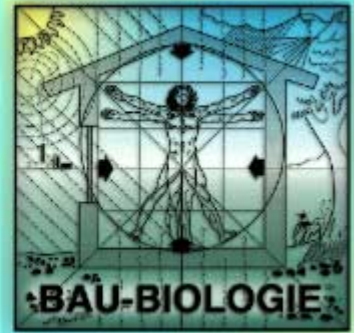


***International Institute for Bau-Biologie™ & Ecology (IBE)***

**Natural, Healthy Buildings**  
**Indoor Air, Water and Materials**  
**Electromagnetic Radiation**  
Courses and Seminars

*Going Beyond Green*

1401 A Cleveland Street - Clearwater, FL 33755 - Phone: 727.461.4371 - Fax 727.441.4373



## **COURSE PROSPECTUS 2008**

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

Bau-Biologie provides a holistic approach to healthy homes and workplaces while always maintaining people, that is, the occupants, at the center of the focus.

**International Institute for Bau-biologie™ & Ecology**

1401 A Cleveland Street • Clearwater, FL 33755 • 727.461.4371  
Website: [www.buildingbiology.net](http://www.buildingbiology.net) , E-mail [info@buildingbiology.net](mailto:info@buildingbiology.net)

*IBE is a 501 (c) 3 non-profit educational organization*

## The International Institute for Bau-biologie™ & Ecology (IBE)

<b>Aim of the IBE</b>	<b>2</b>
<b>Bau-biologists</b>	<b>2</b>
<b>IBE Certification Tracks</b>	<b>3</b>
Building Biology Practitioner (BBP)	3
Building Biology Environmental Consultant (BBEC)	3
<b>The Style of Learning</b>	<b>4</b>
<b>Certification</b>	<b>4</b>
<b>Prerequisites</b>	<b>5</b>
<b>Enrollment</b>	<b>5</b>
<b>Equivalent Courses</b>	<b>5</b>
<b>Course Descriptions</b>	<b>5</b>
IBE 101 Natural, Healthy Buildings – Overview of Bau-biologie™	5
IBE 111 Natural Building Seminar – New Construction	5
IBE 112 Overview of Bau-Biologie™	6
IBE 113 Natural Remodeling Seminar	6
IBE 115 Overview of Electromagnetic Radiation	6
Courses 201-205	7
IBE 201 Introduction to Bau-biologie™	7
IBE 202 Building Materials and Sciences	7
IBE 203 Building Design and Construction	7
IBE 204 Living Environment	8
IBE 205 House Systems	8
Courses 211-213	8
IBE 211 Indoor Air, Water and Materials	9
IBE 212 Electromagnetic Radiation	9
IBE 213 Natural Building/Remodeling Practices	9
Courses 311-312	10
IBE 311 IAQ Sampling	10
IBE 312 Extremely Low Frequency Radiation	10

## **Aim of the IBE**

The International Institute for Bau-biologie™ and Ecology, Inc. (IBE), established in Clearwater, Florida in 1987, is a non-profit educational organization dedicated to bringing together the technical expertise, biological understanding and ecological sensitivity to create healthy homes and workplaces.

IBE's main objective is to educate - specifically, to help people realize that homes and workplaces can be created to bring the benefits of both health and aesthetics into their living environments. Bringing awareness to the health hazards that may exist in our living spaces not only improves health and provides a sense of well being, it also has an impact on the survival of this planet.

IBE offers home study courses, Online Study, and Seminars to both professionals and lay people. The education program incorporates practical application of the building biology principles as an integral part of its activities. To address the needs of those wanting to evaluate their homes and offices for levels of electromagnetic radiation, indoor air quality, etc. IBE has a program of courses and seminars to train Environmental Inspectors and Consultants. The numerous graduates in North America, Canada and Australia include architects, electricians, builders, medical practitioners, home inspectors, engineers and many other environmentally concerned people.

