



COURSE PROSPECTUS

Building Biology Environmental Consultant Certification

Bringing together design methods and technology to provide the information needed to create healthy homes and workplaces.

International Institute for Building-biology® & Ecology
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Building Biologists:

A Building Biologist is trained to view the holistic relationship of all life, and become an environmental advocate in the global effort to solve the problems that arise from modern methods of building and settlement planning—ways that disregard nature and humanity. It is, after all, unaware human beings who create and perpetuate indoor environmental problems, and only by seeing, understanding, and applying natural laws can Building-biologists lead others.

Building-biology is a creative, harmonizing discipline that calls for dynamic, idealistic people. To work for a better, more sustainable and truly Green world is an extraordinary, valued, necessary, and satisfying job. The goal is:

- to regain order and harmony in our surroundings
- to restore the balance between nature, our buildings, and ourselves
- to help build bridges for the realization of a world that is ecologically oriented
- Building-Biology provides a holistic approach to healthy homes and workplaces while always maintaining people, the building's occupants, as its focus.

As Building Biologists, we strive to change, house by house, building by building, the present methods of construction that do not respect and are not compatible with the laws of nature. And as we set practical, real world examples, giving good advice based on Building-biology Principles, we *will* make a difference; we will be changing things for the better.

Building Biology Environmental Consultant Certification:

This program will thoroughly equip you with practical, real-world, hands-on experience in identifying, assessing, and mitigating or eliminating pollutants, airborne toxins, and electromagnetic emissions in homes, schools, offices, and commercial buildings. You will also become an expert in prevention, certified to advise homeowners and those planning to build or remodel a home, as well as architects, builders, inspectors, and engineers in the methods and practices that create and maintain an environmentally healthy home or commercial building. Throughout the program we will concentrate on teaching you the skills needed to make a genuine positive impact in your community and in the world at large.

The sole requirement to qualify for this certification program is our mentored correspondence course, IBE 101, Natural Healthy Building, which is not included in the advanced purchase option, and we encourage you (though we do not insist) to complete IBE 101 before attending your first seminar. Your certification studies will be comprised of 200 online hours of our 200-level courses; our three, 200-level, instructor-led, 5-day seminars; and a Final Project (see pages 5 & 6 of this document for Final Project details). The seminars can be attended in any order; each of them is preceded by prerequisite online courses designed to thoroughly prepare you for the seminars experience.

A great many alumni of this certification are now running successful environmental businesses, based on their Building Biology expertise; many more came to us as already working professionals, and use the BBEC certification to further their credentials: among them are architects, green builders, engineers, building inspectors, medical practitioners, interior designers, city planners, etc.

You will have up to 2 years to complete this program; most students complete it within one year. By selecting our advance purchase option and paying \$3,925 USD for the entire certification track, which includes all of your online courses, seminars, and final project, you will save \$950 off the total price of our BBEC Program tuition.

Requirements

1. IBE 101 Natural Healthy Buildings (our mentored correspondence course)
2. Sign the IBE ethics statement (included with your IBE 101 course materials)
3. Successfully complete of 200 hours of 200-level online courses, and their exams
4. Attend three 5-day seminars (IBE 211, IBE 212, IBE 213), and complete each seminar's proctored written exam successfully.
5. Successfully complete the Final Project (IBE 221)

On-line courses:

Our twenty-five online courses are divided into four categories on the IBE website: *House Systems, Building Biology & Ecological Design, Living Environment & Building Physics, Building Materials & Structural Physics*. You may select your 200-level studies from among any or all of these four categories, choosing them according to your keenest areas of interest. They may be taken in any order; they may be taken before, after, and/or in-between the three 200-level seminars you attend.

- EMR & IAQ: Indoor Climate Overview, Heating Systems, Ventilation, Cellphones: Unhealthy at any Speed; Electromagnetic Radiation, Electrical Home Wiring
- Building Biology & Ecological Design: Bau-biologie Basics, Applied Bau-biologie, Ecological Integration, Community Planning, Architectonics (Form & Function), Space & Harmony
- Living Environment & Building Physics: My Baby's Environment, Building Science Basics, Natural Colors, Light & Lighting, Noise Protection, Interiors (Cause & Effect)
- Building Materials & Structural Physics: Types of Construction, Flooring, Building Overview, Building Materials, Wood Products, Wall Systems, Natural Finishes

Time requirement: 200 contact hours

Equivalent Courses:

IBE recognizes, on a case-by-case basis, education from accredited universities, real-life professional experience, and learning programs provided by respected environmental organizations as equivalent to certain online courses offered by IBE. Please contact IBE at outreach@buildingbiology.net to request an application to petition for course credit. Note that an application must be accompanied by a non-reimbursable administrative fee. Our seminars are excepted from this process; attendance at our seminars is mandatory.

