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Sun, Wind & Light: Architectural Design Strategies, 2nd Edition

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**Synopsis**

Architecture/Environment How to design buildings that heat with the sun, cool with the wind, light with the sky, and move into the future using on-site renewable resources Developed for rapid use during schematic design, this book clarifies relationships between form and energy and gives designers tools for designing sustainably. It also: * Applies the latest passive energy and lighting design research * Organizes information by architectural elements at three scales: * building groups, individual buildings, and building parts * Brings design strategies to life with examples and practical design tools * Features: * 109 analysis techniques and design strategies * More than 750 illustrations, sizing graphs, and tables * Both inch-pound and metric units

**Book Information**

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**Customer Reviews**

This book is very helpful in determining the siting of your building (or gardens) with respect to wind patterns, and sun patterns of your area. As a designer of both indoor and outdoor spaces I found it to be a practical resource for helping ensure the success of a design. When I want shade, I now know where shade will fall; when I want to fill a space with light, I now know where and when light will be there and can adjust my design accordingly. Great book! Would recommend it to architects, landscape architects and anyone wanting to see how their designs integrate into the daily and seasonal climate, wind, and light patterns of their area. The Sun Peg Charts are especially helpful. Good starting and reference point for all designs. Definitely add this one to your library.
A very comprehensive book which leaves you with shortness of breath after each page, covers very well all the aspects of the title and their interaction and effect on planning a building or project of any kind, and gives you a lot of new ideas on how to find out the effects of sun, wind and light and from where will the effect be more and how to make advantage of each one of these elements. Keeps you wondering whether what you have ever designed before was valid or not. Rich in figures and examples, slightly difficult regarding the language. But it is worth every penney.

This is one of the best books I've seen that address building architectural design considerations that affect heating, cooling, ventilation and lighting. It presents tidbits from real designs, focuses on maximizing the effects of the local climate on the building toward the objective of a comfortable and usable living/working space, and addresses supplemental systems as well. This information presumes a level of knowledge relating to some of these concepts that I don't currently have, making it a pretty hard read in many places. However, the book digs pretty deep into each area, providing enough information to get a good start on a building design. The fusion of engineering and creativity is my favorite feature of this book. It provides insight into creative building designs while also presenting the more quantitative factors necessary to size and evaluate a design for intended use.

Where the first edition organized the design strategies individually by scale, the third edition is a complete redesign—adding a number of layers of complexity that reflects a more comprehensive approach and understanding of the subject. Not only have the Analysis Techniques and Design Strategies expanded from 109 to 150, but the overall intentions have evolved to give designers the tools and strategies to meet and exceed the Architecture 2030 energy and carbon targets. This includes carbon neutral, net-zero, and net-positive energy buildings, and accompanying climatic and energy target information for various cities. Although the latter focuses more on urban centres in Canada and the United States, the reach is global in nature.

As anyone working in a design field these days knows, green is the new black (and black may afford too much thermal gain, depending on solar angle). This work presents strategies for building (and neighborhood, and building part) design that take into account the new energy realities. The book is not simply a rehash of LEED strategies - in fact, the authors note that current approaches to energy-aware design are pretty much missing the point. Instead, the methods discussed in the book seek to illuminate an integrated approach to things like daylighting and HVAC. The book is not an
easy read. There is a fairly complex taxonomy and design hierarchy developed, and, unless you familiarize yourself with that, using the book and online resources as a reference will be difficult. I was also surprised to see frequent use of old style hand drawn graphics and charts, given that this new edition has embraced technology in so many other areas (both presentation and content). For readers with a background in design who need a grounding in green energy strategies, the book will be a valuable resource. It's not comprehensive enough to be the primary textbook in a class on the subject, but would be a valuable adjunct in a project-based class.

I studied under Mark DeKay, using the first edition of this book. The second edition adds all of Mark's lectures into what was already a great book, full of very helpful rules of thumb for orientation, materials, siting, and a lot of other design recommendations. A great book made even better the second time around!

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