

# OPTIMIZATION OF COURSE SCHEDULING USING GENETIC ALGORITHM AND TABU SEARCH

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## ABSTRACT

Scheduling of courses is a problem that often occurs in universities, which include clashes when teaching lecturers, room conflicts and student class conflicts. One method that is suitable for scheduling problems is the Genetic Algorithm and Tabu Search (AG-TS). In this study, a system was built to create a course schedule using genetic algorithms and tabu search. The implementation of AG-TS can process quite a lot of data in a fairly short time, namely 265 schedules with a processing time of 561 seconds, and there are no clashes between lecturer teaching schedules or student lecture schedules. This process is faster than creating a schedule using Microsoft Excel. The use of AG-TS is more optimal when compared to the method that only uses AG with an average fitness value of AG-TS = 1 while the average AG is 0.0189228.

**Keywords: optimization, scheduling, genetic algorithm, taboo search**