Objectives of the IBE:

- To endorse or teach courses, workshops and seminars covering the field of healthier and more natural building and lifestyle.
- To advise and provide support and networking for those who are committed to a healthier and more natural building industry in the products and services that they provide.
- To make information on healthier and more natural building, materials and services available to the public and to the building industry.
- To advise and co-operate with other relevant people, including environmental, research, health, community, local and central government organizations to encourage a healthier and more natural built environment and lifestyles.

## **Bau-biologists**

A Bau-biologist is a researcher, architect, engineer, and doctor, all in one. He or she offers a preventive and healing medicine and a creative and unifying influence. A Bau-biologist is a worker in the global effort to solve the problems that come from modern ways of building and settlement planning—ways that disregard nature and human culture.

To work for a better and more beautiful world is an extraordinary, 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.

This is a creative and harmonizing work, and as such, should be carried out without violent conflict. This goal calls for dynamic, idealistic, and creative people. It calls for people who appreciate deeper meanings and hold higher aspirations in life. It calls for people who seek growth and renewal. It calls for people who can stand apart from the masses and transcend the masses' craving for superficial pleasure.

A Bau-biologist must see the holistic relationship of all life. After all, it is unseeing human beings who cause the problem and who are, themselves, the problem. Only by seeing and applying the natural laws ourselves will we be able to lead others out of the labyrinth

As Bau-biologists, we don't have every answer. We may not even be able to change very much the present impersonal, economically, technologically oriented ways of building and living. But let's not worry too much about that. If we set an example ourselves and give good advice, based on Bau-biological principles, we will make a difference. *Then, from the ethical point of view, we can be satisfied with our performance to have participated in changing things to the better hoping that destiny will do the rest.*

## **IBE Certification Tracks**

The IBE Certification programs aim to provide an introductory level course of study suitable for people from varying backgrounds who have an interest in the built environment and its effect on the health of people and the natural environment. The course is not career training in itself, but is a supplement to the many fields it covers and can complement careers in Architecture, Interior and Landscape Design, Building, Town planning, Natural Health and Social Work. It can also suit people coming from a personal point of view, whether to improve their own health or to build their own home.

The courses are intended to challenge and change the way the students live and work in the world, fostering a respect for living in harmony with the natural environment. The benefits of such a lifestyle change affect not only the students themselves, but also their families, the people they work with, and of course the natural environment.

The learning process is relaxed and flexible. It isn't a qualification to "tick off" but a philosophy to be developed over a lifetime. Whether students finish the prescribed assignments is less important than if they continue to learn from people and the world around them, and adopt healthy and sustainable living into their work and lifestyles.

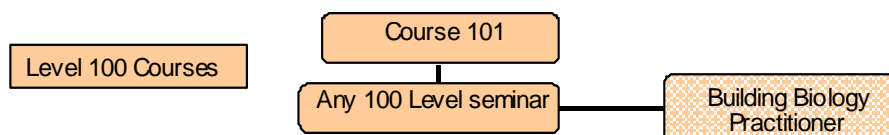
IBE offers three different certification tracks in order to meet your needs.

- Building Biology Practitioner (BBP)
- Building Biology Environmental Consultant (BBEC)

### **Building Biology Practitioner (BBP)**

In this 2-3 month home study course, learn how to create a healthy indoor climate with no electro or water pollution through the use of natural building materials and building systems. There is a companion two-day Natural Building seminar to further explain the material.

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. This course benefits home dwellers, as well as architects, interior designers and other building professionals.



Everyone who is concerned about the living conditions of the home, workspace and neighborhood can take this course. It serves private as well as professional needs. There are no special prerequisites. If a person wishes to build or remodel, they should become informed about the implications of toxic building materials, over-electrification, unhealthy heating systems or air-conditioning, etc., and the healthy alternatives.

