IIBEC’s Educational Programs have earned an industry-wide reputation for offering top-quality, comprehensive building enclosure education. Designed to provide individuals of differing backgrounds with relevant information about roofing, waterproofing, and building enclosure technology and design issues, IIBEC’s educational programs vary in intensity, from basic concepts to advanced specific application principles and theory. Of attendees polled, 99% describe the programs as “worthwhile” and say they would attend future educational events.

### In Person Courses

IIBEC is the authoritative voice and resource for roofing, waterproofing, and exterior wall specification and design, and our classroom courses provide individuals of differing backgrounds with relevant and trending topics in the field. Continuing your education and achieving an IIBEC designation is a big step in your career, and we’re here to guide you with courses offered every month across the U.S. and Canada. AIA learning units (LUs) and IIBEC continuing education hours (CEHs) are offered for each course.

### Online Courses

We make it easy to stay at the top of your field with our selection of online courses on a variety of trending topics. Courses offered completely online allow you to earn continuing education hours from the convenience of your own office or location. AIA LUs and IIBEC CEHs are offered for our online courses in the same way you would obtain them for an in-person course.

### Contract Courses

Contract with us to host a course at your facility and on your schedule. Contract courses are offered to a minimum of 15 people at your location. Save on travel and hotel expenses and get the customized experience for your organization that meets your specific needs. As with all our education courses, AIA LUs and IIBEC CEHs are available. A list of courses available for contract are on the next pages.

For more information regarding the IIBEC Educational Catalog, please contact Director of Educational Services, Jennifer Roller at jroller@iibec.org.
Answering the need to establish a standard of qualifications and practice in an unregulated industry, IIBEC has developed the following professional registration programs. Although they are recommended, all courses in this catalog are not intended to be preparatory for registration exams. In the description of each course you will find information indicating if the course is recommended to be taken when working towards a professional registration. For more information regarding the application or exam process, please contact the IIBEC Senior Director of Membership and Registrations, Alexander Jeffries.

<table>
<thead>
<tr>
<th>Professional Registration</th>
<th>Description</th>
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<tbody>
<tr>
<td>Registered Roof Consultant RRC®</td>
<td>Registered Roof Consultants (RRCs) are independent roofing experts with industry-wide knowledge of materials performance and design requirements. They stand apart from suppliers, product manufacturers and contractors. An RRC is knowledgeable on every facet of the roof construction process and serves as the building owner's counselor for matters pertaining to both existing and new construction.</td>
</tr>
<tr>
<td>Registered Roof Observers RRO®</td>
<td>Registered Roof Observers (RROs) are roofing quality assurance observers who monitor the construction process to assure that roofing projects stay in compliance with approved construction drawings, specifications, and best-practice or warranty-stipulated installation procedures. An RRO is an on-site monitor for the design team. The observer’s vigilance helps keep construction on track with milestone tasks, deadlines, and budget.</td>
</tr>
<tr>
<td>Registered Waterproofing Consultant RWC®</td>
<td>Registered Waterproofing Consultants (RWC) have demonstrated knowledge of different waterproofing materials, systems, and installations when reviewing, specifying and inspecting construction projects. These consultants can competently and objectively document, evaluate, recommend, design, and administer above- and below-grade waterproofing projects to provide professional consulting services using applicable building codes and industry standards.</td>
</tr>
<tr>
<td>Registered Exterior Wall Consultant REWC®</td>
<td>Registered Exterior Wall Consultants (REWCs) have demonstrated the knowledge, skills, and abilities to provide impartial, informed consulting and documentation related to the investigation, design, construction, repair, testing, and codes and standards of exterior wall systems. An REWC has proficient knowledge of wall drainage systems, different exterior wall cladding systems, fenestration assemblies, proper selection of sealants, and the forces imposed on exterior wall systems.</td>
</tr>
<tr>
<td>Registered Exterior Wall Observer REWO®</td>
<td>Registered Exterior Wall Observers (REWOs) act as impartial on-site inspectors for the design team. The observer’s vigilance helps keep construction on track with milestone tasks, deadlines and budget. A REWO’s daily reports will typically include written notes, photography, measurements, and material samples. REWOs act with full authority to inspect all construction materials, equipment and supplies for quality and compliance with the design team’s intent.</td>
</tr>
<tr>
<td>Registered Building Envelope Consultant RBEC®</td>
<td>The Registered Building Envelope Consultant (RBEC) designation is awarded to those who have earned the Registered Roof Consultant (RRC), Registered Waterproofing Consultant (RWC), and Registered Exterior Wall Consultant (REWC) registrations.</td>
</tr>
</tbody>
</table>
In-Person & Contract Courses

All IIBEC courses are approved for IIBEC CEHs, AIA LUs and approved for the AIA Health, Safety, and Welfare Credit.

