# Programme Specification 2022-23

## MASTER OF STUDIES IN INTERDISCIPLINARY DESIGN FOR THE BUILT ENVIRONMENT

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| **1** | **Awarding body** | University of Cambridge |
| **2** | **Teaching institution** | Cambridge Institute for Sustainability Leadership |
| **3** | **Accreditation details** | Master of Studies |
| **4** | **Name of final award** | Master of Studies |
| **5** | **Programme title** | Interdisciplinary Design for the Built Environment |
| **6** | **HECoS code(s)** | 100150 (construction and the built environment)<br>100583 (architectural design) |
| **7** | **Relevant QAA benchmark statement(s)** | QAA 264 08/08 Qualification Descriptor |
| **8** | **Qualifications framework level** | 7 (Masters) |
| **9** | **Date specification produced** | August 2022 |

The MSt in Interdisciplinary Design for the Built Environment (IDBE) is offered by Cambridge Institute for Sustainability Leadership (CISL) in association with the Departments of Architecture and Engineering.

CISL is within the School of Technology and is a key forum for interdisciplinary engagement within the University. Its mission is to empower individuals and organisations to take leadership to tackle critical global challenges. CISL has run graduate and executive programmes for over 30 years. It also delivers open programmes in the UK, Europe, North America, South America, South Africa and Australia, and customised programmes for many leading organisations. CISL has a global alumni base of over 20,000 senior leaders from business, government and civil society.

CISL also offers the MSt in Sustainability Leadership, Postgraduate Certificates in Sustainable Business and Sustainable Value Chains and in Interdisciplinary Design for the Built Environment, and a Postgraduate Diploma in Sustainable Business.

### Aims of the Programme

The course aims to:

- Build awareness regarding current challenges and opportunities facing the built environment, such as sustainability, climate change and rapid urbanisation.
- Equip professionals with the strategic decision-making, inventive problem solving and team leadership skills need to respond to the challenges and opportunities.
- Develop skills in effective collaboration and communication, particularly between clients, consultants, contractors, specialists and occupiers.

### Learning Outcomes of the Programme

Design for the built environment is essentially collaborative and demands effective

communication between disciplines, all of which have their own specialist terminology and knowledge. It also requires responsiveness to the social, economic and environmental context. A key aim of the course is to help students from different disciplines to work effectively together harnessing their knowledge in the design of a well-integrated product.

Students joining the IDBE course typically enter the programme with a professional qualification in a built environment discipline (Engineering, Architecture, Surveying, Construction Management, etc.) and with a minimum of three years' work experience. They are, therefore, deemed to have achieved a level of proficiency in their chosen specialism. Outcomes for the IDBE programme are geared towards providing the students with a broader strategic understanding of the context of design and of current challenges and opportunities facing the production of the built environment. There is an emphasis on leadership and team-working skills to support productive interactions between specialist members of design teams, between these teams and those who procure facilities, and between the functions of design and construction. Equally, the course emphasises strategies and design tools that minimise the need for applied energy and embodied carbon in the built environment, that conserve fresh water, that protect biodiversity, and that exploit renewable energy technologies.

Ultimately, the outcomes are geared towards improving the built environment to ensure it contributes to the quality of peoples' lives including their physical health, mental well-being and productivity, as well as to a low carbon future.

By the end of the programme, successful participants should have:

**Understanding and awareness**

Have a broad and strategic understanding of the global social, environmental, economic and 'system pressures' affecting the built environment, and the resultant challenges and opportunities associated with the production of the built environment

Develop a multi-disciplinary perspective on sustainability and resilience in the built environment.

Understand the role of design in addressing future and current challenges, and, how design choices can influence environmental, social, and economic outcomes.

Awareness of the contribution made by the built environment to the quality of peoples' lives including their physical health, mental well-being and other social outcomes.

Develop an argument for the 'business case' for improvements in the quality and delivery of projects in the built environment, as well as understanding the limitations and challenges associated with it.

**Leadership and change**

Understand own personal leadership motivations, values and agency, and how these align with wider business needs and drivers.

Develop the ability to communicate sustainability-related messages effectively to a variety of audiences.

Develop leadership skills to assist with engagement and influencing change including effective communication and presentation, listening, building coalitions, negotiation, identifying key leverage points, influencing/inspiring others, and resilience.