#### **Requirements**

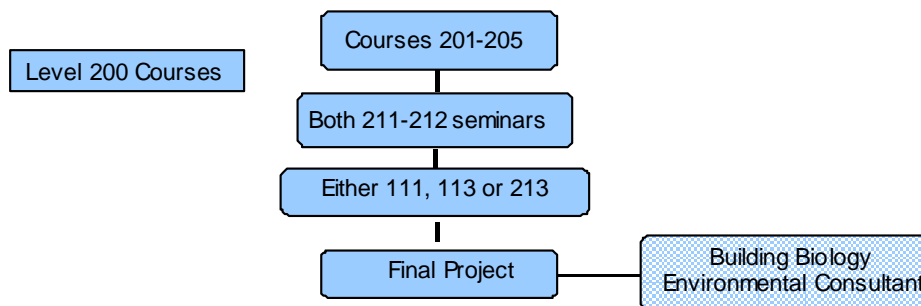
1. No experience required
2. Successfully complete Course 101 or Course Series 201-205
3. Attend any 100 or 200 Level seminar (at least 2 days)
4. Sign an ethics statement
5. IBE member in good standing

### **Building Biology Environmental Consultant (BBEC)**

A 6-month correspondence course supplemented with two separate 5-day seminars composed of hands-on training explaining testing, meters, inspections and simple mitigation techniques are included. Successful completion of an exam and final project is required for certification.

The content of this program will facilitate the building process. Whether you are working with informed architects and builders or with someone new to environmental building issues, you will be able to tell them what you want. Medical practitioners need to know that numerous illnesses are

caused by unhealthy conditions in homes and workspaces. This course will answer many of their questions and will identify solutions to existing problems.



Another group of people who benefit from this course and who have an impact on many of the environmental factors existing in our communities are the manufacturers and distributors of non-toxic and non-hazardous building materials, components and systems. For many people in Europe, Bau-biologie has become a source of income. Consumer demand is growing, and informed suppliers are needed to fill it.

Presently, there are few professionals in this country who have a comprehensive knowledge in this field. In a time where the health consciousness of people is rapidly increasing, architects, civil engineers and builders should have this knowledge to satisfy the demand. A future expectation would be that at least one person in each such firm should be a Bau-biologist.

This course is a translation of the German course by Prof. Anton Schneider, Ph.D., the head of the German Institut für Baubiologie und Ökologie, in Neubeuern. In Germany, it is the ONLY state approved education program for Bau-biologie in Germany.

### Requirements

1. Certified BBP, or equivalent – with a minimum of 1 year proven experience
2. Successful completion of Course Series 201-205 – quizzes and final exam
3. Attend two 5-day seminars, or equivalent – Course 211 and Course 212
4. Attend either Course 111, 113 or 213
5. Successful completion of the final project IBE 221
6. Sign an ethics statement
7. IBE member in good standing

### The Style of Learning

The correspondence and on-line courses are not “spoon-fed.” You will need initiative to find out what you need to know, and self-discipline to keep on with the course. Each course module, rather correspondence or on-line, has quizzes or study sheets, that are used to reinforce your learning and monitor your progress. The primary objectives are to have fun and learn! Follow your intuition, your inclinations and access your passions. This way learning is not only more productive, but is quite painless. The way you go about learning is up to you – reading, talking, listening, creating, teaching, or doing workshops – as long as you achieve the knowledge in the end.

You are welcome to contact IBE by e-mail, letter or phone. Support time may not be full time, but we will do our best to contact you as soon as possible. We will be happy to discuss any questions you have regarding finding information, answering the questions, doing the assignments, as well as provide general encouragement and support.

### Certification

The IBE Certificates are for general interest only and are not registered in Canada or the United States. So you cannot apply for special funding, but then the course costs are kept low to offset that. However, we have modeled it on the DETC standards to provide you with an informative and enjoyable course.

**Prerequisites**

There are no required pre-requisites for any course or seminar. However, as some courses build upon the knowledge of others, pre-requisites may be. Certification requires successful completion of all required courses and seminars for the specified level. (See IBE Certification Tracks)

Although, it is especially suitable for those who wish to complement their existing knowledge in design or construction, students can still do it with no formal training. An innate sense of design or an ability to make design decisions for one's own personal situation is sufficient.