Architectural Sheet Metal Flashing Design
Architectural Sheet Metal Flashing is a one-day course related to design, assessment, and detailing. Topics covered include material selection, attachment, joinery, expansion joint detailing, fabrication tolerances, drainage assemblies, and penetration flashings. Within sheet metal joinery, the subjects of proper soldering techniques, proper solder repair procedures, as well as application of specific metal joinery types are developed fully. The course will communicate the fundamentals and more advanced topics suitable for architects, engineers, and building enclosure consulting professionals.

Building Envelope Quality Assurance
Building Envelope Quality Assurance is a one-day course for professionals interested in field inspections and quality of applications, including material manufacturers, general contractors, quality assurance observers, and field inspectors. This course covers the diverse and challenging aspects of roofing, waterproofing, and exterior walls encountered in the field. Highlights of the course include the role and responsibilities of the quality observer, contract administration, and construction contract documents.

Exterior Concrete Wall Systems
This two-day course is the first specific exterior wall course that builds upon the fundamentals presented in Exterior Walls Technology and Science. The purpose of the course is to provide an in-depth understanding of exterior concrete wall systems that serve as part of the building enclosure system. This course will cover properties of concrete materials that affect their use in building enclosures, applicable codes and standards, design and construction requirements, and evaluating, repairing, and maintaining exterior concrete walls.

Exterior Wall Quality Assurance
Exterior Walls Quality Assurance is a one-day course for professionals interested in performing observation to assure that exterior wall systems are installed in accordance with construction documents. The program covers diverse topics in the construction of exterior walls, and is intended for manufacturers, general contractors, quality assurance observers, and field inspectors.
Exterior Wall Technology and Science
This two-day course provides basic exterior wall technology and terminology that will be used as the fundamental base for additional exterior wall course offerings. The course covers a broad range of topics, including types and function of exterior walls, psychrometrics and moisture movement, design objectives and building code requirements, wall penetrations, materials, coatings and water repellents, and sealants. This course is aimed at those preparing to expand their knowledge into exterior walls and at those already practicing in this area who want to further develop their knowledge in exterior wall technology.

Masonry Wall Systems
This 1.5-day course is the second specific exterior wall course that builds upon the fundamentals presented in Exterior Walls Technology and Science. The purpose of this course is to provide an in-depth understanding of masonry wall systems as they are designed as part of the building enclosure system. Highlights of this program include materials and their properties, masonry accessories, applicable design codes and standards, design and construction requirements, evaluating and repairing masonry wall problems, and maintaining masonry walls.

Metal Roofing
Metal has unique properties that separate it from other roof choices. For over three millennia, metal roofing has been a durable, aesthetically appealing design element utilized for significant buildings. The introduction of corrugated metal roofing in the late 19th century became a welcome economical, fire-resistant roofing option. Metal roofing continues to evolve with technological advances in alloys, coatings, and the use of “floating” standing-seam roof panels. Course content is intended to provide attendees with a comprehensive understanding of metal roofing.

Professional Building Consulting
This two-day course is a classroom extension of the RCI Manual of Practice. It provides an overview of consultant roles that are unique to the roofing, exterior walls, and waterproofing industry. The course also identifies the consultant practices that are common to these three broad disciplines. The course examines building enclosure consultants and discusses what they do and how they do it and is a recommended foundation course for becoming more specialized.
Consultants or industry members who want to develop more in-depth thermal and moisture design skills will want to take this course. The content moves quickly beyond basic thermal terminology and calculations to cooling-load calculations, annual energy consumptions and payback calculations, cool roofing, and temperature calculations within cross sections. Moisture starts with the psychrometric chart and moist-air properties. Additional topics include vapor retarders, the effects of moisture on insulation, air barriers, and mold issues.

