



اَبُو سَيِّدِي تَيَكُونُ لُو كِي مَبَارَا
UNIVERSITI
TEKNOLOGI
MARA

**ECS 358
CIVIL ENGINEERING DESIGN PROJECT**

**REINFORCED CONCRETE BUILDING
DESIGN PROJECT
&
PROJECT BASED LEARNING
(CASE STUDY)**

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PROJECT 1
REINFORCED CONCRETE BUILDING DESIGN PROJECT

1.1: Introduction

1.1.1: Requirement of Building By-Law and Fire Safety Regulations

1.1.1.1: UNIFORM BUILDING BY LAW (UBBL)

In Malaysia, the Uniform Building By-Laws (UBBL) 1984 enacted under the Street Drainage and Building Act 1974 stipulate that all new buildings require submission of plans for approvals prior to construction by a principal submitting person (PSP), such as a Professional Architect and Professional Engineer.

- Preliminary
 - I. Citation. These By-laws may be cited as the Uniform Building By-laws 1984.
 2. Interpretation. In these By-laws, unless the context otherwise requires-- "Act" means the Street, Drainage and Building Act 1974;
 - II. "advertisement hoarding" means any frame, hoarding, board, wall, bar, pillar, post, wire, or any combination of these, or any erection of any kind, or any surface or space used for the display of trade, business or professional advertisements;
 - III. "aggregate" means any material other than cement and water used in the making of concrete which does not contain additions or admixtures;
 - IV. "alterations" include additions and extensions; "approved" means approved by the local authority;
- Submission of plans for approval.

All plans for buildings submitted to the local authority for approval in addition to the requirements of section 70 of the Act shall—

- I. be deposited at the office of the local authority together with the fees prescribed for the submission of such plans in accordance with the First Schedule to these B-laws;
- II. bear upon them a statement showing for what purpose the building for which the plans are submitted is to be erected and used;
- III. bear the certification of the qualified persons on these plans together with Form A as set out in the Second Schedule to these By-laws for which they are respectively responsible; and
- IV. have attached thereto a stamped copy of the relevant site plan approved by the competent planning authority and certified within twelve calendar months preceding the date on which the building plans are deposited unless otherwise exempted under any law relating to planning.

3.0: CONCLUSION

3.1: Summary of Design Works

At the end of the Reinforced Concrete Building Design Project and Project Based Learning (Case Study), students of Civil Engineering are able to come out with the proper ways on solving all of the required works from this project in order to maximize the student's fulfillment in the course. Together with the help and guideline from the lecturer throughout this whole semester, students are able to use the given knowledge in order to produce a quality outcome for this project. Students get to learn more on how to calculate and design for each of the structure member manually using all of the knowledge learned from all of the subject during Semester 5 at UiTM Pasir Gudang in the division of Civil Engineering. Students also able to measure, calculate and list down all of the required data that will later on be used for the structure design using software that is PROKON software. Students also get to introduced to the proper way on using PROKON software in order to come out with a far accurate design for each of the structure member. At the end also students get to know the differences in between both of the calculations and which is far more suitable to be used for future projects as a Civil Engineer. Not only that, students had also got to know more on designing the detailing for the required structure member using AUTOCAD software and generating using PROKON software. The knowledge of computer education is also important as a Civil Engineer as modern-day construction would also rely on modern day calculation that is far more accurate and would be much safer at the end of the project.

3.2: Recommendation

It is deniable that by the completion of this Final Year Project, students get to learn more the skills it takes to become a responsible and knowledgeable engineer in the future. It is recommended that this subject would stick with giving students the proper approach in preparing them for the future to come as a Civil Engineer. It is also recommended that students must take this subject as a compulsory as it would shape them as a more skillful Civil Engineering students.

3.3: References

1. Mohamad Salleh Yassin ,Ramli Abdullah, 2016, REINFORCED CONCRETE DESIGN TO EUROCODE 2, UTM Press, Selangor Darul Ehsan.