**Enrollment**

Students can enroll at any time in the correspondence and on-line courses. Seminars are scheduled at various times throughout the year, please refer to the IBE website for specifics. [www.buildingbiology.net](http://www.buildingbiology.net)

**Equivalent Courses**

IBE recognizes experience, education from accredited universities and respected similar organizations as equivalent to some of the courses offered. These are evaluated on a case-by-case basis. Please contact IBE at [info@buildingbiology.net](mailto:info@buildingbiology.net) for an application to petition for course credit. Note there will be a non-refundable charge for the application.

**Course Descriptions**

Comments regarding course numbering:

First digit: 1 – Building Biology Practitioner certification track  
 2 – Building Biology Environmental Consultant certification track  
 3 – Building Biology Environmental Inspector certification track

Second digit: 0 – Correspondence and/or On-line modules only  
 1 – Seminars

Third digit: unique identifier for the each course

**IBE 101 Natural, Healthy Buildings – Overview of Bau-biologie™**

This Home Study Course (HSC) is on-line and introduces the Principles of Bau-biologie™. Students 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. This course benefits home dwellers, as well as architects, interior designers and other building professionals. Topics include:

- Environmental situation
- Bau-biologie 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

Resources: [Prescriptions for a Healthy House](#), by Paula Baker Laporte, et al., [The New Natural House Book](#) by David Pearson, [Introducing Bau-biologie™](#) videotape, radon and water test kits, and a gaussmeter

Time requirement: 2-3 months

Prerequisites: None

**IBE 111 Natural Building Seminar – New Construction**

This 2-day seminar introduces the Principles of Bau-biologie™. Students are introduced to the indoor environmental hazards a home or office may contain and the design and construction strategies to avoid them during new construction. This seminar benefits home dwellers, architects, interior designers, and other building professionals. The included workshop will expose the students to scientific instrumentation using Bau-Biologie™ assessment protocols. Topics include:

- Environmental situation
- Bau-biologie and building culture
- Biologically-sound building materials
- Construction and building methods – new construction
- Heating and thermal insulation
- Water and water pollutants
- Air and air pollutants
- Electro-climate issues

Resources: IBE Home Study Course [IBE 101], [Prescriptions for a Healthy House](#), by Paula Baker Laporte, et al., [The New Natural House Book](#) by David Pearson,

Time requirement: 2 days

Prerequisites: Course 101

### **IBE 112 Overview of Bau-Biologie™**

This 1-day seminar introduces the Principles of Bau-biologie™. Students are introduced to the indoor environmental hazards a home or office may contain and presented with simple, yet life-enhancing, steps to improve theirs. This seminar benefits all individuals. The corresponding workshop will expose the students to scientific instrumentation using Bau-Biologie™ assessment protocols. Topics include:

- Environmental situation
- Bau-biologie and building culture
- Water and water pollutants
- Air and air pollutants
- Electro-climate issues

Resources: IBE Home Study Course [IBE 101], [Prescriptions for a Healthy House](#), by Paula Baker Laporte, et al., [The New Natural House Book](#) by David Pearson,

Time requirement: 1 day

Prerequisites: Course 101

### **IBE 113 Natural Remodeling Seminar**

This 2-day seminar introduces the Principles of Bau-biologie™. Students are introduced to the indoor environmental hazards a home or office may contain and about available, and often economical, solutions to rectify known problems. This seminar benefits home dwellers, architects, interior designers, and other building professionals. The included workshop will expose the students to scientific instrumentation using Bau-Biologie™ assessment protocols. Topics include:

- Environmental situation
- Biologically-sound building materials
- Construction and building methods – used in remodeling
- Heating and thermal insulation
- Water and water pollutants
- Air and air pollutants
- Electro-climate issues

Resources: IBE Home Study Course [IBE 101], [Natural Remodeling for the Not-So-Green House: Bringing Your Home into Harmony with Nature](#) by Carol Venoli and Kelly Lerner