Roof System Thermal and Moisture Design

This two-day course is a first component of a two-part series covering, in detail, aspects of the technology and science of roofing. The course covers the history and evolution of roofing up to present-day common applications. The course features terminology and technical information regarding roof decks and structures, roof insulation, bitumen membranes, built-up and modified-bitumen membranes, and flashing systems. An understanding of heat transfer theory, moisture, thermal design, and the calculation of U-factors will also be presented.

Roof Technology and Science I

This is the second course of a two-part series covering, in detail, aspects of the technology and science of roofing. Highlights of the program include: fundamentals of single-ply, polyurethane foam, and PMR roof systems; basic concepts and terminology of metal roofing; steep roof design and installation of asphalt shingles, tiles, wood shakes, and shingles; building codes; fire testing/ratings of roofing; and a basic understanding of wind interaction upon roofing.

Roof Technology and Science II

Rooftop Quality Assurance

Rooftop Quality Assurance is a two-day course for professionals interested in performing observation to assure that roof installation is consistent with construction documents. The program covers the diverse and challenging aspects of roofing as encountered in the field and is ideal for roofing material manufacturers, general contractors, quality assurance observers, and field inspectors.
In-Person & Contract Courses

**RRC Review and Update**
This one-day course is structured for those who have already passed the RRC exam and want a review of skills and to be updated with new information, and those who have the necessary tools to complete the RRC registration exam and desire a quick brush-up on technical topics as a review. Covered during the program: wind design, including ASCE 7 and FM Global requirements; thermal calculations; CSI changes; green-roofing principles; and roof asset management (RAM) calculations. Updated information is provided in all areas.

**Stucco and Exterior Finish Cladding Systems**
The Stucco and Exterior Finish Cladding Systems course is a 1.5-day program and is the third specific exterior wall course that builds on the fundamentals presented in Exterior Walls and Science. The purpose of the course is to provide essential information on material properties, design principles, evaluation techniques, and repair methods for stucco and EIFS. Topics covered in this course include sound transmission, thermal bridging, coatings, testing methods, and the various codes and standards impacting stucco and EIFS systems.

**Vegetative Roofing for the Design Professional**
This one-day course is structured for those who design vegetated green roofs or who are responsible for correcting vegetated green roof thermal or moisture protection performance problems. Vegetated green roof design is a technically demanding and evolving growth industry. This course provides guidance in the areas of design criteria, system selection, reference standards, and flashing principles and will discuss the influences of Factory Mutual, ASTM, GRHC, and NRCA publications and guidelines.

**Waterproofing**
The two-day course is designed for the practicing consultant and those who are aspiring to become Registered Waterproofing Consultants. This course focuses on split-slab plaza deck systems, surface-applied waterproofing, and below-grade waterproofing. The course starts with a review of differences among roofing, dampproofing, and waterproofing.
The purpose of this course is to understand the principles of proper roof drainage and to be able to design and size roof drainage devices. The goal is to apply code mandates and industry standards to drain design. Although it is the intention of this course to prepare a student to do engineering calculations, it may not enable a non-licensed professional to do design and engineering work regulated by state licensure laws.

**Roof Drainage Design**

This course is designed for those who design roof systems and for those who need to understand roofing heat transfer and moisture effects on roofing systems. The skills taught in this course are of use to all those involved in roof performance and are necessary skills for the RRC. The principles taught have applicability to walls, as well as roofs, but the primary focus is on roof systems.

**Roof System Thermal and Moisture Design**

This course is designed for those who design roof systems and for those who need to understand roofing heat transfer and moisture effects on roofing systems. The skills taught in this course are of use to all those involved in roof performance and are necessary skills for the RRC. The principles taught have applicability to walls, as well as roofs, but the primary focus is on roof systems.

**Roofing Basics**

This course is intended for those wanting to develop a better understanding of roofing materials and terminology. The following systems and concepts are covered in this course: roof decks – concrete, steel and wood; various rigid board roof insulations; built-up roofing (BUR) materials and installation; modified-bitumen roofing systems; single-ply roofing; and miscellaneous roofing systems including Protected Membrane Roofing (PMR), metal roofing, and spray-in-place polyurethane foam.