Understand professional ethics including personal and professional responsibilities to individuals and to wider society as a whole.

**Critical evaluation and analysis**

Have a reflective attitude towards practice and on-going learning, including a way to share, measure, assess, and/or track personal progress.

Awareness of the differing (and sometimes conflicting) motivations and values of professional colleagues from other disciplines.

Able to be reflective and reflexive regarding sustainability worldviews or paradigms and the assumptions that shape those views.

Understand and interpret academic and practitioner theory and apply this to an organisation and/or project.

Engage with complexity and contradictions in the knowledge base, challenge and critically review evidence, and apply your own opinions and judgement to sustainability issues.

**Professional and interdisciplinary practice**

In a collaborative and interdisciplinary context, be able to pursue a reasoned argument, including the critical evaluation of assumptions, abstract concepts and evidence in the making of judgements, together with the ability to frame appropriate questions to achieve a solution – or identify a range of solutions – to a problem.

Have a clear position on the role of the professions in delivering better places and spaces for the future.

Critical awareness of current issues and new insights emerging at the forefront of the built environment and which advance professional practice.

Have a positive approach towards continuing professional development including an independent and self-directed learning ability to advance knowledge and understanding.

Have an understanding of the needs and expectations of end-users and other stakeholders, including society, and how to capture them on specific projects.

Engage with actors across subject disciplines, institutional sectors and functional silos in order to advance project goals.

Work effectively in a collaborative group setting (in situ and remotely).

**Innovative, creative and strategic response**

Have an understanding of the status of knowledge and the way in which techniques of enquiry and research are used to create and produce new knowledge, technologies, and innovation in the built environment.

Understand how design decisions based on inventiveness, originality and the application of

knowledge can create innovative solutions to problems.

Understand a variety of responses to built environment challenges from different disciplinary backgrounds, including policy impacts, social engagement, and passive & technical innovation.

Be able to confidently draw upon learning from best practice cases of how the built environment is responding to complex sustainability challenges.

Respond innovatively and creatively to project challenges and opportunities.

**Academic research**

Develop an understanding of research methods and associated research skills.

Able to locate and access relevant leading-edge insights and research on issues of relevance.

Able to undertake sound research.

Able to write in a clear, concise, coherent and academically rigorous way.

Learning and Teaching Methods

Intellectual, practical and transferable skills are not delivered separately but rather are developed jointly from the mix of lectures, seminars, workshops and design project work undertaken through the course, including active participation in problem solving (design projects), in discussion (seminars), through experiential learning (workshops), and through the preparation of written work with support from specialist supervisors. For example, students experience working in a team, receive lectures about the management and leadership of effective teams, participate in a role-playing game to develop negotiation skills, and may choose to prepare a written assignment on teamwork or leadership. Students present their project work and case study to the cohort of students and external reviewers. Skills in researching and writing are developed through the progression of individual written assignments, each supported by a supervisor who is a subject specialist.

**Assessment Methods**

The degree is awarded on the basis of the case study, two essays and thesis that every student writes and which form the main assessed part of the students' work. The collaborative studio design work is also graded but this assessment forms a relatively minor element in the overall assessment of the student's output.

The **project case study** (4,000 words) is the opportunity for the student to reflect on and to critically analyse a recent project on which he or she has worked in practice. Students are expected to account for the successes and difficulties encountered, provide commentary on the effectiveness of the team and offer conclusions of relevance to other practitioners.

The **literature review essay** (3,000 words) develops research skills in searching, analysing and writing a critique of the academic literature. There are no prescribed titles; however the focus must be sustainability-related (including resilience or efficiency). Students are encouraged to venture beyond the boundaries of their home disciplines.

The **group research project** (5,000 – 7,000 words) is produced collaboratively by members

of group of 5-7 students. It represents the outcomes of an original piece of research undertaken collectively. It is up to the group – guided by a supervisor – to choose a topic for the research.

The **research dissertation** (15,000 words) must be of relevance to the built environment; however students are permitted a high degree of freedom in selecting the focus. Students are expected to undertake original research and to make academic contribution to the field.

During the first year, students complete their and case study, essay and group project, and in the second, the dissertation. Students who do not show sufficient progress in the first year are advised or required to leave the course.

