

LEMBAR PENGESAHAN

Skripsi yang berjudul "PENJADWALAN MATA PELAJARAN
MENGUNAKAN METODE INTEGER LINEAR PROGRAMMING DI
SMA NEGERI 1 TILANGO"

Oleh

FITRIA DJAFAR
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Program Studi Matematika
Fakultas Matematika dan Ilmu Pengetahuan Alam

Telah dipertahankan di depan dewan penguji

Hari, tanggal : Jum'at, 14 Februari 2025

Waktu : 15.00-16.00 WITA

Tempat : Ruang Sidang Statistika, Gedung Lab. Matematika

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Tanda Tangan

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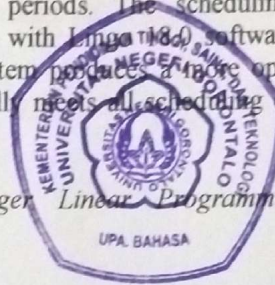
ABSTRACT

Fitria Djafar, 2025. SUBJECT SCHEDULING USING THE INTEGER LINEAR PROGRAMMING METHOD AT SMA NEGERI 1 TILANGO. Undergraduate Thesis. Gorontalo. Study Program of Mathematics, Department of Mathematics, Faculty of Mathematics and Natural Sciences, Universitas Negeri Gorontalo.

The supervisors: (1) **Drs. Muh Rifai Katili, M.Kom., Ph.D.**, (2) **Salmun K. Nasib, S.Pd., M.Si.**

Subject scheduling is a critical component in organizing effective teaching and learning activities. At SMA Negeri 1 Tilango, subject schedules are currently created manually by the curriculum team. This method is inefficient as it is time-consuming and often results in overlapping class schedules. Manual scheduling also faces challenges in meeting the school's numerous constraints and requirements, making the process highly complex. Therefore, an improved scheduling system is needed to address these issues. This research proposes using the Integer Linear Programming (ILP) method to optimize subject schedules effectively. The study aims to develop an optimal subject schedule considering teachers, subjects, days, classes, and periods. The scheduling model was constructed using ILP and implemented with *Lingo 18.0* software. The results show that the ILP-based scheduling system produces a more optimal schedule than the manual method, as it successfully meets all scheduling constraints and requirements that the school sets.

Keywords: *Subject Scheduling, Integer Linear Programming, Schedule Optimization, SMA Negeri 1 Tilango.*



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