

# A Design for Architectural Education

<b>Basic Parameters for Student House Design Project:</b>	
Units of Measurement:	Imperial
Maximum allowable floor area (gross area)	1,500 square feet
Estimated unit cost (not including site costs and servicing charges)	\$150.00 / square foot
Site type/location:	Single front street access No rear lane Overall dimensions = 50' x 125' site plan to be provided by Instructor
House Style:	Single Level Bungalow
Basic Rooms Required	<ul style="list-style-type: none"> <li>✗ Social Space (Living Room, Party Room or Family Area)</li> <li>✗ Kitchen</li> <li>✗ Bathroom (minimum one, additional bathrooms allowed)</li> <li>✗ laundry area</li> <li>✗ Bedrooms (minimum two; one bedroom to be master bedroom)</li> <li>✗ Additional specialty areas as determined by Student</li> <li>✗ No Garage included in design.</li> </ul>

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<b>Process of Application</b>				
Week No.	Task	Activities	Deliverables	Additional Concepts
1	Housing Research	Internet, print materials, photographs, drawings	collage of house styles and preferred details	use of scale drawings, role of the architect, building methods
2	Programme Development	written text/calculations of rooms, areas, uses, and potential locations	notebook submission of calculations, functional relationships, list of rooms and uses	technical writing concepts, mathematic application to design theory on the function of rooms within the house
3	Preliminary Design	bubble diagrams, functional studies, preliminary plan sketches	graphic submission for conceptual design	Discussion on spatial concepts (Active/Passive) discussion on functions and relationships within a house
4	Design Development	preliminary plan sketches, room development, exterior relationships, structure	graphic submission for plans, room usage, access and construction sequence	discussion on construction techniques, details on individual rooms and placement within the planning
5	Design Development	elevation studies, building sections, structural concepts lighting, site locations	graphic submission including exterior elevations, building massing, site development	social discussion on appearance, details and site concepts daylight/solar influences on site development
6	Concept Refinement Grid Draughting	hard line drawings for plan, elevations, sections	graphic submission of resolved plan, elevations and sections including roof system	discussion on relationships within the construction industry, drawing presentation, structural systems
7	Design Confirmation	hard line drawings for plan, elevations, sections	final graphic submission for residence design	Art layout for final design presentation resolution of final design details
8	Final Concept	area calculations, final plan drawings, cost estimate	written submission related to Stage #7 illustrating the concept in English and Area calculations for reference to Stage #2.	review of initial concepts and how the changes/compromises felt through the design process have been resolved.
9	Model Building	exterior walls	First stage of model development	model building techniques, relationship of plans/drawings to the model
10	Model Building	interior walls	Second stage of model development	spatial relationships (variance between how it looked on paper and how it appears in model) model building techniques
11	Model Building	roof system	Final stage of model development	roof systems and structural concepts, model building techniques
12	Final Presentation	assembly of all print and constructed materials	Completion of Stage 8 and 12 resulting in student explanation of the design and process.	discussion on the process deriving a design from theory through development to implementation
<b>CONGRATULATIONS TO ALL FUTURE ARCHITECTS AND HOMEOWNERS</b>				

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Additional Sample problems within design context:

## **A SIMPLE ROOM**

- ✍ Student A and B to measure out their own bedroom and items within it.
- ✍ Note the door, closet and window locations.
- ✍ Student A to switch rooms with Student B.
- ✍ Interview period between both
- ✍ Student A to re-plan the room of Student B (vice versa) based on their interpretations and interview process
- ✍ Presentation to class on the preliminary design

Explores:

- ? Spatial reality
- ? Working within fixed boundaries
- ? Planning for use by others
- ? Independent working
- ? Communication

## **A PRIVATE RETREAT**

- ✍ Students given the parameters for a design of private retreat
- ✍ Location supplied
- ✍ Budget supplied with a price list of materials
- ✍ Students are to establish the reason for the retreat: Hunting, solitude, social, spiritual
- ✍ Design period to focus on both the aesthetic aspects of size, space, and orientation as well as structural aspects of materials and costs.
- ✍ Presentation to class on the preliminary design and cost estimate

Explores:

- ? Spatial reality
- ? Working within fixed boundaries
- ? Planning for specific usage
- ? Independent working
- ? Mathematics of cost estimating (limited requirements)
- ? Science related to materials
- ? Geography related to location of site
- ? Communication skills

## **A NEW CAMPUS**

- ✍ Allowing for students to group in design solution
- ✍ Planning for a new campus within a fictional setting (Avonlea Badlands)
- ✍ Building requirements are identified
- ✍ Research required for building sizes based on occupant loads as defined.
- ✍ Group projects are to design the floor plates and elevations of the buildings.
- ✍ Presentation to the class on final design for each structure
- ✍ Presentation to the examiners on the final cumulative design

Explores:

- ? Student interaction and coordination with other groups
- ? Social understanding
- ? Personal and public spatial developments
- ? Aesthetics, massing, modeling
- ? Theory of design
- ? Communication
- ? Mathematics in terms of areas and relationships
- ? Function and flow
- ? Orientation
- ? Public traffic