

2011-2012 SBA COURSE PREVIEW

BOISE, IDAHO

This Course Preview is intended to provide prospective students with basic information about the SBA Course. A detailed Course Overview and Syllabus is distributed to registered students prior to class start.

SBA COURSE LOGISTICS

- **Class Length:** October 14, 2011 – June 16, 2012 (9 months)
- **Class Meetings:** Once per month on a Friday/Saturday combination. Most Friday classes will run from 4 pm to 9:30 pm, and most Saturday classes will run from 9 am to 5 pm. There will be a few exceptions to accommodate field trips and unit flow.
- **Class Location:** Integrated Design Lab, 306 S. 6th Street, Boise, ID 83702
- **Lead Instructor:** Sharon Patterson, sharon@buildingcoedge.com, 208.440.1946

PROGRAM OBJECTIVES

By the end of the SBA Course, participants should be able to do each of the following:

- Identify and discuss the key practices of sustainable building.
- Apply LEEDTM and other relevant criteria or established guidelines.
- Analyze the costs and benefits of incorporating sustainable building measures.
- Work with architects, designers, builders, building operators, and utilities to improve a building's performance.
- Take advantage of financial incentives and technical assistance offered by governments, utilities and non-profit organizations.
- Establish sustainable design goals for project development.
- Assist in the education and training of staff in your facility or firm in sustainable building.

SBA COURSE OUTLINE

Unit 1: Fundamentals of Sustainable Building and Design

- The “case” or rationale for green building
- Current state of green building in the local region, as well as nationally

- Principles of sustainable design
- The practicum project

Unit 2: The Importance of Place: Site, Transportation and Land Use Issues

- Sustainable site design
- Site planning process
- Sustainable site analysis and site assessment
- Transportation planning and siting, and their relationship to sustainability
- Strategies to achieve sustainable transportation patterns and site development

Unit 3: Energy Efficient Design

- How the design of building energy systems impacts the human experience and the global environment
- The value of a contextual and holistic approach to energy system design in buildings
- How a building dynamically interacts with its occupants and the local climate, including renewable energy flows
- Fundamental building energy systems, including HVAC and lighting

Unit 4: “Green” Materials Selection

- Factors in material selection, and the issue of trade-offs
- Resources to assist in determining materials appropriateness
- Analytical process to evaluate materials for a project
- Material considerations when using the LEED rating program
- Material considerations when designing a green home

Unit 5: Indoor Environmental Quality & Health

- Benefits of improving indoor environmental quality
- Common indoor air pollutants
- Barriers to and solutions for achieving good indoor air
- Implementation issues to help achieve good quality indoor air
- Ventilation system design strategies
- Linkages between health, well-being and productivity
- Physical, psychological and financial benefits of daylight and view

Unit 6: Water and Site Design

- Benefits of adopting a natural systems-based approach

- Sustainable site development patterns
- Impact reduction through landscape layout, plant selection and placement
- Outdoor water conservation strategies and practices
- On-site management methods for storm water and wastewater
- Indoor water conservation

Unit 7: Sustainable Job Site Operations

- Construction waste management, site protection, and IAQ protection
- Incorporating green building materials
- Planning and practices for sustainable construction

Unit 8: Building Operations and Maintenance

- Facility management (FM) functions, duties of FM department, FM professionals, and FM position in sustainability
- Building Commissioning (Cx)—what it is, how it is accomplished, and its critical importance to the performance of a building
- Effective operations and maintenance
- Effective training programs within a building

Presentation of Team Project

COURSE REQUIREMENTS

- **Class attendance:** Students may miss no more than two days of class (regardless of class length). They should avoid missing whole units, especially in areas with which they are less familiar. When planning to be absent, students should notify their Lead Instructor in advance.
- **Class participation:** In addition to participating in class discussions and activities, students need to interact between sessions with their project team. This is primarily done by email, but can include a meeting or two during the year organized around a class session.
- **Project Team:** Students will be assigned to a project team based on project interests, and on the goal of creating teams that balance different professions. Students are expected to work effectively with their team to develop the content for their project-related papers and presentations.
- **Papers:** Students are required to write seven (7) papers during the year. Four (4) of these papers relate to the project work.
- **Presentation:** Students are required to work with their team to develop a 20-minute multi-media presentation of their project.

- **Homework:** Students are assigned homework to prepare for or to synthesize classroom learning. Some of this may be required, while some may be simply recommended.
- **Registration:** All registration requirements (paperwork, financial arrangements) must be complete in order to participate.

