



# GREEN BUILDING PROFESSIONAL TRAINING PROGRAM

## ORGANIZERS



Vilnius, 2018

## About Green Building Professional (GBPro) training program



Lithuanian Green Building Council (LTGBC) in 2014 has initiated a training and accreditation program to provide greater certainty of the abilities of professionals from a variety of relevant disciplines including Architecture, Engineering, Business, Finance, Law, Construction, Materials & Technology providers and Facilities Managers.

The program is jointly organized by **LTGBC and Institute of Architecture at Vilnius Gediminas Technical University Faculty of architecture** along with training development support from the Europe GBC Network. The program is designed specifically to ensure cross training between different disciplines as more efficient collaboration is a critical factor in delivering successful green building projects. **The courses are currently provided in English** and include both theory and practice from experts active internationally. The courses are offered on an ongoing basis with the schedule arranged so that it is possible to complete the program in 12 months. The GBPro program is designed so that students can join at any time. Usually the specific course is provided when the group of at least 12 participants is formed.

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## Benefits of accreditation



The “Green Building Professional Certification” provides recognition in the market place that the professional has been trained in the core concepts necessary to be a useful contributor to successful green building projects. This program is designed to assist professionals in helping their project and clients achieve the highest scores on the required Energy Audits and private, voluntary building rating system (including Lithuanian Buildings Sustainability Assessment System, LEED, BREEAM, etc.). The program is not intended to be a substitute for an individual’s education or professional qualification (e.g. construction engineering degree or architects qualification).



**Lithuania Green Building Council** (LTGBC), launched in 2013, is a non-profit organization, actively promoting the creation of sustainable environment and spurring innovations in the design, construction and operation of green buildings in Lithuania. More information: [www.lzpt.lt](http://www.lzpt.lt)



**Faculty of Architecture at Vilnius Gediminas Technical University** is largest institution of higher education in field of Architecture in Lithuania. It provides all levels of professional studies: undergraduate (Bachelor), graduate (Master) and postgraduate (Doctoral). Over 500 students of all levels are studying in the school nowadays. VGTU entered the top list of one hundred fifty best worldwide universities in the rankings "QS World University Rankings by Subject 2017" for Architecture.

## 2018 courses

Course	Trainer
Financial Considerations of Green Buildings*	Hadley Barrett
Building Envelopes for Green Buildings*	Dr. Hector Altamirano
Life Cycle Assessment & Life Cycle Costing	Ryan Zizzo
Sustainable Materials & Resources*	Luca Volpi
Project management of sustainable projects*	Hadley Barrett
Sustainable site selection and management*	Martin Dreiseitel
Creating and Managing Greener Workspaces	Devyn Olson-Sawyer
Lithuanian Sustainable Buildings Assessment System	Rasita Masalskytė
Legal Requirements & Certifications of green buildings*	Hadley Barrett
Integrating Renewable Energy and Sustainable Development	Hadley Barrett

*\*Required courses for GBPro accreditation.*

More information about GBPro trainings is provided on LTGBC website <http://lzpt.lt/veikla/#mokymai> or by e-mail [info@lzpt.lt](mailto:info@lzpt.lt).

## Trainers' profiles and courses descriptions

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**Hadley Barrett** has extensive experience as leader and owner of various companies acting in the fields of sustainable real estate and renewable energy development in countries such as Finland, Estonia, UK, Latvia, Romania, Norway, The Netherlands, inter alia. He is a board member of the Estonian Green Building Council, CEO and major shareholder of the Oxford Sustainable Group, owner of Harju media and has been a non-executive director of different investment funds in sustainable real estate and renewable energy.

Hadley read an MBA at Oxford University and is a qualified project manager as well as the first Breeam Accredited Professional in the Baltics. He is qualified in Leed, Breeam New Construction, In-Use, Communities, Refurbishment and similar methodologies and has audited, advised and trained many leading companies, individuals and institutions across Europe.

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### Managing Green Building Projects

This is a practical and easily understandable full day course. It is interactive and it uses lecturer's and also participants' personal experiences and knowledge.

Today many companies believe that they do project management. In this course project management is taken as profession and it will be developed to the perfection. We will look over all main stages of the project management starting from main principals and what is different in green building projects.

Topics covered are:

- Integrated project management and design;
  - Green technologies and processes;
  - Managing project scope, schedule, cost, risk, communication, HR and procurements;
  - Best PM practices
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### Legal Requirements and Green Building Certifications

A full-day course that provides essential information on the current and impending European and National legislation and international green building rating tools that are increasingly demanded by investors and dramatically changing how buildings are designed, constructed, operated and deconstructed.

Successful students of this course will:

- Understand the policy driving EU green building legislation
  - Understand the way such legislation works and how it is evolving
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- Understand the main current and upcoming requirements in buildings legislation
  - Understand the future direction of travel for EU green building legislation
  - Understand the function of green building rating systems and certification.
  - Have basic knowledge of the main rating tools available to the European market
  - Receive an introduction to the various professional credentials available through each rating system
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## Financial Considerations of Green Buildings

Sustainable buildings are becoming the norm across Europe and soon Estonia. Europe is following the money.

