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DEDICATION

To those who have always believed in me and given me wings to fly and told me that there are no limits in the sky.

To those who have helped me throughout my learning years without every grumbling about my curiosity and appetite to knowledge.

To those who have always showered me with unwavering support and care.

To those who know themselves and know what they mean to me without the need of articulation.

Those are my family, friends and teachers and for them I dedicate this research, hoping that-by doing so-I am repaying them a little amount of what they owe me.

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Abstract

Structural Design of Administration Building of Hebron University

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Team:

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In this project we will do the structural design of the "**The administration building at Hebron University**". The college contain nine floors, the first basement floor with an area of 1275 square meter and contain service archive stores. The second basement floor with an area of 1285 square meter and contain archive stores. The third basement floor with an area of 1285 square meter which is a parking for vehicles. The fourth basement floor with an area of 1311 square meter contain two wells in addition to a parking for vehicles. The ground floor with an area of 1296 square meter which is a public relation departments, reception and registration. The first floor with an area of 1296 square meter contain offices for deans and engineering and planning departments .second floor with an area 1303 square meter contain deans offices and meeting rooms. Third floor with an area of 1303 contain management supervisors offices and meeting room. The fourth floor with an area of 634 square meter which is a roof.

It is important mentioning that we will use the Jordanian code to determine the live loads, and to determine the loads of earthquakes, for the analysis of the structural and design sections we will use the US Code (ACI_318), it must be noted that we will be relying on some computer programs such as: AutoCAD, Safe, Office, Atir, and other programs.

After completion of the project we expect to be able to provide structural design of all the structural elements of the project accordance to the requirements of the code.

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List of Abbreviations

As	area of non-prestressed tension reinforcement.
As'	area of non-prestressed compression reinforcement.
Ag	gross area of section
Av	area of shear reinforcement
b	width of compression face of member
Cc	compression resultant of concrete section.
DI	dead loads.
d	distance from extreme compression fiber to centroid of tension reinforcement.
Fc	compression strength of concrete.
Fy	specified yield strength of non-prestressed reinforcement.
h	overall thickness member.
LL	live loads.
M	bending moment.
Mu	factored moment at section.
Mn	nominal moment.
Pn	nominal axial load.
Pu	factored axial load.
S	spacing of shear in direction parallel to longitudinal reinforcement.
Vc	nominal shear strength provided by concrete.
Vn	nominal shear stress.

LIST OF ABBREVIATIONS

V_s	nominal shear strength provided by shear reinforcement.
V_u	factored shear force at section.
W_c	weight of concrete.(Kg/ m^3)
W	width of beam orrib.
W_u	factored load per unit area.
ϕ	strength reduction factor.
S_c	compression strain of concrete.
S_s	strain of compression steel.
ρ	ratio of steel area.
ϵ_c	compression strain of concrete=0.003mm/mm
$F_{sd,r}$	total additional tension force above the support.
$V_{ed,0}$	shear force at critical section.
$N_{ed,0}$	normal tension force at support.
α	angel of stirrup.