



**Bournemouth
University**

MSc Sustainable Product Design

The School of Design, Engineering & Computing

The student experience on this degree is enhanced by:

- An emphasis on practical class-based activities which bring the theoretical content to life;
- An understanding of the design process within the context of a sustainable framework: commercial and institutional legislative and technical drivers.

Duration:

1 year full-time (2 years with optional work placement) 2-5 years part-time

During this course units are taught intensively, usually over 4.5 days, with assessment normally taking place 5-6 weeks after the delivery of the unit.

Start Date:

October

Entry Requirements:

Normally, the minimum qualification for entry to this course is a second class honours degree in a design or engineering discipline and/or relevant, recent experience in associated industries confirmed by employer references.

If English is not your first language:

IELTS (Academic) 6.0 or equivalent.

Contact askBU:

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Email: askBUenquiries@bournemouth.ac.uk

Open Days

Log on to: www.bournemouth.ac.uk/opendays

Course Fees

For more information about fees and funding please visit our website www.bournemouth.ac.uk/funding

For more course information

www.bournemouth.ac.uk/courses/MSSPD

Overview

Awareness, understanding and integration of sustainable development issues within the design process are the underlying issues of this course.

Meeting the needs of the present generation, without compromising the ability of future generations to meet their own needs is the challenge for designers.

Sustainable development addresses issues that include economic growth and employment, social progress for all, protection of the environment and prudent use of natural resources. This is a complex and multidisciplinary subject, therefore advanced techniques are embraced to facilitate and communicate relevant case studies throughout the units.

The research undertaken as part of the Individual Masters Project will give you an opportunity to explore your particular area of interest in greater depth.

The School of Design, Engineering & Computing is active in research and enterprise and has a well established base in Sustainable Design and Design Simulation.

All members of the academic team are members of either The Sustainable Design Research Centre or Design Simulation Research Centre and accordingly are active in research and publication within these fields or in associated enterprise.

Course content

Interlocking Nature of Sustainability (20 Credits)

You will develop a high level understanding of how individuals, corporations and governments are responsible for the current problems as well as develop a strong critical awareness of the urgency of current problems.

Sustainable Product Design (20 Credits)

You will develop a deep knowledge and understanding of sustainable product development based on a multidisciplinary approach, and gain the ability to devise sustainable product development strategy within a design and manufacture context.

Design Management (20 Credits)

You will gain a critical understanding of modern design management, the design process, product development, project planning, the integration of total quality and decision making analysis.

Design for Waste Minimisation (20 Credits)

You will develop a deep knowledge of sustainable development based on a multidisciplinary approach to waste minimisation. You will also learn to identify and quantify environmental impacts during the life cycle of a product/service from raw material abstraction to end of life disposal, and implement real-world sustainable development strategies.

Business & Innovation Enterprise (20 Credits)

You will learn how to identify and exploit a company's strengths. You will evaluate external opportunities that exist, together with conceiving strategies to overcome internal weaknesses and the threats that might be imposed by the industry environment.

Research Methods (20 Credits)

You will develop key research skills in areas such as literature reviews, critical analysis of research findings, project proposals, planning, experiment design and analysis, and dissemination. This unit will adequately prepare you for writing a project proposal and for conducting and disseminating the Masters project.

Individual Masters Project (60 Credits)

You will develop an understanding of the characteristics and implications inherent in the solution of a complex, real-world problem by undertaking a substantial, independently-conducted piece of work.

Industrial Placement - one year optional minimum 40 weeks.

The Nature of the Course

The sustainability of a product can be measured through its environmental, social and economic impacts. These impacts, both direct and indirect, are a consequence of decisions made at the design stage. The successful sustainable designer must therefore be able to model the true impact of their design selections. This can be accomplished through the integration of conventional business and management skills together with sustainable design methodologies, advanced material selection and impact modelling and simulation.

The true nature of sustainable design can be explored through the wider issues of sustainable development. These wider issues include climate change, resource depletion, toxicity & pollution together with corporate & individual responsibility. Opinion and judgement of the issues facing the global environment can be formed through examining and discussing the evidence from everyday experiences. Solutions to these problems can be found through the understanding of how individuals, corporations and government can take responsibility.

For the sustainable designer, these wider issues and concepts can be integrated into multidisciplinary approach. There is a need to devise a sustainable product development strategy within the context of design and manufacturing. Here the designer should consider sustainable design drivers such as international agreements, treaties and cultural pressures.

Material selection techniques allow the designer to optimise selection for suitability within the context of "whole life cycle costing". Advanced sustainable technologies allow for extended life-cycles, low energy consumption and enhanced durability.

Life cycle assessment techniques are also deployed to quantify the true cost of products to the consumer, society as a whole and the wider environment. Here the impact of design decisions can be identified and quantified during the life cycle of a product/service from raw material abstraction to end of life disposal.

Entry Requirements:

Normally, the minimum qualification for entry to this course is a second class honours degree in a design or engineering discipline and/or relevant, recent experience in associated industries confirmed by employer references.

Background & Experience

We want committed, enthusiastic students who are going to make a real difference to the course they are studying. Our students learn from each other, as well as our academic staff, so it is really important to us that you can show us how much you care about the course you are interested in. Your personal statement is a great place to do this. Tell us about your personal achievements or any relevant work experience you have done, and show us how they make you the ideal candidate for a place on the course.

For MSc Sustainable Product Design we are looking for applicants who:

- wish to gain the ability and confidence to apply their knowledge and skills to specific design problems individually or in a group
- wish to gain the ability to initiate, research, plan, conduct and report in innovative engineering design.
- wish to gain an understanding of sustainable development concepts and its framework and principal facets involving environmental, social and economic issues
- wish to understand project management methods and tools, and are able to employ them in the planning and execution of projects.

The MSc Sustainable Product Design promotes awareness, understanding and integration of sustainable development issues within the design process are the underlying issues of this course.

A holistic philosophy is the ethos of product design and thus sustainable development is a key issue. Meeting the needs of the present generation, without compromising the ability of future generations to meet their own needs is the challenge for designers.

Sustainable development addresses issues that include economic growth and employment, social progress for all, protection of the environment and prudent use of natural resources. This is a complex and multidisciplinary subject, therefore advanced techniques are embraced to facilitate and communicate relevant case studies throughout the core units.

Course provision

There are individual & group-based development activities and seminar-based discussions. There are also external field trips and keynote external lectures where applicable. Real life case studies developed in conjunction with the RAE visiting professor scheme are also used.

All assessments are on an individual basis. The emphasis throughout the delivery of the units is on the application of theory to relevant practical applications. Each unit is assessed either by coursework only or via a combination of coursework and an examination.

Please note

The University reserves the right to introduce changes to the information given, including the addition, withdrawal, re-location or restructuring of courses.