

# **FMT315 Sustainable Buildings**

**Level:** 3

**Credit Units:** 5 Credit Units

**Language:** ENGLISH

**Presentation Pattern:** EVERY JAN

## **Synopsis:**

FMT315 Sustainable Building will provide students an overview on the principles of sustainability and green building assessment methodologies for new and existing buildings. The course will explore the regulatory framework and the underlying performance standards for sustainable buildings adopted by both locally and internationally. Students will be taught how to evaluate a building's sustainability using the Singapore Green Mark Standards. The course will also provide insights into the principles and features of green technologies that a building can adopt to operate sustainably.

## **Topics:**

- The Triple Bottom-line
- Business case for Sustainable Buildings
- Regulatory Framework for Environmental Sustainability of Buildings
- Understanding the Singapore Code of Environmental Sustainability for New and Existing Buildings
- Singapore Green Building Initiatives
- Singapore Green Mark Standards for New and Existing buildings
- Singapore Green Mark Standards for Offices
- Green Building Standards (e.g. LEED (US), BREEAM(UK) CASBEE(Japan) and Green Star (Australia))
- Principles of Green Building Technologies (e.g. Solar Water Heating, Photovoltaic Systems, Wind Turbine System, Co-Gen and Trigen Systems)
- Benefits and Limitation for the Adoption of Green Building Technologies in Sustainable Buildings
- Sustainable Retrofitting
- Maintenance Requirements for Green Building Technologies

## **Textbooks:**

FMT315 Study Guide

ISBN-13: SG-1941

**Learning Outcome:**

- Demonstrate basic understanding of the legislative requirements on Environmental Sustainability for buildings in Singapore.
- Deconstruct the submission procedures and requirements for certification.
- Appraise and describe the differences between the different Green Building certifications.
- Demonstrate ability to interpret the various international green building assessment systems.
- Relate to the Green Mark Criteria and be able to compute Green Mark scores for new and existing buildings.
- Organise the filing of Green Mark or other Green Building applications.

**Assessment Strategies - Regular Semester (Evening Class):**

<b>Components</b>	<b>Description</b>	<b>Weightage Allocation (%)</b>
Overall Continuous Assessment	PRE-CLASS QUIZ 1	2
	PRE-CLASS QUIZ 2	2
	PRE-CLASS QUIZ 3	2
	TUTOR-MARKED ASSIGNMENT 1	10
	TUTOR-MARKED ASSIGNMENT 2	14
Overall Examinable Components	ECA	70
<b>Total</b>		<b>100</b>

\*The information listed is subject to review and change.