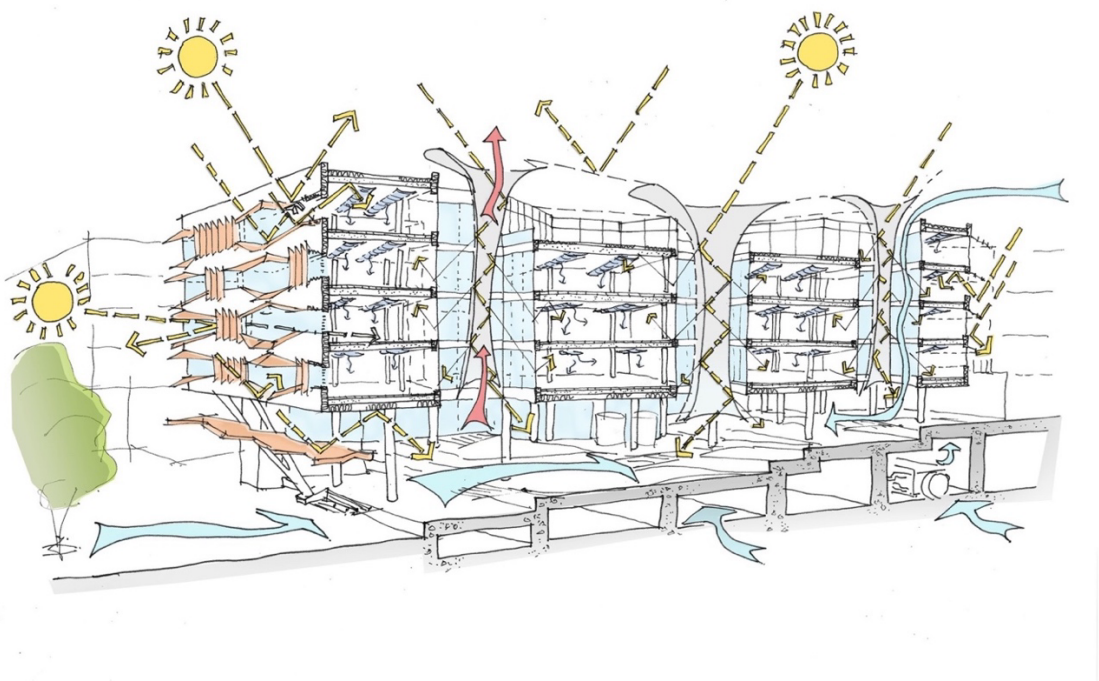
TAYLOR'S UNIVERSITY

Wisdom • Integrity • Excellence

SCHOOL OF ARCHITECTURE, BUILDING & DESIGN
Centre for Modern Architectural Studies in Southeast Asia
Bachelor of Science (Honours) in Architecture

GREEN STRATEGIES FOR BUILDING DESIGN (ARC61804)



https://www.archdaily.com/539213/siemens-hq-in-masdar-city-sheppard-robson/53f3ed13c07a80c3840005d7-siemens-hq-in-masdar-city-sheppard-robson-sketch

Assignment 1: Passive Green Building Case Studies Poster & Booklet
Type of assignment: Group + Individual (Peer Review)
Assignment weightage: 40% (Group+ Individual)
Submission / Presentation: Week 8 (11.06.25)

Introduction

Within the contextual climate and site are the first steps to optimise the benefits provided by the specific environment. Design solutions shall strive to achieve energy efficiency and to use environmentally friendly materials of high quality and durability in order to decrease waste.

The basic approach towards good passive design is to orientate, to shade, to insulate, to ventilate and to daylight. Building have a primary function to provide an internal environment suitable for the purpose of the building. The architectural passive design consideration in designing a building is primarily influenced by its responsiveness to its site context. The important factors that should be considered including site planning and orientation, daylighting, facade design, natural ventilation, thermal insulation and strategic landscaping.

Objectives of Assignment

The objectives of this project are as follows:

1. To critically appraise application of chosen strategies within different cases.
2. To analyze theories and principles of passive green building design strategies.

Learning Outcomes

Students are expected to be able to:

1. Describe passive sustainable design, its green technologies and its applicable design strategies.
2. Analyze passive sustainable design strategies in relation to climate and culture and compare their impact on space and user experience.

Tasks

In a group of 5 person, students are required to choose **two (2) case studies (preferably 3-5 story height only)** on the application of passive sustainable design strategies within an architectural project; **1 from tropical climate region and 1 from other climatic region** (Arid, Mediterranean, Temperate Continental, Polar). Each group are expected to;

a) Identify and compare the passive design strategies applied in both case studies, including factors of; **site planning, day lighting, façade design, natural ventilation and strategic landscaping** (lecture topics week 2-7).

b) Further analyse and elaborate the impact of these passive strategies on the **quality and spatial experience of the chosen project.**

c) As an outcome, each group shall produce **an A0 infographic poster and an A4 landscape booklet** not more than **20-25 pages** consisting of written text, diagrams, sketches, drawings and images and **pre-recorded presentation (5minutes -represent poster not report content)**

d) Fill up **peer assessment form** via Google Form. (Link will be provided later)

