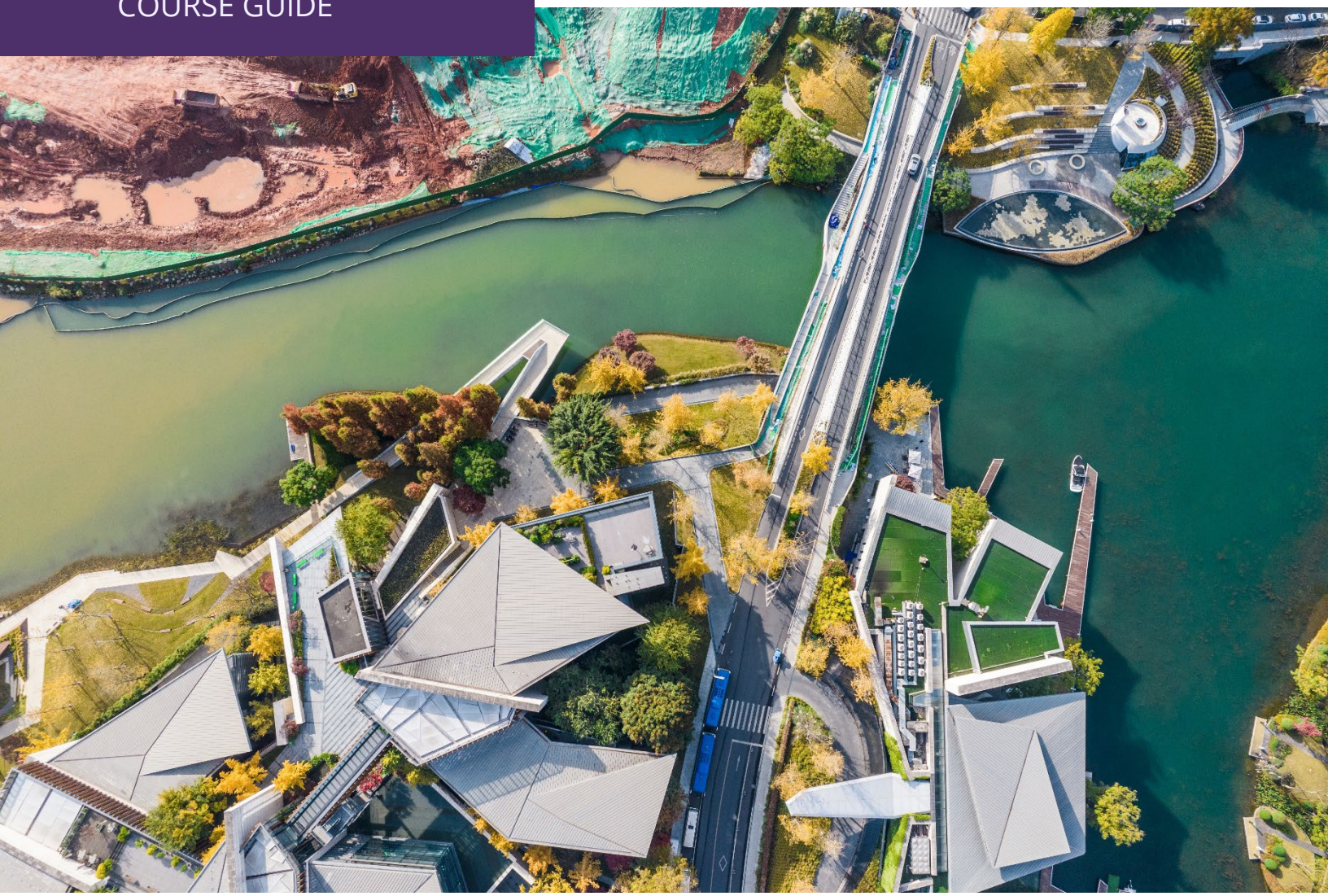
COURSE GUIDE



Certificate in whole life carbon assessment – training programme

RICS®

Course guide

Certificate in whole life carbon assessment

Duration: 11 months enrolment duration

Language: English

CPD: 80 hours

Market sector: Construction

Course type: Cohort training programme

Welcome

We are very excited that you have chosen to study the certificate in whole life carbon assessment. This guide provides essential information and tips to help you make the most out of this course, including details about your course materials.

