

# IBE 214: EMR\* & IAQ\* for Architects and Builders

\*Electromagnetic Radiation & \*Indoor Air Quality



This seminar focuses on the Building Biology principles and their relevance and practical applications in the electromagnetic and indoor air quality of our buildings in North America today. Through an in depth understanding of these concerns, we can create healthy indoor environments for ourselves and clients.

Open to all working professionals as well as to the general public, this seminar benefits architects, builders, interior designers, indoor air quality consultants, home inspectors, home dwellers, and other building professionals.



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

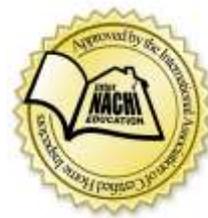
## Seminar Syllabus: IBE 214

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The International Institute for Building Biology & Ecology (IBE) does not and shall not discriminate on the basis of race, color, religion (creed), gender, gender expression, age, national origin (ancestry), disability, marital status, sexual orientation, or military status, in any of its activities or operations. These activities refer to any and all interactions involving our potential or current students and our alumni; these operations include, but are not limited to, hiring and firing of staff, selection of volunteers and vendors, and provision of services. We have been and remain committed to providing an inclusive and welcoming environment for all.

IBE does however reserve the right to deny enrollment, whether first-time or continuing, of students it deems to present the risk of being or becoming disruptive of our program presentations, and/or a distraction for our students from what they have come to us to learn and experience.



Please direct all inquiries to:  
outreach@buildingbiology.net • (866) 960-0333  
Click [here](#) for more information on Building Biology

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### Cancellation Policy

Seminar students who paid their tuition in full, and then cancel at least thirty (30) days before the first day of classes, will receive a tuition/tuition deposit refund in full (100%). Those who cancel less than thirty days out, but more than ten days out, and had paid their tuition in full, will receive a fifty percent refund; the amount they forfeited will be considered on deposit for one year, and may be applied toward any subsequent IBE event or online course. Those who cancel ten or fewer days out will not receive a refund, but their entire forfeited payment will be considered on deposit for one year.

If a student cancels out of a seminar after having received a digital and/or hard-copy of that seminar's manual, and elects to apply their tuition credit to a seminar *other* than the one for which they cancelled out, their tuition credit will be reduced by the value (\$375.00 USD) of the course manual for the seminar out of which they cancelled.

Regarding seminar lodging, please see Hotel Santa Fe, Hacienda & Spa's cancellation policy.

### Extended Policy Stipulation

IBE does not endorse products, methods, practices, services and/or business opportunities (hereafter referred to as “offerings”) that are extraneous to IBE’s policies, practices, and/or curriculum, regardless of whether they are vended/sponsored by our alumni, students, or by outside third parties or organizations.

This policy extends to our seminars, our biennial conference, and all other live or interactive events. And while participants in our events are not restricted by IBE from apprising their fellow participants of any offerings, regardless of whether they are or may be or may not be in conflict and/or in competition with IBE, they may in no way solicit or otherwise “pitch” their fellow attendees during said event(s). Subsequent to said event(s), neither offerings nor follow-up appraisals of offerings may be made or attempted by any means - telephone, e-mail, or snail-mail - without the expressed *prior* consent of their intended recipient(s).

IBE reserves the right to deny/rescind enrollment, whether first-time or continuing, to students it deems to present the risk of being or becoming disruptive of our program presentations, and/or a distraction for our students from what they have come to us to learn and experience.

### Discrimination: Zero Tolerance

The International Institute for Building Biology & Ecology (IBE) does not and shall not discriminate on the basis of race, color, religion (creed), gender, age, gender expression, national origin (ancestry), disability, marital status, sexual orientation, or military status, in any of its activities or operations. These activities refer to any and all interactions involving our potential or current students and our alumni; these operations include, but are not limited to, hiring and firing of staff, recruiting/selecting of vendors, volunteers, and providers of services. We have been and remain committed to providing an inclusive and welcoming environment for all.

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### Seminar Synopsis

This 4-day seminar condenses and combines the current 211 (IAQ) and 212 (EMR) seminars. It contains the practical information that design and building professionals require for new construction and renovations in order to assure that their clients receive optimal healthy environments. The information is also relevant for anyone interested in creating their own healthy spaces with a solid understanding of both air quality and electromagnetics.

Topics include:

- EMR understanding
- EMR installations for new construction and renovation
- IAQ understanding
- IAQ improvements for new construction and renovation
- Lighting and color for health
- Acoustics

Resources: *IBE Natural, Healthy Buildings Course* [IBE 101], *Prescriptions for a Healthy House*, by Paula Baker-Laporte, et al.

### Seminar Objectives

To gain a solid understanding of indoor environmental quality concerns, as they relate to the design and construction of residential buildings. The areas of focus include, biological, chemical and particulate.

To gain a solid understanding of electromagnetic radiation concerns, as they relate to the design and construction of residential buildings. The areas of focus include AC, DC and high frequencies.

To gain an understanding of lighting and daylight and the health concerns of both, as they relate to the design and construction of residential buildings.

To gain an understanding of colour in the built environment and the potential health impactors, as they relate to the design and construction of residential buildings.

To gain an understanding of acoustics and the concerns, as they relate to the design and construction of residential buildings.