Time requirement: 2 days

Prerequisites: Course 101

### **IBE 115 Overview of Electromagnetic Radiation**

This 1-day seminar introduces the Principles of Bau-biologie™. Students are introduced to the indoor environmental hazards from electromagnetic radiation and presented with simple, yet life-enhancing, steps to improve theirs. This seminar benefits all individuals. The corresponding

workshop will expose the students to scientific instrumentation using Bau-Biologie™ assessment protocols. Topics include:

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

Resources: On-line module *Electromagnetic Radiation*

Time requirement: 1 day

Prerequisites: On-line module *Electromagnetic Radiation*

### **<sup>1</sup>Courses 201-205**

Courses 201-205 are a combination of correspondence and on-line modules that may be started at any time. The total length of the course package is about six months. A student must take and successfully pass each of the module quizzes, and an open book, written examination within 1 year after starting the course. Successful completion of all of 5 courses and the final is required for BBEC certification.

#### **IBE 201 Introduction to Bau-biologie™**

This course introduces the Principles of Bau-biologie™. Students will learn about the principles of Bau-biologie™, relevant research, and why it is essential that we start building following these principles. This course benefits home dwellers, as well as architects, interior designers and other building professionals. Topics include:

- Bau-biologie and building culture
- Relevant Bau-biologie research
- Introduction to Bau-biologie principles

Resources: Course Packs 1 and 2

Time requirement: 10 hours

Prerequisites: None

#### **IBE 202 Building Materials and Sciences**

This correspondence course introduces how the Principles of Bau-biologie™ are applied to Building Science and Materials selection. Students will learn about how the principles of Bau-biologie™ can be applied to the selection of building materials. This course benefits home dwellers, as well as architects, interior designers and other building professionals. Topics include:

- Biologically-sound building materials
- Diffusion and Ventilation
- Thermal insulation
- Hygroscopicity

Resources: Course Packs 7 and 8

Time requirement: 2 weeks

Prerequisites: 201

#### **IBE 203 Building Design and Construction**

This correspondence course introduces how the Principles of Bau-biologie™ are applied to Building Science and Materials selection. Students will learn about how the principles of Bau-

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<sup>1</sup> Courses 201-205 should be studied as a package, and all of these are required for BBEC certification

biologie™ can be applied to building/community design and construction. This course benefits home dwellers, as well as architects, interior designers and other building professionals. Topics include:

- Bau-biologie and building culture
- Construction and building methods
- Ecology and building site
- Location and geo-biology
- Rural habitation and town building

Resources: Course Packs 3, 4, 9, 20, 21, 23

Time requirement: 1 month

Prerequisites: 201

### **IBE 204 Living Environment**

This correspondence course introduces how the Principles of Bau-biologie™ are applied to Building Science and Materials selection. Students will learn about how the principles of Bau-biologie™ can be applied to the living environment. This course benefits home dwellers, as well as architects, interior designers and other building professionals. Topics include:

- Furnishing and interior design
- Architectural acoustics and noise control
- Light and illumination/electro-climate
- Color and coloring products
- Mental/emotional aspects of living
- Home Inspection

Resources: Course Packs 12, 13, 14, 18, 19 and On-line modules *Indoor Climate*, *Electromagnetic Radiation*, and *Natural Color & Finishes*

Time requirement: 3 months

Prerequisites: 201

### **IBE 205 House Systems**

This correspondence course introduces how the Principles of Bau-biologie™ are applied to Building Science and Materials selection. Students will learn about how the principles of Bau-biologie™ can be applied to the design and installation of home systems. This course benefits home dwellers, as well as architects, interior designers and other building professionals. Topics include:

- Heating and thermal insulation, ventilation
- Electrical and sanitary installations
- Water systems
- Home Inspection

Resources: Course Packs 10, 11 and On-line modules *Electrical Home Wiring*

Time requirement: 1 month

Prerequisites: 201, 204

### **<sup>2</sup>Courses 211-213**

People who attend the IBE seminars come from many walks of life and include: People studying to become an Institute-certified Building Biology Environmental Consultant (BBEC); Architects and designers wishing to adopt safe building practices; People planning to build or remodel their own houses; Feng Shui practitioners wishing to complement their knowledge with Bau-biologie data; Medical doctors – mostly alternative medical practitioners who realized that many illnesses are the

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<sup>2</sup> Courses 211-212, and either 213 or 111 or 113 are required for BBEC certification.

result of sick buildings; and People simply interested in finding out what makes a healthy indoor environment.