First steps

1. Familiarise yourself with the guidance materials provided on the main page of your course.
2. Introduce yourself to your peers and your trainer in the Introduction Forum.
3. Bookmark the course page.
4. We recommend that you use Google Chrome.
5. Disable pop-up blockers in the settings of your Internet browser.

Mode and duration of study

This training programme is designed to be completed within a 9-month period, which includes the time allotted for final assessments. Modules are released every 5 weeks to ensure a steady progression through the curriculum.

To make the most of your learning journey, we recommend dedicating a minimum of 11 hours to each module and ensuring completion of the final assessments before the course expires. In total, the programme is estimated to take at least 80 hours of commitment to achieve comprehensive learning outcomes.

Each module provides a blend of learning experiences, combining introductory videos, interactive, self-paced eLearning modules with plenty of practical examples and professional tips, reading materials, case study practices, live Q&A and consolidation sessions, quizzes and a final assessment at the end of the course which consists of a case study assignment and an online exam. Additionally, there is a discussion forum available to encourage peer interaction and enable direct communication with the course tutor for any questions or concerns.

What support do you receive?

Your course tutor will remain accessible via the discussion forum throughout the entire course. Expect tutor responses within 3 to 5 working days.

A dedicated support team will be on hand to help you with any questions that you may have. You can reach the Online Academy team at onlineacademy@rics.org

Course description

Whole life carbon assessment stands at the forefront of the RICS sustainability strategy.

This training programme aims to equip the industry with the essential tools to carry out carbon assessments in accordance with the standard's heavily complex and technical specifications. Through a blend of illustrative examples and real-world case studies, this course will enable RICS practitioners and industry stakeholders to apply the new standard in a practical and 'in-use' situation.

Course structure

Module 1 – Background and A0: Pre-construction

- Part 1 – Key changes from 1st edition
- Part 2 – Introduction to the standard
- Part 3 – A0: Pre-construction

Module 2 – A1-A3: Product stage

- Part 1– Product stage (A1-A3)
- Part 2 – Early design phase (RIBA 0 to 2)
- Part 3 – Design stages (RIBA 2 to 3)

- Part 4 – Alternative situations for the product stage

Module 3 – A4-A5: Construction stage

- Part 1 – Construction stage (A4-A5)
- Part 2 – Estimating and tendering
- Part 3 – On-site activities
- Part 4 – Alternative situations for the construction stage

Module 4 – B1-B7: In-use stage

- Introduction to the in-use stage
- Part 1 – Use, maintenance, repair and replacement (B1 - B4)
- Part 2 – Operational water, energy and user activities (B6 - B8)
- Part 3 – Refurbishment (B5)
- Part 4 - Alternative situations for the in-use stage

Module 5 – C1-C4: End-of-life stage

- Part 1 – End-of-life for built assets
- Part 2 – Transport and disposal
- Part 3 – Alternate situations for the end-of-life stage

Module 6 – D: Beyond the asset (Building lifecycle)

- Part 1 – Beyond the asset (D1 - D2)
- Part 2 – Alternate situations for beyond the asset

Module 7 – Production of the WLCA report

- Part 1 – Structuring the WLCA report
- Part 2 – Presenting the data
- Part 3 – The narrative

- Part 4 – Managing records and assessment updates
- Part 5 – Alternative situations for reporting

Final assessments

- Online exam
- Case study assignment

Learning outcomes

At the end of this course, you will be able to:

Module 1 – Background and A0: Pre-construction

1. Acknowledge the requirements or expectations of RICS professional standards for RICS members and regulated firms about how they provide services or the outcomes of their actions.
2. Define the scope of a carbon assessment.
3. Appraise the use of software and tools to support a carbon assessment ensuring results are validated.
4. Develop effective strategies for continuously updating and adhering to legal obligations.
5. Understand the significance of the pre-construction stage in a project's scope and determine the optimal timing for starting assessments during this stage.
6. Identify the scope of a pre-construction assessment.
7. Prepare well-informed assessments for pre-construction set-up requirements.
8. Recognise the importance of local knowledge and diverse technologies in project execution, while understanding that fundamental principles remain consistent.
9. Identify the types of changes and implications to the carbon assessment due to the nature of infrastructure works.

