

# EMRS Certification

v2.3

Electromagnetic Radiation Specialist



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



INTERNATIONAL INSTITUTE FOR  
**BUILDING-BIOLOGY® & ECOLOGY**

**Building Biologists:**

A Building Biologist is an environmental advocate in the global effort to solve with an holistic approach the problems that arise from modern building and settlement planning methods—methods that disregard nature and human culture. It is, after all, the unaware human beings who create environmental problems, and only by understanding and applying natural laws can Building-biologists lead others.

A Building-biologist is really a researcher, architect, engineer, and doctor, all in one. Building-biology offers a preventative and healing medicine with profound unifying influence. This is a creative, harmonizing discipline, and calls for dynamic, idealistic people.

To work for a better and 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 might not be able to change very much the present impersonal ways of building and living, as economically oriented and entrenched as they are. But if we set a sterling example and give good advice, based on Building-biological Principles, we *will* make a difference. Then we can be satisfied ethically with our performance, having participated in changing things to the better, hoping that destiny will do the rest.

**Electromagnetic Radiation Specialist Certification (EMRS)\***

This program will equip you with practical, hands-on experience and real-world solutions for identifying, assessing, and mitigating or eliminating electromagnetic emissions (EMR, EMFs) in homes, schools, offices and commercial buildings. You will also become an expert in prevention, certified to advise homeowners, home buyers, architects, builders, inspectors, and engineers in the methods and practices that create and maintain a minimized presence of electromagnetic fields in homes and commercial buildings. 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.

\*IBE alumni who are certified BBPs (Building Biology Practitioners) and wish to pursue EMRS certification will receive full credit for all EMRS-required online courses they've already completed, as well as for IBE 101 Natural Healthy Buildings, assuming they completed IBE 101 within the past three years. Those who completed IBE 101 more than three years ago will be asked to repeat the course at half the published tuition price.

\*IBE alumni who are certified BBECs (Building Biology Environmental Consultants) or BBEIs (Building Biology Environmental Inspectors) and wish to pursue EMRS certification, need complete our Advanced Electromagnetic Radiation seminar, IBE 312, and the online course IBE 204.9 Cellphones: Unhealthy at any Speed. Those BBECs and BBEIs who've completed IBE 312 successfully in the past two years will be grandfathered into the program, assuming they have, or when they have, completed IBE 204.9.

**Requirements for completing EMRS Certification (No previous experience required):**

1. Successfully complete our mentored correspondence course: IBE 101
2. Successfully complete 110 contact hours of Level 200 online courses
3. Successfully complete two 5-day seminars: IBE 212 Electromagnetic Radiation and IBE 213 Natural Healthy Building & Remodeling Practices, and successfully complete our 4-day seminar IBE 312 Advanced Electromagnetic Radiation
4. Successful completion of a Final Project
5. Sign and submit the IBE ethics statement
6. Beginning two years from the date of your certification, and every two years thereafter, show proof of your ongoing education in the field, via 40 CEUs
7. Maintain IBE membership (Basic or Advanced) in good standing

*You have up to two years to complete the program.*

## **Course Descriptions**

### **IBE 101, Natural Healthy Buildings:**

This Home Study Course introduces the 25 Principles of Building-Biology®. You will learn what kinds of hazards a house or office may contain, how to detect them, what to do about them, and best of all how not to cause them. A senior BBEC who will be assigned as your mentor for this course, and be accessible via e-mail and phone.

Topics include:

- Environmental situation
- Building-Biology and building culture
- Biologically-sound building materials
- Construction and building methods
- Heating and thermal insulation
- Water and water pollutants
- Air and air pollutants
- Electro-climate issues

Most students complete this course within two to three months of enrollment.

### **IBE 200-level Online Courses:**

The following are self-directed home-study courses. Each course includes an online exam, which you must complete successfully. As you complete each exam, you will be presented with the opportunity to download a certificate of completion; or you may return to the course at a later date to download your certificate (detailed, illustrated instructions on how to download your certificates is available for download on our website's Map of Courses page). Please note that your online student profile will not reflect that you completed each course until you have downloaded the certificate (our website then credits you automatically).

Required online courses (110 total online credit hours):

- IBE 203.8 Architectonics
- IBE 204.3 Electromagnetics
- IBE 204.5 Light & Lighting
- IBE 204.9 Cellphones: Unhealthy at any Speed™
- IBE 204.10 Interiors (Cause & Effect)
- IBE 206.2 Electrical Home Wiring

- IBE 206.4 Heating Systems

**Seminar: IBE 212 Electromagnetic Radiation:**

This 5-day seminar is comprised of lectures, instructor- led discussions, instrumentation familiarization labs, measurement labs followed by application in a building evaluation using these instruments. You will learn about the physical nature of these radiations and the reported health effects from these radiations.

You will explore real-world practical solutions for detecting and identifying these man-made electromagnetic emissions. They include power system ELF magnetic and electric fields, power system VLF Fields and wireless radio frequency radiations emitted by cell phones, cordless phones, WiFi and other wireless devices.

You will learn the testing protocols and the IBE Sleeping Room Standards used to investigate and rate the electro-climate in homes and other buildings. You will learn about practical remediation methods to address these emissions.

**Seminar: IBE 312 Advanced Electromagnetic Radiation:**

This advanced seminar has a minimum of lecture and a maximum of lab and practical experiences to allow you develop your skills set for best measurement practices, remediation planning and remediation costing. Emerging issues in the ever changing wireless communication landscape will be discussed.

You will receive a copy of the new IBE Standard Measurement of Non-ionizing Electromagnetic Radiation (EMR) in Low-Rise Residential Buildings. The measurement practices covered in this standard will be used throughout the four days. The seminar will cover the proper identification and mitigation of man-made electromagnetic energies to include power system ELF magnetic and electric fields, power system VLF Fields and wireless radio frequency radiations emitted by cell phones, cordless phones, WiFi and other wireless devices.

Daily classroom experiences will feature comprehensive hands-on learning with the latest lab equipment.

*Please note that IBE 212 must be completed successfully before you enroll in IBE 312.*

**Seminar: IBE 213 Natural Healthy Building and Remodeling Practices:**

This five-day seminar focuses on the science behind the principles of Building Biology. You will learn how these principles can be applied to our buildings in order to create environments that deeply nurture human health while stewarding the environment. You will learn about best-practice for conventional construction and about available alternatives and their potential advantages.

You will also learn about prevention and detection of common indoor health hazards and the design and execution strategies in construction and remodeling that prevent or protect against them. Your daily seminar experience will include lectures, instructor-led discussions, and a high level of student interaction and participation. You will gain focused insight into the dynamic interaction between climate and the built environment, and the impact that good climate-based design can have on raising health and comfort while reducing energy consumption.

**Final Project:**

You will conduct a sample home assessment, and write a report of your findings. During this process you will work closely with a senior EMRS, 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 EMRS; your instructor can advise you in this. You may not use your own home as the basis of your assessment.

**Certificate of Completion:**

IBE Certificates are not federally, state, or province registered in the United States or Canada. So you will not find special funding available (except in Alaska, where state residents may apply to Alaska State Department of Vocational Rehabilitation); please call us with any questions you may have (866) 960-0333, or write us at: <infopod@buildingbiology.net>.

We have modeled our courses on the Distance Educational Training Course (DETC) standards to provide you with an informative and enjoyable learning experience.