

## **Abstract**

Course scheduling problem is a complex problem because there is a linkage between the *constraint* conditions that must be met. The purpose of this final project is to solve scheduling problems with the lecture method of optimization algorithms, namely a Genetic Algorithm (GA) is combined with data mining techniques, namely association using Apriori algorithm with hash data structure. Course scheduling process by combining GA and Apriori (with hash-based techniques) are able to produce a schedule of free constraint by generating solution with less than college scheduling using GA alone. The results showed that subjects with the use of scheduling data mining by Apriori algorithm and hash-based technique can reduce the number of generating solutions to approximately 29.28%.

**Key Words** : Course Scheduling, data mining, association, Genetic Algorithm, constraint