A portion of this seminar is devoted to taking occupant histories, hands-on training with equipment and sampling protocols, laboratory analysis interpretation; recommendations and reporting to clients. Field inspection in small groups, guided by certified BBEC instructors, will explore the use of equipment and testing methods.

It is possible to take the Seminar on Indoor Air, Water and Materials and the Seminar on Electromagnetic Radiation separately based on a special interest or need. To become a Certified Building Biology Environmental Consultant see the section below on the Building Biology Environmental Consultant program.

### **IBE 211 Indoor Air, Water and Materials**

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

Resources: On-line module: *Indoor Climate*

Time requirement: 5 days (successful completion of a written exam is required for BBEC status)

Prerequisites: 201, 204

### **IBE 212 Electromagnetic Radiation**

Because of 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, so that people can help themselves, and avoid the numerous bad effects associated with EMR.

The theory of EM radiation is demonstrated with practical examples and case studies, based on actual 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 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

Resources: On-line module *Electromagnetic Radiation*

Time requirement: 5 days (successful completion of a written exam is required for BBEC status)

Prerequisites: 201, 204

### **IBE 213 Natural Building/Remodeling Practices**

Students review the indoor environmental hazards a home or office may contain and the design and construction strategies to avoid them. Additionally, students learn about available, and often economical, solutions to rectify known problems. This seminar benefits home dwellers, architects,

interior designers, and other building professionals. Students who are in the Building Biology™ Environmental Consultant track will present reports of their case studies. Topics include:

- Environmental situation
- Bau-biologie and building culture
- Biologically-sound building materials
- Construction and building methods
- Heating and thermal insulation

Resources: [Prescriptions for a Healthy House](#), by Paula Baker Laporte, et al., [Natural Remodeling for the Not-So-Green House: Bringing Your Home into Harmony with Nature](#) by Carol Venoli and Kelly Lerner

Time requirement: 5 days (successful completion of a written exam is required for BBEC status)

Prerequisites: Completion of Courses 211 and 212. Days 1-3 are open to the general public.

### **Courses 311-312**

Advanced seminars are offered for existing BBEC's to expand their knowledge and share experiences based on assessments and personal research. Those these will be taught by experienced BBEC's, the general seminar structure will be designed for interactive discussions and opportunities for questions to be answered. Successful completion of the subject specific exams will lead to certification as an advanced Building Biology Environmental Consultant.

#### **IBE 311 IAQ Sampling**

Proper sampling, identification and mitigation of bioaerosols, pesticides, and other aspects of the Indoor environment are a complex and continually evolving process. This advanced seminar is designed to reinforce the basic knowledge obtained during the Level 200 courses and from practical experience.

Topics include:

- Current industry trend in sampling and mitigation for bioaerosols
- Current industry trend for sampling and mitigation for pesticides and VOCs
- Review of lab reports and their significance
- Case study discussion

Resources: [Bioaerosols: Assessment and Control](#), by Janet Macher, published by ACGIH (American Conference of Governmental Industrial Hygienists);

Time requirement: 3 days (successful completion of a written exam is required for advanced BBEC status)

Prerequisites: BBEC, or equivalent

#### **IBE 312 Extremely Low Frequency Radiation**

Proper identification and mitigation of problems related to low frequency electromagnetic issues, specifically in the power frequency band. This advanced seminar is designed to reinforce the basic knowledge obtained during the Level 200 courses and from practical experience.

Topics include:

- Current industry trend in sampling and mitigation for electric fields
- Current industry trend for sampling and mitigation for magnetic fields
- Review of research and their significance
- Case study discussion

Resources: [Electromagnetic Fields](#) by B. Blake Levitt;

Time requirement: 3 days (successful completion of a written exam is required for advanced BBEC status)

Prerequisites: BBEC, or equivalent