# MASTER OF SCIENCE
# BUILDING PERFORMANCE AND SUSTAINABILITY

A multi-disciplinary programme for working professionals from the built environment, who are interested in issues impacting climate and sustainability.

NUS National University of Singapore | Department of the Built Environment
College of Design and Engineering

# Why NUS Master of Science in Building Performance and Sustainability [MSc (BPS)]?

1. Acquire a sound understanding of the importance of sustainability in building creation, as well as the operation and maintenance of building systems, through a multi-disciplinary approach.
2. Benefit from lecturers with international standing.
3. Enjoy meaningful interaction with fellow students from diverse professional backgrounds.
4. Graduate with an internationally recognised degree and be qualified for practice in the broad field of Building Performance and Sustainability.

# Who should enrol?

The MSc (BPS) programme is designed for working professionals who are engaged in design, construction, commissioning, operation and maintenance of building systems and services.

It is also ideal for individuals with a strong passion and interest in this domain who want to build a career in creating high-performance, sustainable buildings.

# Programme Information


One intake per year

## Course Duration

- 1 year full-time | 2 years part-time.
- Mostly evening classes (7pm - 10pm), some afternoon classes (3pm - 6pm).
- Full-time students attend 4 or 5 classes per week; part-time students attend 2 or 3 classes per week.

# Career Prospects

1. Graduates of the MSc (BPS) programme can find their niche as Environmentally Sustainable Design (ESD) consultants, engaged in integrated and collaborative designs, and simulation studies of green buildings.

2. Equipped with knowledge and skillsets in Smart Green Buildings, Occupant Wellbeing, Energy Auditing and Management, Graduates of the MSc (BPS) programme can also find career opportunities in managing large facilities, such as airports, institutional buildings and malls.

3. This degree conferred by NUS enhances the standing and marketability of the MSc (BPS) graduates. While most graduates return to their core disciplines as sustainability-trained professionals, some segue into research or education. Others may go on to pursue PhD degrees.

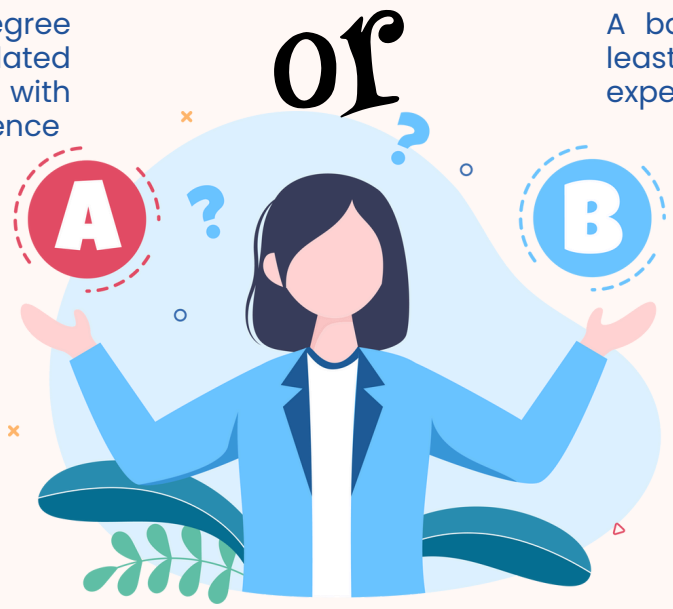
- Architectural Firms
- Environmentally Sustainable Design (ESD) consultants
- BCA, MOM, LTA, NUS, DSTA
- Mechanical and Electrical (M&E) consultants

# Class Profile

International mix of students, providing opportunities for cross-cultural exchanges within an interesting and conducive learning environment.

# Admission Requirements

At least a bachelor's degree with honours in a related discipline, preferably with relevant, practical experience




A bachelor's degree with at least 3 years' relevant work experience.

# English Requirement

Applicants whose first language is not English are required to demonstrate their English proficiency by means of TOEFL / IELTS test scores.

Applicants may be waived from this requirement if they completed their degree programme taught entirely in English and in an institution situated in an English-speaking country/territory, for example:

(non-exhaustive list)
Australia, Canada, Hong Kong, India, New Zealand, Pakistan, Philippines, Singapore, United Kingdom, USA.

To meet the English requirement, the minimum score expected is:

**85 for TOEFL iBT® or 6.0 for IELTS (Academic)**

The TOEFL score or IELTS result is only valid for 2 years after the test and should be valid at the beginning of the application period for the MSc (BPS) programme.

# Programme Structure

## Graduation Requirements:

- Pass 40 units. This includes completing 12 units of essential courses.
- Achieve a Grade Point Average (GPA) of at least 3.0.