Module 2 – A1-A3: Product stage

1. Recognise the scope boundaries and data sources for modules A1 to A3.

2. Explain the need to develop a carbon assessment over the design development, detailing methods to source and validate project-specific data for the assessment.
3. Explain the core carbon terminologies commonly used in a carbon assessment.
4. Discuss the importance of early initiation in carbon assessments and its impact on design and changes, detailing when to start a carbon assessment.
5. Identify the typical sources of data in order of reliability and accuracy while identifying potential shortfalls in data quality.
6. Explain predetermined factors and their appropriate application and suitability, delineating scenarios in which they stand as the sole viable option, and contrasting these instances with contexts where alternative methods prove more suitable.
7. Understand carbon data sources and considerations for the design stage.
8. Manage the update of assessments at the design stage utilising appropriate change control methodology.
9. Identify optimal timing for proposing design changes and apply suitable methodologies effectively.
10. Test the validity of a carbon assessment.
11. Describe the changes to the methodology required for the assessment of fit-out, refurbishment and retrofit of buildings at the product stage.
12. Outline the differences and similarities between infrastructure and new build at the product stage.

Module 3 – A4-A5: Construction stage

1. Describe the scope of modules A4 and A5, and explain how to assess them during the early design, technical design, construction and post-completion phases.
2. Explain how to source information and justify the methodology for presenting data results in a defined format.
3. Analyse the impact of logistics on the assessment and adjust it accordingly.
4. Explain how the assessment of materials should be carried out.
5. Describe the methodology for measuring materials for the assessment according to the level of detail available at the time.

6. Produce an assessment for a simple building element based on the data provided in the worked examples.
7. Explain the process and criteria for assessing and reporting temporary works.
8. Summarise how on-site change is defined under different forms of contract.
9. Describe the methodology for assessing and reporting on-site changes.
10. Describe the methodology for assessing and reporting on-site waste and its allowances.
11. Define predetermined factors and how to use them for assessing on-site waste.
12. Describe the changes to the methodology required for the assessment of fit out, refurbishment and retrofit of buildings at the construction stage.
13. Outline the differences and similarities between infrastructure and new build at the construction stage.

Module 4 – B1-B7: In-use stage

1. Describe the processes and/or materials that both remove and release carbon at the in-use stage, and identify the associated risks of operating specific MEP systems leading to carbon emissions.
2. Explain the criteria for determining built asset maintenance, including the methodology for assessing, reporting, and identifying activities included in reactive maintenance and repair works.
3. Explain the use of predetermined factors to assess the scope and risks of repair works, and illustrate the principles and activities involved in the replacement of built asset components.
4. Demonstrate the application of predetermined factors, including the risks and impact on the replacement of built asset components, and explain situations where modules B2 to B4 may be perceived as constituting a new project.
5. Explain how to assess operational energy (B6) for a small project, including when to seek advice from specialists and when to challenge the assessment results against similar schemes.
6. Identify the sources of data used for assessing operational energy (B6) and apply the principles when using new and developing technologies.
7. Define the scope of module B7 - operational water use, and describe the methodology for assessing and reporting user activities (B8).

8. Describe the changes required in methodology for assessing fit out, refurbishment, and retrofit of buildings at the in-use stage.
9. Outline the differences and similarities between infrastructure and new build at the construction stage.

Module 5 – C1-C4: End-of-life stage

1. Outline the current disposal options for built asset materials and components, recognizing the evolving nature of these options and their influence on future assessments, and identify materials that can be recovered, reclaimed, reused, or are not currently suitable for such processes.
2. Describe the methodology for assessing and reporting each component of C1 to C4 for end-of-life, including the impact of incineration on waste processing.
3. Describe the methodology for assessing and reporting on demolition, dismantling, and deconstruction of built assets (C1), and explain how demolition factors, contractual, and legal obligations affect what can be recovered, reused, or recycled.
4. Identify the factors involved in the time, cost, and recovery balance equation, and explain the impacts resulting from the transportation of materials, plant, and equipment to and from the site.
5. Explain the requirements for reinstating the site to its original condition, and describe the methodology for assessing and reporting the reinstatement process for the site.
6. Describe the methodology and obligations for assessing and reporting the processing and management of waste (C4), and explain the changes required in the methodology for the assessment of fit out, refurbishment, and retrofit of buildings at the end-of-life stage.
7. Outline the differences and similarities between infrastructure and new build at the end-of-life stage.