Various large investment companies, pension funds and international developers now require all buildings in their portfolio to be certified as sustainable. It is fast becoming the trend that buildings without a recognized certification are not purchased. Non-Green buildings are losing value. Tenants are demanding healthier and higher quality buildings and paying a higher price for the privilege.

This course will show you:

- what investors are looking for in sustainable buildings and why it is now so important
  - costs and benefits to corporate strategy and management by choosing sustainable buildings
  - which problems can you expect in design and execution
  - sustainable buildings can be constructed for the same or a lower cost and have lower lifetime costs than other buildings
  - examples of how you may earn additional income from sustainable development
  - proven statistics and facts about sustainable buildings including Estonian examples
  - trends in valuation of sustainable buildings
  - examples of Estonian properties currently undergoing sustainable certifications and results to date
  - why it is increasingly risky not to build green
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## Integrating Renewable energy and Sustainable development

Renewable energy is one of the hottest investments fields in Europe today. It is clear that real estate developments combined with renewable energy deliver a higher profit to developers, a lower cost for end users and are more sustainable. This course will explain to you all the major points you need to consider when planning, designing, constructing and implementing renewable energy within and separate from real estate projects. Packed with practical knowledge and real case examples from nearly 10 years experience, this course is one not to miss.

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Topics included:

- When to use and when not to use renewable energy in your development
  - Why use renewables at all? Pros and cons.
  - Calculating simple payback of renewable energy investments
  - Considerations when developing renewable energy
  - Where to locate
  - The best type of energy source to earn income
  - How to choose manufacturer, equipment and supplier
  - Key considerations when contracting operation & maintenance, insurance, warranty
  - Operational factors
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**Martin Dreiseitel** is President & CEO of F&R Worldwide. Martin works with developers, community leaders, financial institutions and industry on sustainable site selection and site development in Europe. He is actively involved with the Romania, Croatian, Estonian and Montenegrin Green Building Council and an initiative launched by the US embassy in Romania to develop a national Brownfield strategy.

Martin holds an engineering degree (Dipl.-Ing.) from the University of Applied Life Sciences in Vienna and has 20 years of experience, most of which have been devoted to brownfields, remediation and risk management in several European and Asian countries. He is a Coach and certified Trainer according to ISO/IEC 17024.

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## Sustainable site selection & site management

World population is exponentially growing. The ecological footprint of the world population is already twice as big as the biologically active land surface available. Sustainable urban planning is no option – it is a prerequisite for the future of mankind.

According to the United Nations Commission's 1987 report „Our Common Future“, sustainability is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. And according to the U.S. EPA, brownfields are “real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contamination”.

The number of people living in cities is continuously increasing and will continue to increase in future. To maximize use of land inside existing communities must be top priority. And that is where brownfields usually are located.

The reclamation and reuse of brownfield sites is a core component of sustainable development. It integrates a wide range of economic, social and environmental objectives.

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Brownfield redevelopment not only cleans up environmental health hazards and eyesores; it is also a catalyst for community regeneration, particularly when communities are brought into the consultation process of site identification and restoration. Managed effectively as a sustainable redevelopment scheme, brownfield sites provide affordable housing, create opportunities for employment, promote conservation and wildlife, and offer a shared place for play and enjoyment. Above all, the transformation of a brownfield site is a vision of hope for the future ([www.sustainablebuild.co.uk](http://www.sustainablebuild.co.uk)).

Sustainable urban planning requires a risk based approach. An environmental risk assessment covers the risk to all ecosystems, including humans, exposed via, or impacted via air, water and soil. A concept frequently used in environmental risk assessment is that of the source – pathway – receptor. In this model the pathway between a hazard source (for example a source of contamination) and a receptor (for example a particular ecosystem) is investigated. The pathway is the linkage by which the receptor could come into contact with the source (a number of pathways often need to be considered).

Environmental assessments and green building rating systems promote responsible, innovative, and practical site design strategies. Project teams undertaking building projects should be cognizant of the inherent impacts of development on land consumption, ecosystems, natural resources, and energy use.

Preference should be given to buildings with high performance attributes in locations that enhance existing neighborhoods, transportation networks and urban infrastructures as well as sites and land use plans that preserve natural ecosystem functions and enhance the health of the surrounding community.

Sustainable development is not a fashion; it already is a necessity for our future.

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**Luca Volpi** graduated as an Architect in 2006 at the Darmstadt Technical University specializing in energy efficient buildings and sustainable materials, postgraduate in Renovation and Solar Building in Kempten (Energy and environment center EZA). He is partner at Societat Orgànica, a Green Building Environmental Consultancy, focusing on energy efficiency, demand reduction strategies, building energy simulation and certification, as well as materials, LCA analysis and water consumption. He teaches in several conferences, master degrees and postgraduates in English, Spanish and Italian.