Seminars: IBE 211, IBE 212, IBE 213

IBE seminar instructors and guest lecturers are all accomplished indoor environmental experts. A portion of each 200-level seminar is devoted to taking occupant histories, hands-on training in sampling protocols and equipment use, interpretation of laboratory analysis, methods for recommendations and reporting to clients, and field inspections in small groups, guided by certified instructors, to further explore the use of equipment and testing methods. On the fifth morning, there is a Q&A and an oral review of the previous four days' material, followed in the afternoon by a proctored written exam.

Seminar Syllabi, including instructor bios, can be found on the seminar pages of the IBE website, available for download. Each seminar takes place once per calendar year.

IBE 211: Indoor Air & Water Quality:

This seminar is focused on pollutants that are present in our indoor air, tap water and in building materials. Allergies, immune system suppression, fatigue, nervous system complaints, and many other conditions are triggered or made worse by such substances. Emphasis is placed on how to identify problems, what their health impacts are, and how to take effective action. The viewpoint is holistic – we are concerned with the well being on all levels of the people who occupy the building. Topics include:

- Biological contaminants i.e., mold, bacteria etc.
- Volatile organic compounds (VOC's), such as formaldehyde
- Pesticides
- Combustion gases, such as carbon monoxide
- Water pollution
- Dust and particulates
- Environmental stressors, such as humidity and temperature

Prerequisite online courses: IBE 204.2 and IBE 206.6

IBE 212: ElectroMagnetics:

Due to a great number of practical experiences, we have learned that electromagnetic radiation (EMR) influences the well being of people both at home and at work. It is of great importance to understand the basics of EM radiation, and learn the potentially harmful effects associated with EMR. The theory of EM radiation is demonstrated with practical examples and case studies, based on real-life home inspections. Particular emphasis is placed on the bedroom, as well as EM radiation that may enter the house via the public water supply system. The various instruments used in the detection procedure are demonstrated. Topics include:

- Fundamental definitions of energy and how electricity is a special class of energy
- Concepts of AC electric and AC magnetic fields
- EMF low and high frequency ranges including radio frequency and cellular phone
- Definition of AC electric and magnetic fields and DC electric and magnetic fields
- Ionizing radiation
- Static electric and magnetic fields

Prerequisite online course: 204.3 ElectroMagnetic Radiation

IBE 213: Natural Healthy Building & Remodeling Practices:

Building Biology and its 25 Principles are a specialized branch of Building Science that explore the inter-relationships between human health, the built environment, and our planetary ecology. Students review the indoor environmental hazards a home or office may contain, and the design and construction strategies to avoid incurring them during construction and/or remodeling. Additionally, students learn about available, and often economical, solutions to rectify known problems. Students who are in the Building Biology Environmental Consultant track will present reports of their case studies.

Topics include:

- Environmental situation
- Building Sciences
- Building-Biology design within the building culture
- Outdoor Environment
- Biologically-sound building materials and strategies

- Home maintenance and upkeep

Prerequisite online courses: IBE 202.2 and IBE 205.5

IBE 221: Final Project

The home stretch toward completing your Building Biology Environmental Consultant certification! It is a practical assignment designed for you to prove your understanding of the material and protocols discussed in IBE 211 and IBE 212, and your instrument proficiency. The topics your project must cover include:

- Low and high EMF frequency ranges, including radio frequency and cellular phone signals
- Static electric and magnetic fields
- Volatile organic compounds (VOC's), such as formaldehyde
- Pesticides
- Combustion gases, such as carbon monoxide
- Water pollution
- Dust and particulates
- Environmental stressors, such as humidity and temperature

Time requirement: three months from inception

Final Project: the mentored process

You will conduct a sample home assessment, and write a report of your findings. During this process you will work closely with a senior BBEC, who will mentor you through the process. The focus of this project is for you to demonstrate your thorough understanding of how to perform a home assessment—not a mitigation—and prove your proficiency in all aspects of the Building Biology Assessment protocol. Should you discover the need for mitigation, you should reach out to a certified BBEC; your instructor can advise you in this. You may use your own home, or other dwelling familiar to you, as the object of your assessment.

The steps to begin and successfully complete your Final Project:

1. Announce your readiness to IBE, and request that a mentor be assigned to you
2. Draft a home assessment strategy proposal according to Building-Biology protocols
3. Submit your draft to your assigned mentor, who will review it for accuracy and thoroughness.
4. Upon your mentor's approval of the draft, conduct a BBEC Assessment of a home
5. Develop a written report including photos, results and mitigation suggestions.
6. Submit the report to IBE. Your will review the report and approve it, or contact you to discuss it.

IBE will be happy to provide you with a sample assessment report, upon request.

Note: At this point, you will not yet be a certified BBEC; you must not present yourself as such, and do not charge for your service should you opt to assess someone else's home.

You are welcome to contact IBE by e-mail or phone; we will do our best to contact you as soon as possible. We will be happy to discuss any questions you may, as well as provide you with encouragement and support.