

## 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 523BL    STRUCTURAL DESIGN AND ANALYSIS            3 UNITS**

**Course Description:** *b.* Investigation and design of building structural systems for gravity, wind and seismic loading. Comprehensive design exploration of framing type, materials, detailing, layout, form and integration. *Recommended preparation:* One-semester college-level course in physics or calculus.

**Course Goals & Objectives:**

- Structural design for stresses and deflections due to a variety of loading.
- Material behavior of concrete, masonry and composite materials.
- Gravity load resisting systems (trusses, domes, suspension cables, etc.).
- Lateral force resisting systems (moment frame, braced frame, shear wall).
- Seismic and wind design.
- Performance based design for seismic loading.
- Structural detailing, layout, and form.
- Contemporary and historic case studies to demonstrate integration.

Required Curricular Topics addressed	<u>Met</u>	<u>Not Met</u>
Gravity Load Resisting Systems		
Wind and Earthquakes, (physics and analysis)		
Lateral Force Resisting Systems		
Integrated Systems and Design, load path design.		
Seismic Design*		

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

Required Student Performance Criterion/a addressed:	<u>Met</u>	<u>Not Met</u>
B.5 Life Safety		
B.9 Structural Systems		

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

- Structural Design (20%)
- Gravity Load Resisting Systems (15%)
- Wind and Earthquakes (15%)
- Lateral Force Resisting Systems (25%)
- Integrated Systems and Design (25%)

**Prerequisites:** ARCH 523aL

**Textbooks/Learning Resources:**

Schodek, D., Bechthold, M. Structures, 6<sup>th</sup> Edition, 2008.

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Recommendation	<input type="checkbox"/> Substitution Approved <input type="checkbox"/> Substitution Denied
Associate Director, Master of Architecture _____	Date _____
Selwyn Ting	
Comment _____	