

ABSTRACT

THE OPTIMIZATION OF SUBJECTS SCHEDULING USING GRAPH COLORING VERTEX AND SIMULATED ANNEALING

The need for scheduling exists in various places, such as homes, offices, schools, and universities. It is also needed by Unika Musi Charitas. The Problems which often arise in the process of scheduling subject in the Faculty of Science and Technology (FST) are lecturers, rooms and the subjects whice are often scheduled at the same time. The scheduling problems will be esier if there is a system which can arrange automatically, but it still pay attention to the factors which are existed. The application of vertex graph coloring method for scheduling and algorithm simulated annealing can be the solution for the scheduling problems in FST. At Vertex Graph Coloring, seeking vertex neighbors and no neighbors. While on Simulated Annealing, looking for a room and randomly swapped positions. The integration of Vertex Graph Coloring and Simulated Annealing aims to create optimum lecture schedules by looking at hard constraints and soft constraints.

Keywords: Scheduling, Subject, Simulated Annealing, Vertex Graph Coloring.