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## Sustainable Materials and Resources

This full day workshop focused on understanding the availability, benefits, legislative requirements and specification considerations for using Sustainable Construction Materials in construction project. Important green design concepts such as "cradle to cradle" and embodied energy will be presented. Establishing the relationship between the demands of sustainability and the resources used in construction.

Learning objectives for this course include:

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- Understanding the environmental impact of materials used in construction
  - Carry out a critical reflection of the typical way of designing, using and managing resources throughout the lifecycle of buildings
  - Proposing an evaluation methodology and suggestions for improving the materials used in construction, maintenance and refurbishment of buildings.
  - Sharing the knowledge brought from different professional backgrounds and determining the active roles for reducing the environmental impact of materials.
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**Devyn Olson-Sawyer** Devyn Olson-Sawyer, LEED BD+C, is active sustainability consultant and presenter in a number of areas, with a specialty in Green Building and LEED. Her experience includes projects in the United States and Ireland. Devyn is a co-founder of the Irish Green Building Council and currently serves on the IGBC board.

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## Creating and Managing Greener Workplaces

This one-day course explores green workspaces from a number of perspectives - beginning with an examination of the changing nature of work and the business case for green workplaces, and moving to examples, opportunities and barriers for creating green workplaces. The course examines components of green workplace design, potential for greening the workplace through technology, operations, and behaviors, and looks at the range of stakeholders and their reasons for engagement with green workplaces. On completion of this course, successful students will be able to:

- Understand the changing nature of work
  - Describe the business case for green workplaces
  - Develop a Green Office program in their own workplace
  - Describe the opportunities and barriers for creating green workspaces
  - Examine components of green workspace design
  - Describe the range of stakeholders and their reasons for engagement with green workspaces
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**Dr. Hector Altamirano** is a building scientist with a broad research interest in energy, the indoor environment and the operational performance of buildings. Hector is a trained architect with an MA in Energy, Environment and Sustainable Design, and a PhD in Building Science. As a regional coordinator for social housing development at the Chilean Ministry of Housing and Urban Planning he worked on the Chile Barrio Program aimed to develop low cost, energy efficient social housing. He was a researcher and co-founder of the Bioclimatic Laboratory at the Central University of Chile where he taught sustainable building design. In October 2005 he joined the Complex Built Environment Systems (CBES) Research Group at the Bartlett, UCL as a

doctoral student where he contributed to a number of projects funded under DCLG Building Operational Performance Framework as well as EPSRC/Carbon Trust funded CaRB project. In 2009 he moved to the Healthy Infrastructure Research Centre at the UCL Department of Civil and Geomatic Engineering where his work focused on exploring the relationship between infrastructure and infectious disease transmission.

## Building Envelopes for Green Buildings

The course will focus on Green, Dynamic and multipurpose envelopes; process of Interaction; The Importance of Monitoring Buildings; and the Health Effect of Green Buildings.



**Ryan Zizzo** is Technical Director at Zizzo Strategy Inc, an interdisciplinary consultancy based in Toronto. Their team of lawyers and engineers assist public and private sector clients transition to a low-carbon and climate-adjusted future.

As a professional engineer and green building expert, Ryan Zizzo helps built environment designers, managers and operators meet their sustainability goals. This includes creating sustainability plans based on international best practices, quantifying and optimizing the carbon and environmental impacts of buildings and infrastructure using life cycle analysis, and obtaining green building certifications such as LEED.

Ryan has worked on over 50 green building and neighborhood projects with leading Canadian and European architects, developers, and property management firms. He spent three years working in the leading Nordic green building scene in Helsinki, Finland.

Ryan holds a Masters degree in Applied Science in Civil Engineering and Environmental Engineering from the University of Toronto, is a licenced Engineer in the Province of Ontario, and holds a LEED Accredited Professional designation in Neighbourhood Development.

## Life Cycle Assessment & Life Cycle Costing

Life Cycle Thinking is about going beyond the traditional “up-front” focus on the production, manufacturing, and purchase of products and buildings. It aims to quantify and consider in the decision making process the longer term environmental, social and economic impacts of a product or service over its entire life cycle, including the use phase, repair / maintenance, and end-of-life.

This one-day course will provide an introduction and overview of the two main processes of life cycle thinking: Life Cycle Costing, and Life Cycle Assessment.

Life Cycle Costing (LCC) deals with life-cycle economics, and helps embed future costs into today’s decision-making process. Its aim is to determine the most cost-effective option among different competing alternatives to purchase, own, operate, maintain and, finally, dispose of an object or process.

Life Cycle Assessment (LCA) has become a leading environmental assessment technique used by consumers, industry, and government. LCA is increasingly required by firms that

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wish to green their supply chain, and by designers who wish to compare the environmental impacts of various alternatives. LCA is part of leading green building certification systems like LEED, BREEAM, and DGNB.

Participants will learn the basics of LCC & LCA, why they are important, how they are performed, and how to interpret the results of such studies.

Other related topics that will also be discussed include carbon foot printing, environmental product declarations, data sources, calculation tools, and product and building examples.

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