

MSc

Net Zero Buildings

Study mode

Full-time

Duration

12 months

Apply by: **17 September 2027**Starts on: **27 September 2027**

About this course

Develop practical expertise in the environmental design of buildings and their surroundings in the context of a changing climate.

You'll get hands-on experience using computer environmental modelling software and explore pioneering developments in sustainable architecture.

Introduction

Bringing together graduates and professionals from a range of backgrounds, this programme will enhance your knowledge of environmentally friendly and sustainable building design.

We'll immerse you in the climate-sensitive design of buildings and urban landscapes and hone your skills in environmental assessment. You'll explore the evolution of the environmental design of architecture and discover how to use the latest computer environmental modelling software.

Developing skills in the application of this software, you'll start to design buildings and their surroundings that are energy-efficient and sustainable. Your learning will be fully informed by the scientific study of climate change and key responses such as net zero carbon design.

A comprehensive grounding in research methods will complement your environmental design skills. You'll be taught by academic experts with highly rated international research in history and theory, environment and process, urban design, conservation and innovative technologies.

There is the additional opportunity to tailor the course to your own interests and further tap into the research expertise of the programme team. Examine key architectural concepts, hone your urban design skills, enhance your knowledge of low energy/low carbon building design, or learn additional specialised modelling tools and techniques.

Who is this course for?

This master's is suitable for graduates from architecture, landscape architecture, design, engineering, and physical sciences disciplines who want to pursue a career in environmental and sustainable building design.

What you'll learn

- How to use computer environmental modelling software
- Sustainable design skills that reduce environmental impact
- Practical skills in environmental assessment
- Research methods and effective analysis
- The basis and impact of climate change
- Urban design techniques
- Key architectural concepts and theories

School of Architecture support:

- Small group teaching with experienced academics
- Interdisciplinary teaching within a very strong research environment
- One-to-one support from individual tutors
- A diverse and international student community
- Access to substantial library resources in the area of sustainable design
- Opportunities to develop individual research interests

Course content

Discover what you'll learn, what you'll study, and how you'll be taught and assessed.

Semester one

Modules

Compulsory modules	Credits
PASSIVE STRATEGIES FOR LOW-CARBON AND HEALTHY BUILDINGS (ARCH716)	15
AI-INTEGRATED ENVIRONMENTAL AND ENERGY MODELLING (ARCH717)	15
NET ZERO STRATEGIES AND LIFE CYCLE ASSESSMENT (ARCH747)	15

Optional modules	Credits
VIRTUAL ENVIRONMENTS FOR ARCHITECTURE (ARCH708)	15
COMPUTATIONAL DESIGN AND AI: THEORY AND APPLICATIONS (ARCH777)	15

Programme details and modules listed are illustrative only and subject to change. As part of our commitment to continuous improvement, we are currently reviewing all of our programmes. This may include refining study pathways, strengthening links with employers, integrating generative AI, developing students' research skills, and enhancing alignment with our research strengths. The course content currently shown on this page reflects the programme as it ran for students beginning in September 2026. This page will be updated for students beginning in September 2027 by Friday 30th April 2027 at the latest.

Semester two

Modules

Compulsory modules	Credits
DESIGNING FOR A CHANGING CLIMATE (ARCH719)	15
RESEARCH METHODOLOGY (ARCH707)	15
DIGITAL CLIMATE RESPONSIVE AND NET ZERO DESIGN STUDIO (ARCH734)	30
Optional modules	Credits
IMMERSIVE ARCHITECTURAL VISUALISATION (ARCH732)	15
SUSTAINABLE CONSTRUCTION AND MANAGEMENT (ARCH733)	15
DIGITAL TRANSFORMATION AND CONSTRUCTION 4.0 (ARCH743)	15
HERITAGE BIM AND CIRCULAR ECONOMY (ARCH744)	15

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Final project

Modules

Compulsory modules	Credits
THESIS: DISSERTATION (ARCH721)	60

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Teaching and assessment

How you'll learn

Teaching for Net Zero Buildings MSc in the Liverpool School of Architecture is delivered through a combination of lectures, seminars, workshops and tutorials, all of which are presented in person and on campus. Tutors are all experienced academics with strong track records in teaching and research related to environmental design.

Depending on which module options are taken, class sizes will typically vary between 15 and 30 students, and the small group teaching encourages strong interactions between the students and with the tutors.

How you're assessed

Students are assessed using a variety of formats that include written assignments, posters, presentations, computer simulations, design projects and a research dissertation.

Liverpool Learning Framework

At Liverpool, we take a distinctive approach to education through the Liverpool Learning Framework. This means teaching that is engaging, inclusive and designed to help you succeed during your studies and beyond.

You'll develop specialist subject knowledge alongside the skills employers value most, including:

- Digital fluency
- Confidence
- Global citizenship

Our curriculum is characterised by the three Liverpool Hallmarks:

- Research-connected teaching – learning informed by the latest ideas and discoveries
- Active learning – taking part, applying knowledge and learning by doing
- Authentic assessment – assessments designed around real-world tasks and challenges

We also embed key priorities across our curriculum, including AI literacy, employability, and sustainability, helping you prepare for the future and make a positive impact in the world.

We're committed to creating a supportive and inclusive learning environment where every student can thrive.

