**Solar Decathlon Professional Training**

**Syllabus**

**COURSE INFORMATION**

Learning outcomes:

1. Apply building science principles that are paramount to the successful design of high-performance, energy-efficient buildings.
2. Discuss and address weekly topics including Planning and Setting Goals, Passive Design, Building Envelope, Lighting, Plug Loads, Mechanical Systems, and Renewable Energy.

**COURSE ACTIVITIES**

The training is a blend of online on-demand content and live virtual weekly sessions.

You are expected to view the on-demand videos each week *before the live sessions.* Then come to the weekly sessions with questions and be prepared for discussion with the instructor and other participants.

Each week, the instructor will guide discussions on the topic to help inform the ongoing development of the project activity.

**NET ZERO PROJECT DESIGN ACTIVITY**

A key component of the training is applying the building science concepts to a project. Each week, you will be considering design decisions for a project and presenting their ideas at the end of the course.

The details for a hypothetical small office project will be provided and you will choose a climate zone for the building. You can choose to work on your own project if you wish.

It is expected you will put in extra time each week outside the on-demand and live class time to work on your project design to discuss in class and present at the end. An optional worksheet is provided to use to capture your notes and design elements.

You will share your final project design at the final live session.

**COURSE MATERIALS**

|  |  |
| --- | --- |
| Solar Decathlon Building Science Education | Online on-demand videos and quizzes  <https://www.usgbc.org/education/sessions/solar-decathlon-building-science-education-12849660> |
| Achieving Zero Energy: Advanced Energy Design Guide for Small to Medium Office Buildings (ASHRAE) | ***Note:***  Free download available at:  <https://www.ashrae.org/technical-resources/aedgs/zero-energy-aedg-free-download> |
| Weekly live cohort training sessions | Wednesdays 5:00 – 6:30 pm ET  January 18 – March 21, 2024  *Zoom link to be added* |
| Google Folder | Student materials and shared documents will be available in a shared Google Folder.   * Syllabus * Project Activity sheet * SDPro Calculator |

**CONTINUING EDUCATION CREDIT**

LEED accredited professionals can earn GBCI continuing education hours. The [Solar Decathlon Building Science Education](https://www.usgbc.org/education/sessions/solar-decathlon-building-science-education-12849660) online series provides 8.5 GBCI CE hours. Select videos will be called out for each week’s topics. To earn CE hours you must watch all the videos and pass the quiz within each Module in the series.

There are up to 15 GBCI CE hours available for attending at least 80% of the live weekly sessions. The sessions will be recorded if you miss a week but GBCI CE credit is only available for attending the live sessions.

There are 10 GBCI CE hours available for completing the Net Zero Project Design Activity.

A Certificate of Completion is available upon request if you need to document your completion for other continuing education purposes.

**WEEKLY SCHEDULE**

**Weekly Topics**

|  |  |
| --- | --- |
|  | Topic |
| Week 1 | Introduction |
| Week 2 | Planning and Setting Goals |
| Week 3 | Passive Design |
| Week 4 | Building Envelope, Part 1 |
| Week 5 | Building Envelope, Part 2 |
| Week 6 | Lighting , Plug Loads |
| Week 7 | HVAC, Part 1 |
| Week 8 | HVAC, Part 2 |
| Week 9 | Renewable Energy |
| Week 10 | Final presentations |