

Sustainable Aspects for Built Environment

Course Title	:	Sustainable Aspects for Built Environment
Course Code	:	(To be allocated)
Credit Units	:	3

L	T	P	SW	FW	Total Credits
2	0	0	2	0	3

Course Objective	:	This subject aims to provide an insight into important sustainability principles in the built environment. Specifically, students will gain a systematic understanding and critical awareness of sustainability concepts, features and benefits, environmental certification tools and key property sustainability debates and their relevance to a range of stakeholders in the built environment.
-------------------------	---	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Pre-requisites	:	NIL
-----------------------	---	-----

Student Learning Outcomes (SLO)	:	<ol style="list-style-type: none"> 1. Understand sustainability, the need for sustainability and the importance of the sustainability movement. 2. Understand key sustainability features and its benefits to stake holders using various Rating systems 3. Apply sustainability in the built environment through compliance with green legislation and certification. 4. Analyze factors that are relevant to the stakeholder groups to promote sustainability in organizational decision making.
----------------------------------------	---	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Course Content / Syllabus:

Modules	Weightage (%)
Module -1 Principles of Sustainability	
Introduction to sustainability; Sustainability models, concepts and principles; Key institutions; Green building certification systems (LEED, GRIHA, IGBC, others); NBC 2016 chapter on sustainability; Sustainable consumption; Environmental laws.	20%
Module -2 – Importance of sustainability in real estate	

Insight into various mandatory and voluntary eco-labels for new and existing buildings in the built environment and their key characteristics; Drivers for Eco labelling, Barriers for Econ labelling, Key features in Eco labelled buildings and its business benefits	30%
3 –Sustainability rating credits and materials	
Site Selection and Planning – Key credits, conceptual understanding and its importance. Water Conversation – Key credits, conceptual understanding and its importance Energy & Atmosphere – Key credits, Conceptual understanding, cost and benefit Building materials and resources - Green construction materials; C&D recycling; Use of local materials; Embodied energy; Sustainable material selection criteria Indoor Environmental Quality – Daylighting, Co2 monitoring, Low emitting materials and Testing air quality. Innovation and Local credits	40%
4 - Sustainability in organizational decision making	
Critical awareness of a range of views from key stakeholders on the importance of sustainability in real estate practices. Business strategy for sustainability; Inclusion in scope of work and specifications	10%

Pedagogy for Course Delivery	:	Theoretical concepts shall be imparted during lectures. Discussions and assignments shall be used for anchoring of concepts and to elaborate practical application.
-------------------------------------	---	---------------------------------------------------------------------------------------------------------------------------------------------------------------------

Assessment / Examination Scheme:

Theory Lecture / Tutorial (%)	Lab / Practical / Studio (%)
100%	0%

Theory Assessment (Lecture & Tutorial):

Continuous Assessment / Internal Assessment				End Term Examination
Components	Project / Home Assignment/ Presentation	Class Test	Attendance	50%
Weightage (%)	30%	15%	5%	

Notional Hours:

Lecture Contact	30
Tutorial Contact	0
Self-Work	30
Field Work	0
Assessment	10
Total Session	70

Text & References:**Text Book**

- Sustainable Construction: Green Building Design and Delivery; By Charles J. Kibert, John Wiley & Sons
- Reading material as provided during the lectures

References

- https://www.cagbc.org/cagbcdocs/advocacy/World_Green_Building_Trends_2018_SMR.PDF
- [https://igbc.in/igbc/html_pdfs/abridged/IGBC%20Green%20New%20Buildings%20Rating%20System%20\(Versions%203.0\).pdf](https://igbc.in/igbc/html_pdfs/abridged/IGBC%20Green%20New%20Buildings%20Rating%20System%20(Versions%203.0).pdf)