THE GLASGOW SCHOOL OF ART

Glasgow School of Art Course Specification
Course Title: Energy and Urban Environments

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Please note that this course specification is correct on the date of publication but may be subject to amendment prior to the start of the Academic Year.

Course Code	HECOS Code	Academic Session
	100121	**2026-2027**

Course Title	Energy and Urban Environments
Course Contact	**Isabel Deakin**

Credits	20
SCQF Level	11
When Taught	Stage 1

Associated Programmes	Master of Science in Sustainable Cities Master of Science in Architectural Futures: Practice Based Research
Lead School	Mackintosh School of Architecture
Other Schools	N/A
Date of Approval	Programme Approval September 2025

Course Introduction

The *Energy and Urban Environments* course introduces students to the core principles of sustainability within the urban context, exploring how energy, environment, and equity impact our cities and shape their future., The course provides students with frameworks and tools to critically examine and evaluate urban systems in the context of environmental, economic, and social aspects of people and planetary wellbeing; and to develop strategies for meaningful and sustainable change.

The course introduces the key principles that underpin sustainable urbanism, including synergy with natural systems; efficient resource use for inter-generational equity; the protection of human health and comfort; the rationalisation of energy and material flows; the integration of economic and social objectives; and the role of the city as a catalyst for transformation.

Students examine the concepts of self-sufficiency, the optimisation of urban space use through effective building form, and the global relevance of sustainability principles across diverse global contexts. A key emphasis examines relationships between urban form, urban energy and the urban environment; and how urban built forms can be optimised for the integration of passive solar and renewable energy sources for lighting, thermal control, and clean air. The course introduces processes such as SPEAR (Sustainable Project Appraisal Routine) developed by ARUPs, providing students with a recognised framework for evaluating the sustainability of built environment projects.

Through comparative analysis of international precedents and theoretical approaches, students gain the tools to interpret sustainability in the urban built environment and evaluate the real-world impacts of design choices for different environmental, economic and social contexts.

Course Aims

The aims of the course are to:

professionalism: facilitate a student's ethical and critical awareness of the environmental, economic and social implications of urban development within the context of sustainable urban development.

design/create: facilitate a student's understanding of the effects of design practice on the sustainability of cities with reference to theoretical models and real-world urban contexts.

research: facilitate a student's understanding of the sustainable theories and frameworks used to evaluate the energy and environmental performance of urban developments.

communication: facilitate a student's understanding, through structured written and visual critical analysis, the relationships between urban design practices and sustainable principles.

skills: facilitate a student's command of the use of established frameworks, tools, precedent analysis and critical reflection the evaluation of sustainability outcomes.

knowledge: facilitate a student's an understanding of the relationships between energy and environment and the six core principles of sustainable urbanism.

Course Intended Learning Outcomes

By the end of this course students will be able to **appraise, integrate and articulate**:

professionalism: an ethical and critical awareness of the environmental, economic and social implications of urban development within the context of sustainable urban development.

design/create: the effects of design practice on the sustainability of cities with reference to theoretical models and real-world urban contexts.

research: an understanding of the sustainable theories and frameworks used to evaluate the energy and environmental performance of urban developments.

communication: through structured written and visual critical analysis an understanding of the relationships between urban design practices and sustainable principles.

skills: through the use of established frameworks, tools, precedent analysis and critical reflection the evaluation of sustainability outcomes.

knowledge: an understanding of the relationships between energy and environment and the six core principles of sustainable urbanism.

Indicative Content

This course is designed to support students to critically explore the environmental, social and economic impacts of urban development and to evaluate how design decisions influence the sustainability of cities. Through lectures, seminars and case studies, students will develop an understanding of key sustainability principles and their practical application in diverse urban contexts.

During the course students will:

- Develop a critical awareness of the multi-dimensional nature of sustainability in cities, including environmental resilience, economic viability and social equity.

- Explore the relationships between urban energy flows and urban environment.

- Explore the six core principles of sustainable urbanism with a focus on:
    1. Synergy with nature and ecological integration
    2. Efficient use of resources for inter-generational equity
    3. Protection and enhancement of human health and comfort
    4. Rationalisation of urban energy and material flows
    5. Integration of economic and social sustainability
    6. The city as an educational and transformative resource

- Examine the role of self-sufficiency in urban systems, including the integration of local energy generation, circular economies, and food and water resilience.

- Investigate how urban form and land use optimisation can contribute to more sustainable urban environments.

- Interpret and analyse the effects of design decisions on energy consumption, microclimates, mobility, and accessibility using theoretical models and real-world case studies from cities with different climatic, economic and sociocultural conditions.

- Evaluate sustainability outcomes using established frameworks and tools.

Description of Learning and Teaching Methods
Pedagogy: The course is intended to provide students with a deep knowledge of the theoretical frameworks and environmental, social and economic impacts of urban development on the sustainability of cities. Through a series of lectures, seminars and tutorials that support peer dialogue and critical reflection, students will develop ideas for the final assignment. **Delivery:** The course is delivered through regular lectures and seminars, using a range of learning and teaching activities. **Timetable:** The course is delivered over 10 weeks, 2 hours per week. **Canvas:** The virtual learning environmental tool Canvas is used for the dissemination, discussion, and access to relevant course information, and to signpost students to other relevant teaching and learning platforms used by GSA.

Indicative Contact Hours	**Notional Learning Hours**
20	200

Description of Formative Assessment and Feedback Methods
Formative feedback is delivered during the course following a formative submission in week 6, offering students the opportunity to obtain staff feedback towards their final submission. Formative feedback provided fosters ongoing reflective learning while supporting the summative graded assessment and feedback process, which generally happens at the end of the course.

Description of Summative Assessment arrangements
Summative assessment is undertaken at the end of the course and is designed and delivered to support student learning. Students' work is assessed against the Intended Learning Outcomes (ILOs) for each course. Summative assessment in this course is undertaken through a coursework assignment in the form of a 3,000-word illustrated essay. Coursework assignment submissions involve visual and text-based submissions utilising both digital and physical tools and formats. Written feedback is provided on all summative assessments. All submissions will be assessed and moderated in line with the GSA Code of Assessment. Reassessment opportunities where a student has not passed the course are outlined in the GSA Code of Assessment.

Description of Summative Assessment Method	Weight %	Submission week
Illustrated Essay and Reflective Commentary Students are required to submit an illustrated Essay with precedent analysis and reflective commentary (3000 words).	100	Semester 1, week 12

Exchange/Study Abroad	
Can this course be taken by Exchange/Study Abroad students?	No
Are all the students on the course taught wholly by distance learning?	No
Does this course represent a work placement or a year of study abroad?	No
Is this course collaborative with any other institutions?	No
If yes, then please provide the names of the other teaching institutions	

Reading and On-line Resources
Supporting the course, an indicative reading and on-line resource list is accessible via Resource Lists. This list will be reviewed and updated annually. Supervisors, tutors and peers will provide further recommendations appropriate to student's chosen research subject.