Submission Requirement

As a group, students are required to prepare the following:

1. **Pre-recorded creative - presentation video (Maximum of 5 minutes)**
2. **A4 Booklet (20-25 pages, landscape),** softcopy shall be **not more than 25MB each**
3. An **A0 infographic poster (portrait**) by which must include (but not limited to);
    - **Summary of passive design approaches**
    - **Comparative study between 2 case studies.**
    - **Link to pre-recorded presentation (please make sure the link are working)**

- Apart from textual description, students are expected to produce **Illustration of analysis** using images, infographics, sketches or doodles.
- **Drawings** (**relevant** plans, sections, elevations, 3D views) of the selected buildings, data analysis, options, samples
- **References** – APA Format
- **Students' full names, IDs and name of respective tutor MUST** be included on the poster and cover of booklet
- Upload the **all submission materials required above** on to your **allocated tutor's folder** in **the Google Drive link provided below;**

https://drive.google.com/drive/folders/11MfMPXkMSiVnoZsB5vrkL8z8z5YpFoEZ?usp=sharing

Assessment Criterias

The assessment will be based on the following:

- Vigorousness of research and analysis of contents with regards to passive green building design strategies and their impact on spatial quality and user experience
- Clarity in research and analysis of contents in the poster and booklet, both in textual description and illustrations; and
- Visual presentation skills

Marking Criteria / Assessment Rubric

Marks shall be distributed as follows:

Marking Criteria	Marks (%)	Acquired TGC	FAIL	POOR	SATISFACTORY	GOOD	EXCELLENT
Able to analyse the impacts of passive green building strategies on the spatial quality and overall experience of users	**40**	**1.2**	Absence of/very little analysis of the impacts of passive green building strategies on the spatial quality and overall experience of users **(0 - 8)**	Minimal/poor analysis of the impacts of passive green building strategies on the spatial quality and overall experience of users **(10 - 16)**	Minimal good analysis of the impacts of passive green building strategies on the spatial quality and overall experience of users **(18- 24)**	Considerable amount of good analysis of the impacts of passive green building strategies on the spatial quality and overall experience of users **(26– 32)**	Excellent and detail analysis of the impacts of passive green building strategies on the spatial quality and overall experience of users **(34 - 40)**
Able to Identify and appraise the passive green building strategies in case studies in relation to context and user.	**40**	**1.1 1.2**	Absence of/ very little explanation and description of the passive green building strategies in case studies in relation to context and user. **(0 - 8)**	Minimal/poor explanation and description of the passive green building strategies in case studies in relation to context and user. **(10 - 16)**	Minimal good explanation and description of the passive green building strategies in case studies in relation to context and user. **(18- 24)**	Considerable amount of good explanation and description of the passive green building strategies in case studies in relation to context and user. **(26 – 32)**	Excellent and detail explanation and description of the passive green building strategies in case studies in relation to context and user. **(34 - 40)**
Able to communicate the points in a narrated texts and visual presentation through diagrams, images and information in creative way possible; with	**20**	**3.1, 3.2**	Absence of/ very little number of diagrams, images and information to demonstrate clear analysis through narrated presentation **(0 - 4)**	Minimal/ poor diagrams, images and information to demonstrate clear analysis through narrated presentation **(6 - 8)**	Minimal appropriate diagrams, images and information to demonstrate clear analysis through narrated presentation **(10 - 12)**	Considerable amount of satisfactorily produced diagrams, images and information to demonstrate clear analysis through narrated presentation **(14 - 16)**	Excellently produced diagrams, images and information to demonstrate clear analysis through narrated presentation **(18 - 20)**
Total	**100**						

References

Main References:

1. Baird, G. 2010. *Sustainable Buildings in Practice: What the Users Think.* Routledge, Oxon.
2. Behling, S. 2000. *Solar Power: The Evolution of Sustainable Architecture.* Prestel, Munich.
3. DeKay, Mark (2014). *Sun, Wind, and Light: Architectural Design Strategies 3rd Edition*, John Wiley & Sons, Inc. New Jersey, USA.
4. Duran, C. Fajardo, J. 2010. *The Sourcebook of Contemporary Green Architecture.* Collins Design, New York.
5. Kishnani, Nirmal. 2012. *Greening Asia: Emerging Principles of Sustainable Architecture*, BCI Asia Construction Information Pte Ltd. Singapore.

Recommended References:

1. Battle, Guy. 2001. *Sustainable Ecosystems and the Built Environment*. Wiley: Great Britain.
2. Hawkes, Dean. 2002. *Energy Efficient Buildings, Architecture, Engineering and Environment.* WW Norton: N.Y.
3. Hyde, Richard. 2000. *Climate Responsive Design*. Spon Press: N.Y.
4. Williams, Daniel E. 2007. *Sustainable Design Ecology, Architecture and Planning*, John Wiley & Sons, Inc. New Jersey, USA.
5. Yeang, K. 2006. *ECODESIGN: A Manual for Ecological Design*. John Wiley and Sons, Great Britain.
6. Yeang, K., Woo, L. 2010. *Dictionary of Ecodesign: An Illustrated Reference.* Routledge, London

Prepared by:	**Checked by:**	**Approved by:**
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