

PERENCANAAN ARSITEKTUR GEDUNG BENGKEL TERPADU POLITEKNIK NEGERI BENGKALIS

Nama : M. Reino Akmaliansyah Putra
Nim : 4103221474
Dosen Pembimbing 1 : Bobby Rahman., M.,Arc
Dosen Pembimbing 2 : Guswandi, ST., MT

ABSTRAK

Peningkatan jumlah mahasiswa dan aktivitas akademik di Politeknik Negeri Bengkalis mendorong kebutuhan fasilitas penunjang yang memadai, salah satunya adalah Gedung Bengkel Terpadu. Penelitian ini bertujuan merancang gedung bengkel yang modern, efisien, dan berwawasan lingkungan, sesuai dengan prinsip green building. Rumusan masalah difokuskan pada perancangan gambar 2D, 3D, dan animasi bangunan. Metodologi yang digunakan mencakup studi literatur, observasi lapangan, wawancara, serta pemodelan desain menggunakan perangkat lunak AutoCAD, SketchUp, dan Lumion. Hasil perencanaan meliputi zonasi ruang publik, privat, dan servis; sistem utilitas terpadu; serta fasilitas aksesibilitas dan evakuasi yang memenuhi standar keselamatan. Gambar 2D, 3D, dan animasi visual dihasilkan untuk mempermudah pemahaman konsep desain. Kesimpulannya, rancangan Gedung Bengkel Terpadu ini tidak hanya memenuhi fungsi pendidikan dan pelatihan teknik, namun juga mengedepankan keberlanjutan, efisiensi energi, dan kenyamanan pengguna. Perencanaan ini diharapkan menjadi referensi pembangunan fasilitas pendidikan vokasi berkelanjutan di masa depan.

Kata Kunci: Gedung Bengkel Terpadu, Perencanaan Arsitektur, Green Building, Politeknik Negeri Bengkalis, Gambar 2D dan 3D, Visualisasi, Pendidikan Vokasi.

ARCHITECTURAL DESIGN PLANNING FOR THE INTEGRATED WORKSHOP BUILDING OF BENGKALIS STATE POLYTECHNIC

Name : M. Reino Akmaliansyah Putra
Student Id : 4103221474
Suvervisor 1 : Bobby Rahman., M.,Arc
Suvervisor 2 : Guswandi, ST., MT

ABSTRACT

The increasing number of students and academic activities at Bengkalis State Polytechnic has driven the need for adequate supporting facilities, one of which is the Integrated Workshop Building. This study aims to design a modern, efficient, and environmentally friendly workshop building in accordance with green building principles. The research focuses on the architectural design of 2D drawings, 3D models, and building animations. The methodology includes literature studies, field observations, interviews, and design modeling using AutoCAD, SketchUp, and Lumion software. The design outcomes include zoning for public, private, and service areas; integrated utility systems; and accessibility and evacuation facilities that comply with safety standards. The resulting 2D and 3D images, along with animated visuals, help convey the design concept more effectively. In conclusion, the Integrated Workshop Building design not only fulfills the function of technical education and training but also promotes sustainability, energy efficiency, and user comfort. This planning is expected to serve as a reference for the development of sustainable vocational education facilities in the future.

Keywords: *Integrated Workshop Building, Architectural Planning, Green Building, Bengkalis State Polytechnic, 2D and 3D Drawings, Visualization, Vocational Education.*