

Certificate in Sustainable Environmental Design



PROGRAM SUMMARY

It is now internationally recognized that the building sector consumes 40% of the energy generated, and is also responsible for up to 60% of the waste generated in the world today. According to the IPCC Fourth Assessment Report, new buildings have a potential to save up to 75% of the energy consumed. This can be achieved via an integrated design approach involving architects, engineers, contractors, and clients.

It is also known that interventions like passive solar building design, high efficiency lighting and appliances, high efficiency ventilation and cooling systems, solar thermal (hot-water) systems, low-energy insulation and heat-reflecting materials, efficient water and waste-management systems and sustainable landscape designs can contribute tremendously to the projected energy savings in a new building. Existing buildings can also greatly benefit via energy assessment and retrofit programs to lower their energy consumption significantly.

The certificate program in Sustainable Environmental Design is intended to equip working professionals with exactly such skills and expertise as to conceptualize, design, develop, monitor and verify sustainable habitats in the Indian context.

The program is designed to give professionals a broad understanding of the theories, frameworks, policies, practices, national codes & standards, and software that can allow them to design highly-context specific sustainable environments across the nation and across the world.

Students who complete this certificate will attain the necessary skills and knowledge to be a part of research, design and development of habitats that are energy efficient, green and sustainable.

PROGRAM FORMAT

The certificate program is designed for a period of 24 weeks.

- Commencement: February 2012
- Completion: July 2012

Learning is based on a schedule comprising 14 hours per week, consisting:

- Theory lectures
- Studios and labs
- Field visits
- Guest lectures
- Seminars
- Hands-on training workshops

The schedule shall be spread over the six month period with classes on 2 mornings per week for 3 hours per morning (0700 hrs to 1000 hrs) and a full-day commitment of 8 hours (0800 to 1600 hrs) on Saturdays.

Reading material would be provided either in hard copy or digital copy form.

Participants are expected to have laptops that support wireless connectivity, and must have Microsoft office (or its equivalent), and Adobe PDF reader installed.

COURSE STRUCTURE

The program comprises courses on the three dimensions of sustainability and their correlation with sustainable environmental design. They shall broadly cover the *past, present and future* of sustainable habitats including:

- Theories and concepts that form the foundation of what we understand as sustainable habitats today. This shall include fundamental aspects of thermo-physical laws that govern energy systems, architectural systems, vernacular and traditional design systems, etc.
 - This section shall also include hands-on workshops in traditional technologies such as working with lime in buildings, compressed earth-block architecture, small-scale check-dams and irrigation systems, ecological sanitation, etc.
- The '*present*' shall cover the status quo in the field of sustainable habitats today. This shall include national and international policy frameworks, codes (NBC, ECBC, etc.), standards, rating systems such as GRIHA, LEED, CASBEE, BREEAM, etc.
 - This shall also include hands on training on software such as Ecotect, E-Quest, Energy Plus, etc. to simulate sustainable buildings and predict their energy consumption to conform with national codes, standards, etc..
- The '*future*' as they say, is unwritten. Towards the final month of the program, the participants shall have the opportunity to utilize their '*past*' and '*present*' knowledge to work on a concept research paper to create a future that they think would serve as one that is sustainable.

CORE COURSES

Classroom lectures and seminars on the theories and practices in sustainable habitats:

- Fundamentals of sustainability – theories, history, evolution and the dimensions (Social, Economic, Environmental)
- Energy Systems - Fundamentals of energy transfer and thermo-physical laws
- Ecological systems – local/global eco-systems and biodiversity, and the built environment.
- Social systems – social sustainability issues and their interaction with the built environment
- Economic Systems – economic sustainability, ecological economics, Life Cycle Costing (LCC) and the built environment.
- Governance systems – buildings related policies, codes, standards, mandatory and voluntary rating systems, etc.
- Building Systems – In view of all the above, how to design and build sustainable habitats in the local/regional context
- Urban systems – How to up-scale sustainability to the city level with sustainable urban strategies
- Building Energy and environmental software training

FACULTY

The certificate program is being conducted under the auspices of the Sushant Graduate School. The Course includes lectures and seminars with:

Gaurav Shorey, Dristi Neog, Anurag Roy, Sudeshna Chatterjee, Jagan Shah, Ryan Sequeira, Parul Munjal, Amit Sarma

Guest lecturers will be announced at a later date.

ELIGIBILITY

The certificate programme is designed for graduates and post graduates in the fields of architecture, planning, engineering, landscape, and design, with 2+ years of work experience in teaching or professional practice.

The 20 places in the program will be awarded on competitive basis.

APPLICATION REQUIREMENTS

Applicants should submit **duly completed application forms (available on www.sushantschool.org)** accompanied with:

1. statement of purpose for joining the course
2. portfolio of creative works
3. updated curriculum vitae (CV)

FEES

- Total Program Fees: Rs. 60000
- Application Fee: Rs. 1000

All fees are payable by Cheque or Demand Draft in favour of 'Sushant Graduate School'. Program fees are due latest within five days of commencement of program.

TIMELINE FOR ADMISSIONS

- Last date for receipt of applications: 21ST January 2012, Saturday
- Last date for payment of fees: 30th January 2012, Monday

CONTACT WITH QUERIES

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