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Careers and employability

Net Zero Buildings MSc develops both practical skills in environmental assessment and a deeper understanding of climate-sensitive design, planning for climate change, sustainable architecture and computer modelling of sustainable building and urban environments. Computer environmental modelling and the application of that modelling to sustainable environmental design are investigated via coursework assignments. Students also acquire specific analytical skills in the application of both quantitative and qualitative research methods and generic research skills, such as reflective learning, literature reviewing and dissertation writing.

The knowledge and professional skills that students will develop upon completion of the programme will prepare them for a wide range of potential career areas, including employment in higher education (teaching and/or research), architectural practices and sustainability design consultancies.

Graduates go on to work both in the UK and internationally. For example, one graduate is now National Head of Sustainability for a UK construction and property consultancy while another is a Sustainability Consultant for a major international architectural practice.

You'll graduate equipped with the contemporary skills and knowledge to meet the growing demand for sustainable building expertise in:

- Architecture.
- Construction.
- Project management.
- Consultancy services.
- Higher education.

You may also wish to continue your studies and will find you are well prepared for PhD research.

Career support from day one to graduation and beyond

Career planning

From education to employment

Networking events

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Fees and funding

Your tuition fees, funding your studies, and other costs to consider.

Tuition fees

UK fees (applies to Channel Islands, Isle of Man and Republic of Ireland)

Full-time place, per year – £12,500

International fees

Full-time place, per year – £30,000

Tuition fees are for the academic year 2026/27.

Tuition fees cover the cost of your teaching and assessment, operating facilities such as libraries, IT equipment, and access to academic and personal support.

- You can pay your tuition fees in instalments.
- All or part of your tuition fees can be funded by external sponsorship.
- International applicants who accept an offer of a place will need to pay a deposit.

If you're a UK national, or have settled status in the UK, you may be eligible to apply for a Postgraduate Loan worth up to £13,206 to help with course fees and living costs. **Learn more about paying for your studies.**

Additional costs

We recommend that you budget £50–£100 towards field trips. Beyond this, we don't anticipate additional costs to students outside of general study costs.

You can find information on the general and subject-specific costs you could expect to incur on our study costs webpage.

Entry requirements

The qualifications and exam results you'll need to apply for this course.

Postgraduate entry requirements

We accept a 2:2 honours degree from a UK university, or an equivalent academic qualification from a similar non-UK institution. This degree should be in an appropriate field of study. For example, Architecture, Landscape Architecture, Design, Engineering or Physical Sciences. Please contact us if you wish to check whether your degree subject is suitable, however a wide spectrum of subjects are acceptable.

Candidates who do not meet these requirements will be considered on their individual merits and should discuss their particular circumstances with the Programme Director.

International qualifications

[Select your country or region to view specific entry requirements.](#)

Many countries have a different education system to that of the UK, meaning your qualifications may not meet our entry requirements. Completing your Foundation Certificate, such as that offered by the [University of Liverpool International College](#), means you're guaranteed a place on your chosen course.

English language requirements

You'll need to demonstrate competence in the use of English language, unless you're from a [majority English speaking country](#).

We accept a variety of [international language tests](#) and [country-specific qualifications](#).

International applicants who do not meet the minimum required standard of English language can complete one of our [Pre-Sessional English courses](#) to achieve the required level.

IELTS

6.5 overall, with no component below 6.0

TOEFL iBT

If you took a TOEFL test on or before 20 January 2026, you'll need 88 overall, with minimum scores of listening 19, writing 19, reading 19 and speaking 20. If you took a TOEFL test from 21 January 2026 onwards, when a new scoring system was introduced, you'll need 4.5 overall, with 4 or above in all components. TOEFL Home Edition not accepted.

Duolingo English Test

125 overall, with writing not less than 125, speaking and reading not less than 115, and listening not below 110. For academic year 2025/26 only, we will also accept the production, literacy, comprehension and conversation score set: 120 overall, with no component below 105.

Pearson PTE Academic

61 overall, with no component below 59

LanguageCert Academic

70 overall, with no skill below 65

PSI Skills for English

B2 Pass with Merit in all bands

INDIA Standard XII

National Curriculum (CBSE/ISC) – 75% and above in English. Accepted State Boards – 80% and above in English.

WAEC

C6 or above

Pre-sessional English

Do you need to complete a Pre-sessional English course to meet the English language requirements for this course?

The length of Pre-sessional English course you'll need to take depends on your current level of English language ability.

Pre-sessional English in detail

If you don't meet our English language requirements, we can use your most recent IELTS score, or [the equivalent score in selected other English language tests](#), to determine the length of Pre-sessional English course you require.

Use the table below to check the course length you're likely to require for your current English language ability and see whether the course is available on campus or online.

Your most recent IELTS score	Pre-sessional English course length	On campus or online
6.0 overall, with writing at 6.0 and no component below 5.5	6 weeks	On campus or online
5.5 overall, with writing at 5.5 and no component below 5.0	10 weeks	On campus or online
5.5 overall, with no more than one component at 5.0	12 weeks	Online
5.5 overall, with no component below 5.0	20 weeks	On campus
5.0 overall, with no more than one component at 4.5	30 weeks	On campus
4.5 overall, with no more than one component at 4.0	40 weeks	On campus

If you've completed an alternative English language test to IELTS, we may be able to use this to assess your English language ability and determine the Pre-sessional English course length you require.

Please see our guide to [Pre-sessional English entry requirements](#) for IELTS 6.5 overall, with no component below 6.0, for further details.

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