

GUJARAT TECHNOLOGICAL UNIVERSITY
Syllabus for M. Arch - 2019
SECOND SEMESTER
Subject: Sustainable building Design principles -II

Course Code: X26102

Credits: 3

Course Objective: Advanced green design principles

Course Contents:

This module will enhance learning of Theory and Principles of Sustainable Design -1 from passive methods to active and thermal energy analysis of the building system. General Aspects of Mechanical ventilation , indoor air quality, ventilation rate procedure for multiple spaces, Energy Performance Assessment for building envelope and building performance, optimization of building space and materials insulation design, fenestration and embodied energy will be addressed in this module. Introduction to the theories of Environment-Behavior relationships. The nature and function of theories. Arousal approach, stimulation approach, Adaptation level, Behaviour constraint and Environmental stress approach. Barker's ecological psychology approach

References:

1. Green Technologies and Environmental Sustainability” (ISBN: 978-3-319-50653-1, Edited by Ritu Singh, Sanjeev Kumar , Springer International Publishing (2017)
2. Smith, R. J., Phillips, G. M., and Sweeney, M., “Environmental Science”, Longman
3. Scientific and Technical, Essex, England, 1982.
4. Watson Donald, “Climate Design: Energy Efficient Building principles and practices”, McGraw Hill Book Company, New York, 1983.
5. Sustainable Infrastructure | The Guide to Green Engineering and Design, Author:S. Bry Sarte, Date of publication: September 2010,Publisher: Wiley, ISBN: 978-0470453612