Module 6 – D: Beyond the asset (Building lifecycle)

1. Explain how system boundaries are defined and their practical impact on the assessment.
2. Identify circumstances when it is possible to take benefit of waste material from the asset.

3. Explain the difference between the defined knowledge of today's capabilities against the predictions for the future.
4. Identify the sources of potential beneficial materials for including in the assessment report.
5. Explain the principles of exported energy and its similarities to operational energy (B6).
6. Outline the differences and similarities between infrastructure and new build at the end-of-life stage.

Module 7 – Production of the WLCA report

1. Explain the requirements for producing a WLCA report according to the standard, including the presentation of data in the assessment report.
2. Identify the necessary elements to explain, clarify, exclude, or assume in the report narrative and why they are needed, and explain the principles governing the maintenance of assessment records.
3. Describe the legal obligations by location and jurisdiction concerning the asset, how these variations impact assessor responsibilities, and outline the assessor's duties and tasks pertaining to their insurance provider.
4. List the instances when assessment reports must be reviewed, how to identify when changes occur, and describe the methodology for determining and explaining the scope of the review and reporting updates.
5. Outline the similarities between infrastructure and buildings.
6. Explain who is responsible for maintaining the records and reports, and produce a complete WLCA report for a single building.

Learning resources

Each module follows a structured format, offering the same types of learning resources presented in the recommended order for optimal progression.

Pre-reading

These are essential reading materials which we recommend reading prior to watching the introductory video.

To complete this activity, you must open the reading files.

Introductory video

The theoretical aspects of the module will be delivered in the introductory videos. You will take more advantage of the video lessons if you read the materials suggested prior to watching them.

This activity has no completion requirement, but we strongly recommend watching it.

eLearning module

Interactive and responsive eLearning modules will deliver the theoretical and practical aspects of the module. The content is presented in bite-size chunks, featuring worked examples, top tips and plenty of activities for you to test your knowledge.

To complete this activity, you must complete all lessons.

Knowledge check

Once you finish the eLearning module, you can take the knowledge check to assess your

understanding and track your progress in the module.

You need a score of at least 75%. You can try as many times as you need to reach this grade.

Case study practice

The case study is your opportunity to practice. It is an activity based on simulated projects where you can apply theoretical concepts into real-world scenarios.

Case studies **are not marked** by the course tutor.

Instead, use the '**Case Study Exchange Forum**' on your course page as a platform to share your work with peers. This valuable practice can expand your perspectives and generate a diverse range of insights and ideas.

Once you submit your case study, you'll gain access to its **model answer**. Both the case study instructions and model answer are provided in PDF and video formats.

Some modules will offer multiple opportunities to practice, however you are only required to submit one case study per module.

To complete this activity, you must submit at least one case study in the 'Case Study Exchange Forum'.

Consolidation Q&A session

These 1-hour live web classes consolidate the key takeaways from the modules and provide an opportunity for you to ask your tutor questions.

This activity has no completion requirement, but we strongly recommend attending the live session or watching its recording.

End of module knowledge check

This activity will test your knowledge of the content covered in the module.

You need a score of at least 75%. You can try as many times as you need to reach this grade.

Final assessments

Case study assignment

The case study assignment is a crucial component of your **final assessment**. Once submitted, it will be evaluated by your tutor within 7 working days. This assignment involves conducting a comprehensive whole-life carbon assessment for a small building.

To unlock the case study assignment, you must have completed all seven modules.

You must achieve a **65% passing grade** in the case study assignment. You are allowed **one attempt**. If you need a second attempt, it can be made available for a £125 + VAT administrative fee. You cannot purchase more than one second attempt. To request a second attempt, please contact **onlineacademy@rics.org**.

Online exam

To unlock the online exam, you must complete all seven modules. The exam has 50 multiple-choice questions, a **75% passing grade**, and a 70-minute time limit. You are allowed **two attempts**,

with the second attempt available **24 hours** after the first. If you need further attempts, they can be made available for a £50 + VAT administrative fee, please contact **onlineacademy@rics.org.**

You must pass the case study assignment and online exam to pass the course.

A certificate of completion is granted upon completion of the course feedback.

Discussion forums

There will be one forum per module for you to engage with peers and tutors. Tutors will usually reply within 3 to 5 working days.

Please refer to the "Discussion Forum – Guidance and Code of Conduct" on the course page.