READINGS AND ASSIGNMENTS

Required Reading

A detailed list of both reading and written assignments will be distributed to registered students, along with any special ordering instructions for the required resources.



SBA Institute Student Notes. A notebook is provided at the beginning of class. It contains lecture outline notes, examples of green ratings systems, and additional course details.



The Philosophy of Sustainable Design. Jason McLennan.



“Chapter 5. Sustainable Site Design.” *Sustainable Building Technical Manual.* Nicholas T. Dines, p. III.3 – III.12. (PDF provided in Student Notebook.)



The Northwest Green Home Primer. Kathleen O'Brien.



Your Green Home. Alex Wilson (recommended, not required)

Additional recommended references and resources will be supplied throughout the year.

Recommended Preparation for those New to Building Industry

The course is geared towards working design and development professionals; however, students who are new to the field of building, are returning to the field after some time, OR have a narrowly defined expertise might want to prepare by reviewing the following basic texts. The course will NOT cover basic design/construction concepts or details. *Students are likely to find one or more of these books at a local bookstore, or at a university or college bookstore with construction management or similar programs.*



Construction: Principles, Methods and Materials. Harold Olin, and H. Leslie Simmons. \$90.



Fundamentals of Building Construction: Materials and Methods. Edward Allen, and Joseph Aano. (John Wiley). \$95.



Encyclopedia of Construction Methods and Materials. William R. Spence (Sterling). Paperback @ \$20.



Modern Carpentry: Building Construction Details in Easy-to-Understand Form. Willis H. Wagner. OR *The Journal of Light Construction, Fine Homebuilding,* and architectural journals.

Visit a job site! Students interested in this type of preparation should contact the contractor and connect with the field supervisor of the project that they are interested in visiting. They should inform the contractor and the supervisor that they want to get the feel of a building project in process. (Don't just show up!) Sturdy shoes are a must, as is being amenable to a quick visit...they're usually pretty busy! And take cookies!

Types of Assignments

- **Individual Work:** Students are responsible for individual course preparation and synthesis work. These include required and recommended reading, analysis/observation, and writing assignments. Assignments are due by the opening session of the unit for which they are preparing.
- **Team Work:** Team work consists of ongoing project analysis that takes place over the course of several units. Early in the course, Lead Instructors introduce a diverse set of project examples that will be assigned to groups for analysis throughout the remainder of the year. Groups evaluate projects and discuss possible strategies for improving sustainability in the course topic areas. Individual students are responsible for completing research and preparing a paper summarizing results of this research. Finally, each of the project teams makes a 20-minute presentation on their project on the last day of class.

SUCCESSFUL COURSE COMPLETION

SBA Certificate: At the final class, students will receive a certificate of competency to verify that they have successfully completed all of the course requirements.

Certified Sustainable Building Advisor (CSBA) Exam: Students who complete all course requirements are eligible to take the CSBA Exam. Those who pass the exam (with a score of 70% or greater) receive a certificate from the Sustainable Building Advisor Institute (SBA Institute) verifying that they have earned the designation of Certified Sustainable Building Advisor (CSBA). The exam is a three (3) hour, closed book exam, and is taken under

proctored conditions.

Professional and Academic Credits:

- The SBA Institute is a USGBC Approved Education Provider under the USGBC Education Provider Program (EPP). The SBA Course counts towards LEED Accredited Professional Maintenance Credits, required by the Green Building Certification Institute (GBCI), and is expected to count towards LEED AP Exam eligibility requirements. Please contact GBCI directly for more information.
- The SBA Course is approved through the American Institute of Architects (AIA) for 100 Learning Units (LUs). Members of other professional organizations are encouraged to contact a representative to learn if they accept AIA-approved courses for learning units.
- The SBA Course does not provide academic course credits.

STUDENT TESTIMONIALS

The information provided by the guest lecturers and course material is unparalleled in value.”
Justin Schwartz, Architect, Studio F3

“Almost everybody who wants to be useful in the future to their chosen profession should take a course like this!” – Susie Rogers, Architect

“The course content and depth of study is compelling. This is the only the ‘philosophy of sustainability’, but practical applications, now and especially for future generations.” – Greg Neruda, Idaho Green Audits

“I became a LEED AP a year ago just by self-studying. This course provided real examples of many of the concepts I had only read about. The class helped validate my LEED AP knowledge with more in-depth examples.” – Kathy O’Neill, E3 Business Solutions

“I loved coming to class each month for the interaction with like-minded folks and to listen to local area experts.” – Tonja Phetmisay, Idaho Power