Full and active participation in the studio projects is compulsory, although the assessment of their contributions is only a relatively minor element of the overall assessment. The projects are intended to be an opportunity for students to experiment with new ideas in a supportive and collaborative, rather than a competitive and adversarial, environment.

The course also makes use of workshops which along with the programme of lectures and seminars do not form part of the examination scheme; however their value is monitored through the self-reporting of the students. This feedback is sought through on-line feedback on the Virtual Learning Environment which the students are expected to complete for each residential week.

**Exit Award**

The Postgraduate Certificate may be awarded to IDBE students who successfully complete the first year of the IDBE course by attending the residential weeks in Cambridge, and passing the three first-year assignments. The Postgraduate Diploma may be awarded to IDBE students, at the discretion of the Board of Examiners, who successfully pass the first-year assignments, and who attend year two residential weeks in Cambridge and complete the on-line modules, but who fail or don’t complete the dissertation.

**Programme Structure**

The IDBE programme is a two-year part-time Master’s Degree course with the students attending six intensive residential study sessions and completing online modules. The six residential weeks and online modules are compulsory, and there are no modular choices. The part-time format permits students to continue with their professional career while studying. They prepare their written work between residential sessions. The residential weeks are themed and the content and learning is delivered via the subject of lectures, workshops, and a studio design project.

Across the six weeks and online modules, students are introduced to a wide range of issues relating to the design and production of the built environment, including the construction industry, professional responsibilities, effective teamwork, as well as the social, economic and the environmental context within which they work. The programme explores how successful, sustainable built environment projects rely on the coordinated effort and visioning of multiple disciplines and professions, and it encourages the integration of skills between specialists from different background disciplines to improve project design. The core modules are:

1. Leadership, professionalism and interdisciplinary practice
2. Sustainability and resilience
3. Innovation and technology
4. Design thinking
5. Research skills

The course examines these modules across a diversity of contexts:

1. Living environments
2. Working environments
3. Moving environments
4. Heritage environments
5. Future urban environments

Each residential week includes a multidisciplinary design exercise or a group task. Students work on their individual written assignments between the residential weeks.

**Standard Programme Admission Requirements**

Candidates are assessed and accepted on the basis that they have:

1. At least a 2.i honours degree from a UK University or an equivalent standard from an overseas institution.*
2. A minimum of three years' work experience.
3. Demonstrable enthusiasm and/or aptitude for interdisciplinary design in the built environment.
4. Good ability in written and spoken English language.
5. Endorsement from employer or, if independent, from an organisation that will be the focus of work on the programme
6. Access to appropriate computer technology and internet software.
7. The ability to pay the course fees or to identify a sponsoring institution.

* Exceptional applicants who do not meet the standard admission criteria of a 2.i honours degree will be assessed on an individual basis and may be required to provide further materials in support of their application.

**Managing Teaching Quality and Standards**

The University ensures high quality of teaching and learning in the following ways:

- Scrutiny of the External Examiners Reports for all teaching programmes
- Encouraging student engagement at both the local level, through involvement in Faculty and Departmental Committees, and at a central level by participation in nationally-benchmarked surveys

- Participation in the biennial Education Monitoring and Review Process to explore provision, share good practice and suggest constructive courses of action
- Mentoring, appraisal, and peer review of staff, and encouraging staff participation in personal development programmes

**Student Support**

- Students receive briefing materials and a Course Handbook ahead of the first workshop.
- Course materials and supplementary materials are all available electronically on the programme specific Virtual Learning Environment.
- Each student is allocated a Director of Studies from within the CISL staff, a first-year assignment Tutor and a second-year dissertation Supervisor.
- The residential workshops include sessions on research skills, to help students prepare for their dissertations
- The first residential week includes an induction to the University Library resources to help students to prepare for their dissertations

**Graduate Employability and Career Destinations**

As the MSt is a part-time degree, the participants will mostly be in employment and will use the programme to improve their career prospects. The programme takes an applied approach to knowledge, with both the teaching and assignments oriented towards relevance to their work situation.

The Careers Service maintains links with employers and takes their needs and opinions into account in the services which it provides for students. The Careers Service also allocates a Careers Adviser to each College, faculty and department to act as a point of contact.