

Glasgow School of Art Course Specification

Course Title: Energy, Comfort & Health

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 2024-25 Academic Year.

Course Code:	HECOS Code:	Academic Session:
PELC210		2024-25

1. Course Title:
Energy, Comfort & Health

2. Date of Approval:	3. Lead School:	4. Other Schools:
PACAAG August 2022	Mackintosh School of Architecture	This course is available to students on PGT programmes which include a Stage 2 elective.

5. Credits:	6. SCQF Level:	7. Course Leader:
20	11	Janice Foster

8. Associated Programmes:
This course is available to students on PGT programmes which include a Stage 2 elective.

9. When Taught:
Stage 2, Taught online only

10. Course Aims:
<p>The overarching aims of the cross-school electives are to:</p> <ul style="list-style-type: none"> • Encourage interdisciplinary, critical reflexivity from within an open set of choices; • Foster deep investigative approaches to new or unfamiliar areas of practice and theory; • Cultivate self-directed leadership and initiative-taking in both applied and abstract modes of practice/ study not necessarily associated with a student's particular creative specialism; • Enable flexible, ethical exploration and connection of diverse knowledge and understanding within a specialist programme of study. <p>The specific aims of this elective are as follows:</p> <ul style="list-style-type: none"> • To offer a broad awareness of how the design of buildings is affected by energy efficiency, the need for comfort and the support of occupant health; • To give students specific knowledge of objectives, strategies and tactics used to deliver energy efficient, comfortable and healthy buildings; • To inform students of the interrelationships between these fields, the risks of pursuing one objective over others, and the need for a balanced approach; • To examine how design decisions impact on occupants' experience and well-being;

- To identify a research question and undertake self-directed research within this field using appropriate methodologies;
- To interpret technical information, identify suitable analysis and evaluation techniques within the wider context and draw meaningful conclusions / lessons learnt for practice.

11. Intended Learning Outcomes of Course:

On successful completion of the course the student will be able to:

- Understand the need for reducing energy use in buildings within a contemporary context which includes comfort, well-being and wider social, economic and environmental aspects;
- Understand the key parameters and metrics for energy efficiency, comfort and health and the interrelationships between them;
- Understand the impact of design decisions on building occupants and develop design responses which address each in a balanced way;
- Plan, develop and apply quantitative research methods, key research techniques/tools and analytical skills;
- Synthesise information from various sources and identifying gaps, challenges and opportunities, reporting clearly, accurately and competently on findings.

12. Indicative Content:

The course is delivered over 10 weeks and comprises two parts as described herein:

The first part of the elective comprises six seminars; course delivery is through lectures, group work, peer group discussion, workshop and peer learning. In these sessions, students will receive an initial introduction to the course subject and be assigned a total of six individual subjects. In groups, the subjects are explored and independently researched, with each group preparing and presenting interim presentations of their findings. Presentations are given in weeks two, four and six to demonstrate learning on assigned subjects. Student presentations are required to demonstrate how the given subjects interrelate for the holistic assessment of energy efficiency and comfort in buildings and designs to support health and well-being.

Topics include:

- Energy – introduction to energy efficiency and underlying rationale
- Comfort – the ISO thermal comfort standard and the adaptive comfort counter-point
- Health – introduction to the scope of health-supporting design
- Heating – background to heating and the range of contemporary heating strategies
- Ventilation – background to the subject and ventilation strategies
- Materials – introduction to a range of natural building materials

The submission for Part one of the course is made in Week 8. The submission consists of a narrated (with subtitles) group slideshow or film and an individual written report. The report is required to evidence individual participation in group work. These two submissions are individually marked and have equal weighting.

Part two is introduced in the course introduction. This element of the course allows students to synthesise learning from Part one to investigate, consolidate and contextualise the student's assigned topics from Part one. Lectures on energy, comfort and health in buildings using real-world examples will be given in Weeks 7 and 9 and tutorials in Weeks 8 and 10.

Submission for Part two of the course is a written in-depth study of the assigned subjects from Part one to demonstrate the students knowledge gained of each subject researched and the complex inter-relationships between energy, comfort, and health in the context of an occupied dwelling in Scotland. Submission is in Week 11.

