OXFORD BROOKES UNIVERSITY

PROGRAMME SPECIFICATION

for the award of

MSc/PGDip Sustainable Architecture: Evaluation and Design

Managed by the Faculty of Technology, Design and Environment

delivered by the School of Architecture

Date approved:	Date approval confirmed, on recommendation of University validation panel or other authorised body.
Applies to students commencing study in:	September 2019

RECORD OF UPDATES

Date amended*	Nature of amendment**	Reason for amendment**
July 2016	**Transferred to new template, update graduate attribute from global to active citizenship**	**CMA Compliance, Update to graduate attribute**
October 2016	**Checked for errors and amended by Subject Coordinator and Programme Lead.**	**Subject specialist knowledge.**
February 2018	**Reflect changes in the modules – two modules archived and one new 40 credit added**	**Programme update**

SECTION 1: GENERAL INFORMATION

Awarding body:	Oxford Brookes University
Teaching institution and location:	Oxford Brookes University, Headington Campus
Language of study:	English
Final award:	MSc
Programme title:	Sustainable Architecture: Evaluation and Design
Interim exit awards and award titles available:	PG Diploma: Sustainable Architecture: Evaluation and Design (named award) PG Certificate: Sustainable Architecture: Evaluation and Design (exit)
Brookes course code:	MSC-SBP/AR50 (PGD-SBP, PGC-SBP)
UCAS code:	P008081
JACS code:	K210
HECoS code:	See guidance note G2.2, section 1
Mode of delivery:	Full-time (face to face/on-campus) Part-time (face to face/on-campus)
Mode/s and duration of study:	Normal duration 12 months full time and 24 months part time. Maximum duration for all modes is 5 years.
QAA subject benchmark statement/s which apply to the programme:	
Professional accreditation attached to the programme:	
University Regulations:	The programme conforms to the University Regulations for the year of entry as published/archived at: http://www.brookes.ac.uk/regulations/

SECTION 2: WHY STUDY THIS PROGRAMME?

The MSc degree in Sustainable Architecture: Evaluation and Design is specifically designed to meet the need for buildings to be judged by their actual performance as much as by their appearance, and to demonstrate sustainability in terms of:

- their global impact with regard to climate changing emissions and use of rapidly dwindling finite resources
- their impact on local and regional levels of pollution and waste
- their ability to positively contribute towards sustainable development and human well-being.

Over half the carbon dioxide emissions in the developed world are produced by buildings. As global concern increases about climate change, so does the importance of low-carbon, resource efficient buildings that provide high quality environments. In order to minimise the enormous impact of buildings on the environment and positively promote alternative solutions, rapid changes are already taking place in the UK driven by legislation, tax incentives, guidelines of the professions and action by individuals and pro-environment organisations. These changes are creating a commercial imperative for all building professionals to upgrade their expertise and be able to provide clients with environmentally benign and energy efficient buildings that are cost-effective to run and will comply with increasingly stringent energy- related legislation. Building professionals need to adopt forward-thinking and strategic approaches to develop sustainable environments informed by essential skills for evaluating and improving building performance.

The MSc degree in Sustainable Architecture: Evaluation and Design (or PG Diploma in Sustainable Architecture: Evaluation and Design) provides graduates with the knowledge, skills and tools to be able to design, plan, construct, evaluate and advise on, the creation of low-carbon, sustainable buildings as well as evaluate the environmental impacts of their decisions. A key aim of the programme is to promote an interdisciplinary and strategic approach to design that will enable professionals to integrate their skills and co-operate in achieving genuinely excellent environmental performance in buildings. The programme provides the graduate with the opportunity to engage with 'live' projects and clients and apply their newly acquired *academic abilities, personal qualities and transferable skills* to real situations.

Based in the Faculty of Technology, Design and Environment at Oxford Brookes University, the Sustainable Architecture: Evaluation and Design programme provides one of the best and most innovative programmes in the world in this subject. This unique multi-disciplinary programme is taught by a variety of professionals, experts and researchers and is underpinned by cutting edge research undertaken by staff working within the Oxford Institute for Sustainable Development (OISD), a cross-disciplinary research institute which addresses the multiple dimensions of sustainable development and the synergies and processes that link them. OISD has been acknowledged as one of the key players in sustainable development research in UK. OISD research groups have contributed to major Research Council projects including: 'Evaluating Low Carbon Communities' (ESRC), 'Retrofit 2050' (EPSRC), 'Suburban Neighbourhood Adaptation for Changing Climate' (EPSRC), 'Understanding Walking and Cycling' (EPSRC) and Promoting Independent Cycling for Enhancing Later Life Experience (Cross Council), as well as major Innovate UK and EU projects.

The aim of the programme is to develop graduates who can contribute strategically and creatively to the expanding area of sustainable building design and performance assessment.

The programme develops:

- essential knowledge, understanding and skills to achieve a high level of energy and resource efficiency in buildings;
- the understanding of the holistic meaning of the term "sustainability" in relation to the interdisciplinary nature of the built environment;
- skills in evaluating and predicting building performance and the ability to strategically influence the feasibility and design process; and

- design ideas and skills that are necessary to propose innovative strategies for low-carbon buildings with reduced resource use.

