

ABSTRAK
PERENCANAAN GEDUNG LABORATORIUM FAKULTAS
KEDOKTERAN UNISSULA SEMARANG
OLEH:

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Dalam rangka peningkatan pelayanan pendidikan yang bermutu dan berkompeten. Universitas Islam Sultan Agung terus melakukan berbagai pembenahan diantaranya dengan peningkatan fasilitas pendidikan salah satunya adalah Pembangunan Gedung Laboratorium Fakultas Kedokteran.

Untuk mendapatkan hasil akhir dari perencanaan Gedung Laboratorium Fakultas Kedokteran Unissula Semarang dengan bantuan software SAP2000 v.14, PCACOL dan MIDAS-Gen v.7.1. Tahapan analisis struktur gedung menggunakan tata cara struktur beton untuk bangunan gedung SNI 2847 – 2013, Peraturan pembebanan indonesia untuk gedung (PPIUG) 1983, Peraturan beton bertulang indonesia (PBI)-1971, Tata cara perencanaan ketahanan gempa untuk struktur bangunan gedung dan non gedung SNI-1726:2012.

Berdasarkan hasil analisis dan perhitungan, didapatkan dimensi dan jumlah tulangan S1(D10-250), ST (D16-200) K1 90X90 (30D19), K2 80X80 (26D19), K3 70X70 (22D19), K4 30X50 (10D19), B1 25X70 (4D19-4D12-2D19) Lapangan (2D19-4D12-3D19), Tumpuan G1 40X80 (12D19-4D12-4D19) Lapangan (3D19-4D12-7D19). Core Wall (T 20 cm D13-200), Shear Wall (T35 cm D13-200), serta pondasi yang digunakan adalah pondasi tiang pancang dengan diameter 45 cm, kedalaman 45 m. Penulangan semua pile cap untuk tulangan arah X D22 – 200 dan arah Y D22 – 200 mm.

Kata kunci : Peraturan, Perencanaan, pembebanan gedung, *Software*, perhitungan, Tulangan, *Shear Wall*, Pondasi.

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ABSTRACT
BUILDING DESIGN LABORATORY MEDICAL FACULTY UNISSULA
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In order to improve service quality education and competence. Sultan Agung Islamic University continue to make various improvements including the improvement of education facilities one of which is the Building Laboratory of the Faculty of Medicine.

To get the final result of the planning Semarang Building Hotel Sailing Science, with the help of software SAP2000 v.16, PCA interaction columns and MIDAS-Gen v.7.1. Building structure analysis stage using the (PPIUG) 1983 load regulation of indonesia for buildings, the SNI 2847-2013 of concrete for buildings, (PBI)-1971 Concrete regulation idonesia. Earthquake SNI 1726-2012 on spectra building and non building for strukture.

Based on the analysis and calculation, obtained dimensions and amount of reinforcement S1(D10-250), ST (D16-200) K1 90X90 (30D19), K2 80X80 (26D19), K3 70X70 (22D19), K4 30X50 (10D19),BA20X30 (5D16-2D16) Field (2D16-3D16) Support, B1 25X70 (4D19-4D12-2D19) Field (2D19-4D12-3D19) Support. Core Wall (T 20 cm D13-200), Shear Wall (T35 cm D13-200), as well as the foundation used is a pile foundation (spun pile) with a diameter of 45 cm, with a depth of 45 meters. All pile cap reinforcement for reinforcement directions X D22 - 200 and directionY D22 -200mm.

Keywords : *regulation, Planning, load buildings, Software, Calculation, reinforcement, Shear Wall, foundation.*

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