

PERENCANAAN DAN KELAYAKAN OPERASIONAL SHUTTLE BUS KAMPUS UNIVERSITAS GADJAH MADA

Aditya Soma Atmaja

17/415991/SV/13729

INTISARI

Sebagai kampus terkemuka Universitas Gadjah Mada mengalami peningkatan jumlah civitas akademika yang signifikan, hal tersebut mempengaruhi mobilitas pada kawasan kampus sehingga menyebabkan beraneka ragam pergerakan internal di kawasan kampus, dalam memenuhi pergerakan tersebut diperlukan penyediaan layanan transportasi umum yaitu salah satunya adalah pengoperasian layanan bus kampus. Penelitian ini bertujuan untuk menentukan rute bus kampus serta penentuan biaya operasional kendaraan (BOK) bus.

Metode penelitian yang digunakan yaitu metode kuantitatif, metode survei dan metode deskriptif. Penelitian ini juga menggunakan analisis spasial dengan bantuan perangkat lunak PTV VISUM untuk uji pemodelan transportasi. Rute bus kampus ditentukan dari pergerakan asal dan tujuan internal civitas akademika yang didapatkan dari hasil kuesioner, kemudian untuk perencanaan operasional kendaraan mengacu pada SK.687/AJ.206/2002.

Hasil penelitian adalah penentuan dua alternatif rute yaitu alternatif rute-1 dan rute-2. Pada masing-masing rute membutuhkan bus sebanyak 8 buah, *headway* 10 menit pada jam puncak dan 20 menit pada non jam puncak. Pengoperasian dilakukan selama 13 jam di hari kerja dengan BOK pada bus Hino, Isuzu dan bus listrik sebesar Rp. 4.957/km, Rp 5.134/km dan Rp 5.386/km pada rute-1 dan untuk rute-2 sebesar Rp 5.135/km, Rp 5.326/km dan Rp 5.580/km.

Kata Kunci : Bus Kampus, Rute, Operasional Kendaraan

PLANNING AND OPERATIONAL FEASIBILITY OF CAMPUS SHUTTLE BUS GADJAH MADA UNIVERSITY

Aditya Soma Atmaja

17/415991/SV/13729

ABSTRACT

As a leading campus, Gadjah Mada University has experienced a significant increase in the number of academics. It affects the mobility in campus area that causes a variety of internal movements. One of required things to fulfil these movements is providing public transportation services. Therefore, UGM provides campus bus services. This study has aim to determine campus bus routes and Vehicle Operating Costs (VOC).

The research methods were quantitative methods, survey methods and descriptive methods. This study also used spatial analysis with PTV VISUM software as transportation modeling tests. Based on the questionnaire result, campus bus routes were determined by the academic community movement from origin to destination zone. The vehicle operational planning cost refered to SK.687/AJ.206/2002.

The result of the research was determining two alternative routes i.e., alternative route-1 and route-2. Each route required 8 buses, 10 minutes headway at peak hours and 20 minutes at off hours. The operation of campus bus was carried out for 13 hours on weekdays. The VOC on Hino, Isuzu and electric buses were Rp. 4,957/km, Rp 5,134/km and Rp 5,386/km for route-1. The VOC on those buses for route-2 were Rp 5,135/km, Rp 5,326/km and Rp 5,580/km.

Keywords : Campus Bus, Route, Vehicle Operations