13. Description of Summative Assessment Methods:

Assessment Method	Description of Assessment Method	Weight %	Submission week (assignments)
Part 1	One group presentation (video/narrated slideshow) with subtitles and an individual 500-word written report describing the student's contribution to the group work.	Part 1: 40%	Week 8 to Canvas.
Part 2	One 2000-word (+ or - 10%) written in-depth study of students individual topics covered during Part one of the course.	Part 2: 60%	Week 11 to Canvas.

13.1 Please describe the Summative Assessment arrangements:

Part One – Weighting 40%

- The summative grade is weighted 50:50 between presentation and written report
One narrated (with subtitles) visual presentation of group work to which each student has contributed.
- Through the first weeks of the course students present their developing group work in short presentations (c.5min) to the class for peer review and discussion. This ensures awareness of all subjects, collaboration and learning from peers. This method improves the student's practice of concisely presenting complex information and promotes an opportunity for self-reflection for the 500-word written report. The final presentation will be c.15mins.
- One 500-word (+ or -10%) written report describing the student's participation and contribution to the group work, including identifying interesting subjects, learning opportunities, challenges and limitations.
- Submission: **Week 8.**

Part Two – Weighting 60%

- Submission of a 2,000 word (+ or -10%) in-depth study of the student's topics analysed in Part one, including identification of the interrelationships between each topic centred around energy, comfort and health in buildings.
- Submission: **Week 11.**

Assignments are assessed and second marked against the course's Intended Learning Outcomes, as per the assignment sheets available from the course Canvas page.

14. Description of Formative Assessment Methods:

Student engagement with formative assessment is a mandatory requirement. The formative assessment of Part one of the course is embedded in the course from Weeks 1-6. Methods are based on student participation in peer-group discussions concerning the subjects covered and group presentation content and contribution.

The tutor and students engage in dialogue to discuss energy, comfort and health in workshops and evaluate each group's presentation performance and content. This is to encourage peer-group learning and areas for development. Students receiving feedback may wish to reflect and revise group work for summative submission.

Self-reflection is integrated into Part one of the course through reporting individual contributions to group work.

Tutor feedback will be provided in Week 6 for Part one of group work.

Formative assessment for Part two of the course will be made during planned tutorials taking place in the course from Weeks 7-10. Tutorials will be organised in peer groups and suggested tasks will need to be completed by the student group in advance of the tutorial. The student will receive written formative feedback on their tasks and collective feedback from peer groups.

14.1 Please describe the Formative Assessment arrangements:

As above.

15. Learning and Teaching Methods:

Formal Contact Hours	Notional Learning Hours
20	200

15.1 Description of Teaching and Learning Methods:

Course is offered over 10 weeks, 2 hours a week. Wednesday or Friday

16. Pre-requisites:

Successful completion of Stage 1

17. Can this course be taken by Exchange/Study Abroad students?	No
18. Are all the students on the course taught wholly by distance learning?	Yes
19. Does this course represent a work placement or a year of study abroad?	No
20. Is this course collaborative with any other institutions?	No
20.1 If yes, then please enter the names of the other teaching institutions:	
N/A	

21. Additional Relevant Information:

N/A

22. Indicative Bibliography:

- Halliday, S. (2008). Sustainable construction. Routledge.
- Howieson, S. (2005). Housing and asthma. Taylor & Francis
- Menon, R., & Porteous, C. (2012). Design Guide: Healthy Low Energy Home Laundering. MEARU (Mackintosh Environmental Architecture Research Unit), The Glasgow School of Art (output from this EPSRC project).
http://www.gsa.ac.uk/media/486640/mearu_laundry_design_guide.pdf
- Porteous, C. (2013). The new eco-architecture: alternatives from the modern movement. Taylor & Francis.
- Sassi, P (2006). Strategies for Sustainable Architecture. Taylor & Francis
- Woolley, T (2017) Building materials, Health and Indoor Air Quality. Routledge
- Morgan, C (2018). Sustainable Renovation. Improving homes for energy, health and environment.
- Stevenson, F (2019). Housing fit for purpose: Performance, feedback and learning
- Baker, N., & Steemers, K. (2017). Healthy homes: Designing with light and air for sustainability and wellbeing
- Nicol, F., et al. (2012). Adaptive thermal comfort: Principles and practice