Please refer to the following link to view the staff profiles within the School of Architecture:
http://architecture.brookes.ac.uk/staff/

SECTION 3: PROGRAMME LEARNING OUTCOMES

On successful completion of the programme, graduates will demonstrate the following Brookes Attributes:

3.1 ACADEMIC LITERACY

.1 Evaluate the sustainable performance of design proposals requiring both systematic and creative application of a wide range of appropriate modelling techniques, information sources and recognized global standards.

.2 Create strategies from abstraction of performance evidence informed by the understanding of the current global debates of sustainable design subjects.

3.2 RESEARCH LITERACY

.1 Set-up and undertake research tasks according to established disciplinary research methodologies.

.2 Critically evaluate and design an investigation in significant areas of sustainable building theory and or practice, selecting appropriate methodologies, building on the existing and current knowledge base and where appropriate proposing new hypotheses.

3.3 CRITICAL SELF-AWARENESS AND PERSONAL LITERACY

.1 Act autonomously in planning and implementing a research project and communicating the outcome effectively.

3.4 DIGITAL AND INFORMATION LITERACY

.1 Develop project briefs, reports and designs to a professional best practice level from a range of evidence and data.

.2 Identify and define the information required on a given topic and use research skills to evaluate relevant information resources within the sustainable building subjects.

3.5 ACTIVE CITIZENSHIP

.1 Judge the interrelationship of nature, ethics and the formation of human settlements as active and passive ‘sustainability’ innovative strategies and responsible citizenship.

SECTION 4: CURRICULUM CONTENT & STRUCTURE

4.1 PROGRAMME STRUCTURE AND REQUIREMENTS:

Code	Module Title	Credits	Level	Status	Coursework: Exam ratio
ARCH7023/P30401	Building Physics	20	7	Compulsory	100% coursework
ARCH7024/P30402	Urban Sustainability and Microclimates	20	7	Compulsory	100% coursework
ARCH7025/P30405	~~Post Occupancy Building Evaluation~~ Building Performance Evaluation	20	7	Compulsory	100% coursework
ARCH7029/P30413	Services and Systems for Net Zero Energy Buildings	20	7	Compulsory	100% coursework
ARCH7031/P30414	Building Simulation and Design in Context	40	7	Compulsory	100% coursework
ARCH7027/P30409	Research Methods and Design	10	7	Compulsory	100% coursework
ARCH7030/P30499	Dissertation	50	7	Compulsory	100% coursework

4.2 PROGRESSION AND AWARD REQUIREMENTS

.1 Students will normally be expected to follow the programme in the sequence specified.
.2 For the award of Postgraduate Diploma, the candidate must pass ARCH7023/P30401, ARCH7024/P30402, ARCH7025/P30405, ARCH7029/P30413 & ARCH7031/P30414.
.3 In order to progress to the Dissertation, the candidate must have met the requirements for the award of the Postgraduate Diploma.
.4 Students registering for the award of MSc who fail to meet the requirements for the MSc programme, but have met those for the Postgraduate Diploma will be awarded the Postgraduate Diploma.
.5 Part-time students must normally undertake a minimum of three modules per year.
.6 Students, who are in receipt of a resit grade for one or more modules, will be permitted to continue with their programme subject to point 2 (above)
.7 To be awarded a PG Certificate students would be required to pass 60 credits from the compulsory taught list

Special Conditions for Students taking SA:ED Specialization as part of the MArchD Part 2 Programme

.1 MArchD Programme students are required to achieve a minimum of 50% on each element of assessment for the module to pass the module.
.2 The Postgraduate Examinations Committee may **not** compensate for failure in any assessment element in the alternative compulsory modules.

4.3 PROFESSIONAL REQUIREMENTS

None.

SECTION 5: TEACHING AND ASSESSMENT

Teaching

The teaching activities are held primarily at the university and run for two days per week for full time students and one day per week for part time students. This contact time involves teaching activities such as:

- Lectures and seminars, including student- led seminars

- Workshops
- Group and one-to-one tutorials

Each 20 credit taught module will include between 20 and 30 contact hours The remaining time is for individual and group work and study which typically takes place in the library, studio and other university facilities or on project sites and at home. A number of modules require studying real buildings and or sites and meeting groups of people outside the university. The total time required to complete one 20 credit module will depend on the student's ability and experience but as an indication students should consider devoting 10 hours of study time per credit.

Each module will set out one or more assignments that enable students to structure their learning and demonstrate the learning outcomes. Assessment elements are designed to progress students through the five core graduate attributes supporting individual *abilities, personal qualities and transferable skills* include:

- Case study analysis and evaluation presented as a report and or oral presentation
- Critical and research essays and reports resulting from guided and independent study
- Data analysis and calculations
- A synoptic design / consultancy project (Module ARCH7026/P30406)
- Many of the programme modules such as the Post-occupancy evaluation(ARCH7025/P30405) enables students to adopt an experiential learning-by-doing approach wherein they evaluate the energy and environmental performance of a real case study building in the local area to understand both the technical and occupant's perspective.
- Beyond the subject-specific skills, students learn to work in multidisciplinary groups and deal with clients and design and buildings teams.
- The dissertation (Module ARCH7030/P30499), which gives the opportunity for the application and expansion of the material generally presented in the programme through independent research. Dissertation topics are selected by each student and past examples include: Analysis and evaluation of sustainable building methods, approaches, performance, occupant satisfaction, legislative and other incentives, and economic implications. Design-based dissertations are also possible.

