

**Class 1, October 25, 2010: What is a good detail design & how does it fit into comprehensive design?**

*Essential Questions To Be Considered?*

What is a detail?  
 What are "integrated" and "comprehensive" design?  
 How do detail designs fit into comprehensive/integrated design?  
 How do you apply principles of design to create a detail?  
 What are criteria for a good detail design?

*Desired Understandings*

Definition of a detail  
 Details are a 'design' problem  
 The five 'S's' = structure, skin, services, safety, sustainability  
 The relationship of skin, services, and safety to structure  
 Method for organizing information in written and graphic format

*in-class exercise 1:*

Photovoltaic system one-line diagram translation

**Total of all six In-class exercises counts as 15% of mark**

*homework 1:*

Integrated design summary (12% of mark)

**Class 2, November 1, 2010: How do detail designs affect personal comfort and safety?**

*Essential Questions To Be Considered?*

What is 'Universal Design'?  
 How do people's different characteristics affect detail design  
 How do detail designs support personal comfort?  
 What are characteristics of each kind of building service?

*Desired Understandings*

Affect of 'Universal Design' on detail designs  
 Architect's responsibility for loadbearing elements in a building  
 Acoustic strategies with building materials - airtight, heavy, imp  
 Physical impact of MEP services on building design

*in-class exercise 2*

"Universal Design" check for class project

*homework 2*

Accessible library casework drawings (12% of mark)

**Class 3, November 8, 2010: What is the purpose of the building envelope?**

*Essential Questions To Be Considered?*

What is the purpose of the building envelope?  
 What are time honored strategies to mitigate natural forces?

*Desired Understandings*

Characteristics of forces of Nature that affect buildings  
 Envelope design strategies for different climates

*in-class exercise 3:*

Precipitation / thermal conductance / condensation 3 climates

*homework 3:*

3/4" envleope summary detail (12% of mark)

**Class 4, November 15, 2010: How do detail designs affect a building's behavior in a catastrophe?**

*Essential Questions To Be Considered?*

How does a building behave in a catastrophe?  
 How can detail designs mitigate the effects of a catastrophe?  
 How can fire protection & life safety systems mitigate the effects of a catastrophe?

*Desired Understandings*

"Fire barrier, partition & wall" requirements and designing details  
 "Means of egress" requirements and designing details

*in-class exercise 4:*

Alternatives for fire resistant construction - with sketches

*homework 4:*

3/4" fire wall detail (12% of mark)

**Class 5, November 22, 2010: How do 'green principles' affect detail design?**

*Essential Questions To Be Considered?*

What are the Impact of 'green' priniciples on detail design

*Desired Understandings*

Detail designs for cross ventillation  
 Detail designs for day lighting  
 Detal designs for sun control for heat gain

*in class exercise:*

Details from 'Original Green' and 'Living Building Challenge'

*homework:*

none

**Class 6, November 29, 2010: What are components of an envelope design?**

*Essential Questions To Be Considered?*

What are the components of contemporary envelope designs?

*Desired Understandings*

Allen's condition for leak in assembly - water, force, opening

How Water vapor condenses within an envelope

Thermal conductance affects mechanical equipment sizing

*in-class exercise 5:*

Superinsulated roof and wall detail design issues

*homework 5*

1-1/2" head/jamb/sill window detail (12% of mark)

**Class 7, December 6, 2010: Revisiting comprehensive design**

*Essential Questions To Be Considered?*

Revisit all questions

*Desired Understandings*

Revisit all understandings

*in-class exercise 6:*

Photovoltaic system selected architectural details

*homework 6:*

Updated package of homeworks 1 through 5 (25% of mark)

**Class 8, December 13, 2010: Have I increased my understanding of the detail design process?**

*in-class exercise 7:*

Presentation of conclusions