

ABSTRACT

Sekolah Tinggi Teknologi Telkom, called STT TELKOM, is the collage of technology. It is built for that fulfill the need of technology, management, and worker who has had a skill. It has to manage many things. One of them is the determining of class scheduling. That the problem commonly appears is that the activity is done similarly. Beside this problem, the difficulty make a new class scheduling arrangement if the changing happens in an existing scheduling.

One of methods which is utilized in the class scheduling determining is Integer linier Programming. The requirements that have to be fulfilled for it are the decision variable determining, the objective function determining, and the constraints determining. The requirements that have determined will produce a optimal solution. For this research, the software utilized is QS.

For determining the decision variable, there are many factors that affect the class scheduling. They are subjects, lecturers, the day that is used, the classification of time, the number of credits, the number of meeting, the rooms that are utilized, and the class.

For this research, the identification of decision variable is the class scheduling. The number of its are 274 variables. Whereas, the objective function is to avoid the scheduling that is executed similarly. The number of constraints are 136. Sensitivity analyses that is done are the new subject added and the new class. This condition has produce 300 decision variables and 151 constraints.

The result which is produced in this research is the class scheduling that isn't done similarly with that the percentage for each level is 78,57% for second level, third level, and fourth level. Whereas, in sensitivity analysis the percentage for every level is that second level is divided two classes with that it is 78,57 % for TI – (n-1) – 01 and 14,28% for TI – (n-1) – 02, 78,57% for third level, and 85,71% for fourth level. Beside that, the number of time that is used by lecturer per week is 14 lecturers that teach 4 hours, 2 lecturers that teach 2 hours, and 1 lecturer that teaches 8 hours. In sensitivity analysis the number of time utilized by lecturer per week is 2 lecturers teaching 8 hours; whereas, the others aren't varied. Moreover, the usage of rooms is 95,83% for room 1, 41,67% for room 2, and 4,17% for room 3. For sensitivity analysis it is 95,83% for room 1, 41,67% for room 2, 4,17% for room 3, 12,5% for room 4, and 0% for room 5.

Keywords: *Decision Variable, Objective Function, Constraints, Integer Linier Programming, the class scheduling.*