

PETITION TO SUBSTITUTE MASTER OF ARCHITECTURE BASIC STUDIES COURSE REQUIREMENT

Name _____ USC ID# _____ Date _____

EQUIVALENT COURSE TITLE(S) _____

COURSE # _____ UNITS _____ SEMESTER/YEAR COURSE WAS COMPLETED _____

GRADE _____ INSTITUTION _____

Number & Title of Course: ARCH 523AL STRUCTURAL DESIGN AND ANALYSIS 3 UNITS

Course Description: a. Introduction to behavior and analysis of building structures. Structural loading, materials, and element types will be explored to understand the basic building blocks of buildings.

Course Goals & Objectives:

- History of structures and their integration with architecture.
- Analysis of simple structures for loading using statics and equilibrium.
- Calculation of structural behavior including stresses and deflections.
- Material behavior of steel and wood considering strength and stiffness.
- Structural components and simple systems including cables, columns, beams, arches, foundations and trusses.

Required Curricular Topics addressed	Met	Not Met
Analysis: Structural Mechanics, force, equilibrium, truss analysis		
Behavior: Force, Stress, Strain, Types*, Geometric properties		
Structural Components: Axial, Bending, Combined, Deflection		
Structural Design: Wood, Steel		
Seismic Considerations***		

*tension, compression, shear, bending, torsion

** centroid, moment of inertia, section modulus

*** Seismic Design is a program requirement that can be fulfilled through ARCH 573, Seismic Design

Required Student Performance Criterion/a addressed:	Met	Not Met
B.9 Structural Systems		

Topical Outline (include percentage of time in course spent in each subject area):

Structure design (20%)

Structure analysis (80%)

Textbooks/Learning Resources:

Schodek, D., Bechthold, M. Structures, 6th Edition, 2008.

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Recommendation Substitution Approved Substitution Denied

Associate Director, Master of Architecture _____ **Date** _____
Selwyn Ting

Comment _____