**Roof Technology and Science, Part I**

This course is designed for practicing roof consultants, architects, engineers, building owners and managers, and manufacturers technical personnel who desire to become more knowledgeable about the science and technology of roofing. The course is organized into six main topics: roof decks and drainage, thermal and moisture design, calculations and materials, bituminous systems, single-ply roofing systems, spray-applied polyurethane roofing systems, and protected membrane roofing systems.
Roof Technology and Science II
Roof Technology and Science II is the second step and is a continuation of Roof Technology & Science I, focusing on different topics such as roof design for wind resistance and fire resistance. RT&S II also explores additional roofing systems such as fluid-applied membranes, steep-slope roofing systems, metal roofing, and roof flashing principles. Additionally, RT&S II addresses prolonging the life of roof systems through proper maintenance.

Rooftop Quality Assurance
This course is designed for those intending to become more professional as rooftop quality assurance observers. Although not a preparation course for taking the Registered Roof Observer (RRO) exam, this course provides useful information for the observer who is studying for this registration.

Wind Design for Low-Slope Roofs
Part I: Understanding ASCE 7-10
Wind Load Calculations
This course is designed for practicing roof consultants, architects and engineers who want to become more knowledgeable about the major factors that affect designing roofs for wind resistance and in order to meet building codes. The focus of this course is on calculations of wind uplift pressures according to ASCE 7 methodology.

Wind Design for Low-Slope Roofs
Part II: FM Global Guidelines and Best Practice Considerations
This course is designed for practicing roof consultants, roofing contractors, architects and engineers who want to become more knowledgeable about the major factors that affect designing roofs for wind resistance in order to meet insurance requirements and building codes. The focus of this course is on FM Global guidelines and other miscellaneous wind design guides.
As a respected information provider to the commercial building industry, IIBEC offers many insightful publications and products developed specifically for today’s roofing, waterproofing, and building enclosure professional.

*IIBEC Interface* is a technical/trade publication that is published eleven times a year and is distributed to members and subscribers across the globe. *IIBEC Interface* provides readers with technical articles and timely coverage of industry news and events.

It is intended that *IIBEC Interface* educate and inform all segments of the industry, establish a common ground for discussion, and provide a forum for the exchange of ideas and technical knowledge. Articles from 2015 to the present are available online.

**IIBEC Education**

Jennifer Roller is the Director of Educational Services for IIBEC. She has over 13 years of experience in the fields of education and nonprofit management. Jennifer has a Bachelor of Science in Liberal Studies from Longwood University, a Graduate Certificate in 21st Century Learning & Leadership from Longwood University, and a Master of Nonprofit Management degree from the University of Central Florida.

Jerry Teitsma is IIBEC’s Education Advisor and a longtime member of the organization. As former Director of Education, Jerry has been instrumental in writing many of IIBEC’s courses on roofing topics. Jerry has a Bachelor of Science in Wood Technology and a Master’s degree in Building Construction from Michigan State. He has earned his RRC and RRO registrations from IIBEC and his Certified Construction Contract Administration from CSI. Recently, Jerry received the IIBEC Lifetime Achievement Award from IIBEC.
Meet IIBEC’s Education Committee

The Education Committee recommends to the Board of Directors policy on matters related to the Institute’s educational programs. The Committee assesses need and participates in the development of educational programs for IIBEC members and the roofing, waterproofing, and building enclosure industries at large.

Josh Summers, REWC, SE, PE
Education Committee Chair

Paul Buccellato, F-IIBEC, RWC, REWC, FASTM, AIA

Keith Davis, RBEC

Jean-Guy Levaque, F-IIBEC, RRC, RRO

Jeffrey Garrison, RRC, RWC, PE, CCCA, CEI

Douglas Wells, RRO

Ray Wetherholt, PE, RRC, RWC, REWC, RBEC, F-IIBEC

André Coppin, RRC, RRO

Jeremy Bridwell, RRC, REWC, PE

Russell Raymond, RRC, REWC, RWC, RBEC RRO, CDT, CEI

Robért Hinojosa, RRC, RWC, REWC, RBEC, RRO, PE, CDT, F-IIBEC

Pete Keener, RRC, RRO
ABOUT US

IIBEC is an international nonprofit association of professionals who specialize in roofing, waterproofing, and exterior wall specification and design. From sprayed polyurethane foam to cedar shakes, from parking garages to air barriers, IIBEC has a member expert for every type of roof, exterior wall, or waterproofing issue in the world today.

The association presents educational programs designed to demystify and explain the practical application of roofing and waterproofing technology and sound building enclosure theory.

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