# Seminar Syllabus: IBE 214

## Seminar Schedule

Hotel Santa Fe, Hacienda & Spa  
Santa Fe, New Mexico

Day One, Saturday, 02 December 2017

### INTRODUCTION TO BUILDING BIOLOGY AND INDOOR ENVIRONMENTAL QUALITY

- Introduction to Building Biology
- Introduction IEQ
- Building science basics
- Moisture, temperature, air movement
- Biological concerns
- Biological solutions

Day Two, Sunday, 03 December 2017

### CHEMICALS, PARTICULATES, EXPOSURES

- Chemical exposures/solutions
- Particulate exposures/solutions
- Radioactive exposures/solutions

Day Three, Sunday, 04 December 2017

### INTRODUCTION TO ELECTROMAGNETIC RADIATION

- Low frequencies
- Low frequencies, concerns and solutions
- Introduction to Alternative Wall Systems
- High frequencies
- High frequencies, concerns and solutions
- DC electric and magnetic fields
- DC electric/magnetic fields, concerns and solutions

Day Four, Monday, 05 December 2017

### LIGHTING AND COLOR FOR HEALTH

- Daylighting, concerns and solutions
- Electrical lighting, concerns and solutions
- Color: natural and synthetic
- Acoustics, definitions and types
- Acoustics, concerns and solutions
- Final Exam

## Seminar Syllabus: IBE 214

### Meet Your Instructor

The author of this seminar

#### IBE 214: EMR & IEQ for Architects and Builders



**Stephen Collette** is a Certified Building Biology Environmental Consultant, and Principal of Your Healthy House, based out of Lakefield, ON, Canada. Stephen is a retired straw bale builder, having worked on two dozen straw bale structures across Ontario and Quebec, from small cottages to 13,000 sq. ft structures and everything in between. Stephen has an engineering background and became passionate about healthy housing when his family became ill due to exposure to mould. Stephen carries out indoor

environmental inspections on houses and other buildings to determine health impactors based on building science and environmental health concerns. Stephen is a LEED AP (Leadership in Energy and Environmental Design Accredited Professional) from Canada Green Building Council. Stephen has a Building Science Certificate from the University of Toronto and is a certified Building Science Specialist of Ontario. As a consultant Stephen helps people make healthier, more environmentally friendlier building choices. Stephen is a published author who writes and lectures across North America on healthy, natural and green buildings. Please visit his website at [www.yourhealthyhouse.ca](http://www.yourhealthyhouse.ca)

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## Venue

Hotel Santa Fe, Hacienda & Spa  
1501 Paseo de Peralta, Santa Fe, NM 87501  
([click here to visit our host hotel's website](#))

We make every effort to ensure that the classroom, commons areas, and overnight guest rooms at our seminar venues meet or exceed Building Biology standards for a health-supporting environment, and Hotel Santa Fe, Hacienda & Spa's management joins us in our efforts.

All areas of the hotel are cleaned daily with distilled white vinegar (a natural disinfectant and antibacterial agent) and warm water. All seminar attendees will be lodged in a single wing of the hotel, where the WiFi will be disabled, out of respect for those attendees who are sensitive or hypersensitive to electromagnetic radiation (those who prefer to have WiFi service to their rooms may submit their request to Erik Rosen < [erosen@buildingbiology.net](mailto:erosen@buildingbiology.net) >, and their request will be honored promptly, insofar as the hotel's room availability allows). All attendees are asked to please respect the health and wellness of fellow attendees who may be chemical or multi-chemical sensitive by abstaining from using scented personal products, throughout their stay with us.

Our venue is nonetheless situated "on the grid," and attendees should reasonably expect to find themselves exposed, from time to time, to industrial agents known to provoke health issues.

**Overview:** You are required to arrive the day before classes begin (Friday, 01 December) and remain on site through your completion of the final exam, at or around 5:00 PM, Tuesday, 05 December. Check-in begins at 4:00 PM; check-out time is noon. Requests for late checkout should be addressed to the hotel's front desk staff, preferably well in advance. *Please note: if you will be departing the hotel on the final day of classes, you will want to pack your bags before class begins and store them securely at the front desk.*

There will be a Meet & Greet Friday evening, 01 December, at 6:30 PM in the venue lobby. At this time, attendees arrange among themselves for an off-site meal or snack, all together or breaking into groups, according to their individual dietary and culinary preferences. Dozens of restaurants are located within walking distance of the hotel, in addition to a restaurant on-site. The hotel also offers free shuttle service to downtown Santa Fe, the site of numerous additional restaurants, cafés, coffee shops, etc.

**Arrival/departure:** Santa Fe is served by two airports: Albuquerque International Sunport and Santa Fe Regional Airport. Sandia Shuttle serves those arriving via Albuquerque with hourly service (8:00 AM to midnight; [click here](#) for schedule) to the front door of our venue. From Santa Fe Regional Airport there is Uber service only to our venue. Both airports are served by major national rental car companies, on-site.

**Rooms:** All rooms in our block are Santa Fe Suites, which are described in detail on the hotel's website, with separate seating area and private bath. Our special discounted rate is \$99/night, for single or double occupancy. To reserve your lodging at this special discounted rate on the hotel's IBE-dedicated website page, please [click here](#).

**Meals:** Daily buffet-style lunch, on class days, is included in your tuition. Vegan, vegetarian, and gluten-free will be available. Continental breakfast will be available in the hotel's lobby café (\$10). Full breakfast and dinner offerings will be available in the hotel's restaurant, at published prices.

**Attire:** While Santa Fe is located at a somewhat southerly geographic latitude, it is situated 7,500 feet above sea level. Expect wintry weather, with nighttime temperatures dropping below 32°, Fahrenheit, and snow will not be unexpected. Average daytime temperature: 45°. Please dress accordingly (layering is recommended), and at your own comfort level (as casual as you please).

**Rental cars/personal cars:** Students who drive to Santa Fe or opt to rent a car for the duration of their stay are asked to consider volunteering their vehicles for ride-sharing with their fellow students. Those who are willing to share transportation from/to either airport are asked to make their willingness known to Erik Rosen, IBE Director of Administrative services, at [erosen@buildingbiology.net](mailto:erosen@buildingbiology.net).