is very important. The lab work schedules should be generally adjusted with the course schedules in order to avoid crash of schedules. However, the implementation is yet crashed between lab work schedule and the course schedule of praktikan. In addition, another problems happens when it turns to schedule inputs by the students. It takes lots of time to accomplish this process.This is caused by a manual lab work schedule system input.

The research is conducted to design a lab work scheduling information system in APK & E Laboratory using the waterfall method. There are three parameters to interfere with the decision and formulating the linear programming in accordance to provide an optimal lab work schedule. They are; number of students' classes, days and number of shifts prepared. As a result, produced 360 units of variables to support variables decision making in order to maximize the students empty schedules. Therefore 16 optimal shifts of lab work schedules created with an extra additional information of groups allocation in every each shift.

A lab work scheduling information system in APK & E laboratory can be used to input the data online (via internet). Therefore it is far much easier and faster. the system can verify students information who wants to inputs the schedule to match the schedule database. The use of a lab work scheduling information system also supports most of the lab work activities. This is because informations related with lab works are briefly associated with the assistants, students, and lecturers so that it can be done easily, quickly, and accessed in realtime.

Key Words : Work Design Analysis and Ergonomic lab work, linear programming, *waterfall*, an information system of scheduling.