

SBA COURSE PREVIEW 2011-12

OLYMPIC COLLEGE

The Course Preview is intended to provide prospective students with more information about the SBA course. A detailed Course Overview and Syllabus will be distributed prior to class start to registered students.

SBA Course Logistics

- **Class Length:** October 14/15, 2011 – June 8/9, 2012 (9 months)
- **Class Meetings:** Once per month on a Friday/Saturday combination. Most Friday classes will run from 9 am to 5 pm; most Saturday classes will run from 9 am to 3 pm. There will be a few exceptions to accommodate field trips and unit flow.
- **Cost:** \$1,995 (only \$20/hour!)
- **Class Location:** Olympic College Bremerton Campus, Room HSS 218. Just one-hour ferry ride from Seattle or 40-minute drive from Tacoma. www.olympic.edu
- **Lead Instructor:** Katrina Morgan katrina@fermataconsulting.com.

Program Objectives

By the end of the SBA course, participants should be able to:

- Identify and discuss the key practices of sustainable building.
- Apply LEED™, Built Green™ 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
- A view of the current state of green building in the region and nationally
- The principles of sustainable design
- An introduction to the practicum project

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

- An introduction to sustainable site design
- An understanding of the site planning process
- Sustainable site analysis and conduct a site assessment
- Importance of transportation planning, siting, 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 contextual, holistic approach to building energy system design
- 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 and solutions to 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 Commission (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 Projects

Course Requirements

- **Class attendance:** No more than two days of class may be missed (regardless of class length). Please avoid missing whole units, especially in areas with which you are less familiar. When planning to be absent, please notify your Lead Instructor in advance.
- **Class participation:** In addition to participating in class discussions and activities, you will need to interact between sessions with your project team: This is primarily done by e-mail, 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 the need for creating teams with a balance of different professionals. They are expected to work effectively with their team to develop the content for their project-related papers and presentations.
- **Papers:** You will be required to write four 3-5 page papers during the year. These papers will relate to the work you are doing in your project team.
- **Presentation:** You will be required to work with your team to develop a 20-minute presentation on the project you have worked on during the year.
- **Homework:** You will be assigned homework to prepare for or synthesize your classroom learning. Some of this may be required, while some may be simply recommended. Since you are most aware of your learning needs, use your best judgment on the latter.
- **Registration:** All registration requirements (paperwork, financial arrangements) must be complete.

At Course Completion, you will be eligible for:

Certified Sustainable Building Advisor (CSBA) Exam: Students who successfully complete course requirements are eligible to take the CSBA on-line exam. If you pass it (with a 70% score), you will receive a certificate from The National Sustainable Building Advisor Program verifying that you have completed all requirements necessary for the CSBA designation. The exam is a three (3) hour, closed book exam, to be taken under proctored conditions set by the SBA Institute. Students who do not pass the exam are eligible to retake the exam once free of charge.

SBA Certificate: At your final class, you will receive a certificate of competency to verify that you have completed all of the above course requirements.

Professional and Academic Credits:

- The SBA Institute is a USGBC Approved Education Provider under the USGBC Education Provider Program (EPP). The SBA Course will count 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.

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 with lecture outline notes, examples of green ratings systems and additional course details.



The Philosophy of Sustainable Design, Jason McLennan



Sustainable Building Technical Manual. Chapter 5. *Sustainable Site Design*, by 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

Many 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, if you are new-to-building, are returning to the field after some time, OR your expertise is narrowly defined, you might want to prepare yourself by reviewing the following basic texts. The course will NOT be covering basic design/construction concepts or details. *You are likely to find one or more of these books at a local bookstore, university or college bookstore with construction management or similar programs.*



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



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



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



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

Also, visit a job site! Proper protocol is to call the contractor and connect with the field supervisor, and tell them you want to get the feel of a building project in process. (Don't just show up!) Wear sturdy shoes and be amenable to a quick visit...they're usually pretty busy! And bring cookies...

Types of Assignments

Individual Work

Students will be responsible for individual course preparation and synthesis work. These will include required and recommended reading, analysis/observation, and writing assignments. These assignments are due by the opening session of the unit for which you are preparing.

Team Work

Team work consists of ongoing project analysis that takes place over the course of several units. Early in the course, we will introduce a diverse set of project examples that will be assigned to groups for analysis throughout the remainder of the year.

Groups will evaluate projects and discuss possible strategies for improving sustainability in the course topic areas. Individual students will be responsible for completing research and preparing a paper summarizing results of this research. Finally, each of the project teams will make a 20-minute presentation on their project on the last day of class.