The programme includes one or more field trips, which provide students with the opportunity to directly experience the application of sustainability and energy efficiency in the built environment.

Learning

The programme is designed for self-motivated and independent individuals with experience in higher education. The programme expects students to take control of their learning and probe deeper into the material covered in the contact session by further independent reading and study.

Assessment

The programme is assessed through coursework, produced by students either individually or in groups, plus class test. The coursework to be assessed includes:

- written and graphic project work (reports, essays, designs and dissertation)
- group or individual oral presentations in class supported by digital and printed work

Assessments include written and or verbal feedback by one or more members of staff. Verbal feedback occurs in group seminars, individual tutorials and design review crits where external experts in the subject are often invited to contribute to feedback. A sample programme work assessment feedback form can found in Appendix of the programme handbook. The assessment undertaken in all modules is moderated.

Updated May 2016

The MSc. Dissertation is marked by two assessors independently, who subsequently agree a grade. Where agreement cannot be reached, a third assessor is asked to assess the work and all three assessors agree on a final mark. Further details on the assessment process can be found in the Post Graduate Regulations.

The Postgraduate Programme Examination / Graduation Committee reviews the proposed assessments for each module annually to ensure that assessments adequately reflect learning outcomes and that assessment levels are comparable with other programmes of the same level.

SECTION 6: ADMISSION TO THE PROGRAMME

6.1 ENTRY REQUIREMENTS

Normally, it is expected that candidates for the ***MSc/ PG Dip /PG Cert*** **in Sustainable Architecture: Evaluation and Design (SA:ED)** will come from a wide range of backgrounds and experience, including undergraduate studies in architecture, engineering, or physics, and other subjects related to the built and natural environment. Others may have been working in related fields for a number of years and seek to further develop their skills in sustainable design This wide range of interest and skills is particularly appropriate to the interdisciplinary nature of this programme.

All candidates for admission to a postgraduate programme in the Faculty of Technology, Design and Environment must meet two core requirements in terms of previous education and ability to work at postgraduate level in the English language:

Education

Admission to the programme will normally be open to applicants who fulfill one of the following requirements:

(i) hold an approved undergraduate honours degree (or equivalent) at '1st' or 'upper second class' (i.e. a '2:1')

(ii) Possess an appropriate professional background and experience in architecture, building or building servicing design

(iii) Applications will also be considered from potential candidates who wish to seek accreditation for their prior experiential learning or earlier qualifications (see programme regulations)

Language

Applicants whose first language is not English must demonstrate that their level of English is appropriate for study at the postgraduate level. An IELTS score of 6.5 or other equivalent English assessment system will be required as a minimum. The university's general language requirements are: http://www.brookes.ac.uk/international/applying-to-arriving/how-to-apply/english-language-requirements/

Dispensation

In exceptional circumstance, where applicants can show that they have qualifications or experience or both that demonstrate that they have knowledge and capabilities equivalent to those possessed by holders of the qualifications listed in 6.1.1 or 6.1.2 above, may be admitted with dispensation from the requirement to possess those qualifications.

Admission with credit (APL/APEL)

Applicants with prior certificated or experiential learning who make the case in writing with appropriate supporting documents may be admitted with exemption from or credit for, up to two-thirds of the credit value of the Brookes Postgraduate award (see programme regulations).

SECTION 7: PREPARATION FOR EMPLOYMENT

Students from this programme have gone on to work in a wide range of occupations from architectural and engineering practices to development work, furniture design, owning and operating electricity utilities and Carbon Trading or progress on to Postgraduate Research Studies. The four

main areas of employment for graduates of the programme are:

- **Sustainable architectural practice**. Graduates have found employment working as 'sustainable architects' within existing practices or set up their own sustainable architecture practice.
- **Research in sustainability**. Graduates have found employment working for universities such as Oxford Brookes, architectural practices, such as AEDAS and commercial research organisations, such as the Building Research Establishment.
- **Sustainable design consultancies**. Graduates have found employment working within existing consultancies or set up their own sustainable architecture consultancy.
- **Progression from MSc to PhD.** The programme has a good history of progressing students from the MSc to Postgraduate Research. In the past 2 years, two MSc graduates of the programme have completed their PhD and one other graduate has a PhD underway at Oxford Brookes University. The PhD students have both the opportunity to be involved in on-going funded research grants and to contribute to specialist teaching on MSc Modules.

The programme provides links with potential employers in the following ways.

- **Live projects**. Students engaging in 'live' projects with real clients that can include architectural practices, developers and other potential building clients.
- **Alumni network**. The programme has an extensive alumni network that includes potential employers for recent graduates. Yearly meetings are held to exchange personal and professional information.