

## **Abstract**

Formal method is a science deals with specification and design of system in mathematical approach. Formal method focuses on developing system model and verifying its properties. Formal method provides verification at early stage of software development, i.e. specification and system design.

Academic system in study program Bachelor degree of Informatics Engineering, Telkom Institute of Technology defines rules and procedures of curriculum and study program, evaluation of study, academic council, counseling and registration. Curriculum and study program explain the subjects; evaluation of study deals with grade point; academic council evaluates graduation status of student; counseling and registration discuss student's study plan.

This final project investigates formal modeling and model analysis of this academic system in petri nets. The result of this final project is petri nets model and its analysis to check properties based on the academic system. Based on the developed model, academic system has weaknesses i.e. there is no checking in course requirement and no academic council on second and third grade. It also possible to build 3-years study of curriculum.

**Keywords:** curriculum, registration, academic council, petri nets