## Students can take:

**12 units** Essential Courses + **28 units** Prescribed Electives = **40 units**

**12 units** Essential Courses + **28 units** Prescribed Electives + **8 units** Unrestricted Electives = **40 units**

**12 units** Essential Courses + **20 units** Prescribed Electives + **8 units** Dissertation = **40 units**

# Course List

(with effect from AY2025/2026)

## ESSENTIAL COURSES [12 UNITS]

BPS5111 Integrated Building Design (Semester 1) [4 units]

BPS5112 Green Building Integration and Evaluation Studio (Semesters 1 & 2) [8 units]

## PRESCRIBED ELECTIVES [20 UNITS]

BPS5221 Microclimate Design (Semester 1) [4 units]

BPS5222 Indoor Environmental Quality (Semester 2) [4 units]

BPS5223 Building Energy Performance - Passive Systems (Semester 1) [4 units]

BPS5224 Building Energy Performance - Active Systems (Semester 1) [4 units]

BPS5225 Building Energy Audit and Performance Measurement and Verification (Semester 2) [4 units]

BPS5226 Smart Buildings and Facilities (Semester 2) [4 units]

BPS5228 Advanced Building Materials and Structures (Semester 2) [4 units]

BPS5230 Data-Driven Decision-Making for Smart Built Environments (Semester 2) [4 units]

BPS5231 AI for Sustainable Building Design (Semester 1) [4 units]

BPS5232 Environmental, Social and Governance (ESG) in the Built Environment (Semester 2) [4 units]

BPS5300 Special Topics in Building Performance and Sustainability (spans 1 semester) [4 units]

BPS5000 Dissertation (spans 2 semesters) [8 units]

## UNRESTRICTED ELECTIVES [MAX. 8 UNITS]

Unrestricted Electives (UE) enable students to pursue their academic interests and aspirations by reading courses of any Department/Faculty. UE courses are optional.

# Fees and Financial Assistance

The full programme fee (inclusive of 9% GST) is **SGD$49,050**.

All Singapore Citizens, Singapore Permanent Residents and NUS Alumni will receive 40% tuition fee rebates.

- A non-refundable application fee of S$109 (inclusive of 9% GST) must accompany your online application.
- Payment of fees will be on an instalment basis, paid over 2 semesters for full-time students and (up to) 4 semesters for part-time students. Complete fee must be paid before a student can graduate from the programme.
- Students need to separately pay for Miscellaneous Student Fee (MSF) directly to the University on a semester basis. Fees are reviewed annually.
- Acceptance Fee of S$5,450 (inclusive of 9% GST), which will be credited towards your programme fees, is payable upon acceptance into the programme. Fee is non-refundable and non-transferable.
- Programme fees do not include the cost of recommended textbooks and readings.
- The cost of travel, accommodation and miscellaneous expenses are not included and are to be borne by the participant.

# MSc (BPS) Alumni

"The MSc in Building Performance and Sustainability is a very rewarding programme. We learned a lot working on projects with people from different backgrounds. The professors were very helpful and experienced. They facilitated my self-learning, which yielded real-life experiences. I am proud to be part of an amazing community – while I was pushing myself to be better, I had the support of like-minded course mates."

**Gao Yushi**
**Assistant Engineer**
**Beijing Institute of Architectural Design (Group) Co., Ltd**
**MSc (BPS) (2020), NUS**

"The MSc in Building Performance and Sustainability programme deepened my knowledge in sustainable design and mechanical engineering. The programme, with its broad curriculum and knowledgeable professors, gave me a good baseline not only in building science fundamentals, but also in my ongoing research work across the field. With what I had gained, I was able to put new ideas and methods into practice when I returned to work."

**Sarah Daniell**
**Environmentally Sustainable Design (ESD) & Mechanical Engineer**
**eCubed Building Workshop**
**MSc (BPS) (2020), NUS**

"My time in NUS reading the MSc in Building Performance and Sustainability programme was immensely enriching. The course curriculum was exactly as charted out in the prospectus, yet it went far beyond my expectations. The topics covered were way ahead of typical classroom teaching, with a lot of focus on real-world experience. The faculty members were mostly pioneers in their own fields and were very cooperative and supportive."

**Shweta Kaw**
**Principal**
**Studio Meraki**
**MSc (BPS) (2013), NUS**

# NATIONAL UNIVERSITY OF SINGAPORE

The National University of Singapore (NUS) is one of the world's leading universities, with over 40,000 students across three campuses. By offering a distinctively Asian yet global experience, NUS gives students the opportunity to excel academically and to grow holistically. NUS is recognised for the breadth of its academic programmes, experiential learning, entrepreneurship education and impactful research. As the university continues to grow from strength to strength, it takes pride in nurturing students and equipping them with the necessary skills to be forward-thinking and versatile graduates.

# COLLEGE OF DESIGN AND ENGINEERING

A school of NUS for education and research, the College of Design and Engineering (CDE) promotes the growth of knowledge in improving the quality of Singapore's built and natural environment. In 2021, it was No. 6 on the Quacquarelli Symonds ranking of the world's top universities for the study of Architecture/ Built Environment, based on academic reputation, employer reputation and research impact. CDE is the only school in Singapore offering undergraduate and graduate students a comprehensive suite of educational programmes to develop cross-disciplinary competencies spanning the lifecycle of the built environment. This covers urban planning and design, architecture and landscape architecture, total building performance and sustainability, project and facilities management, real estate finance and economics, and industrial and product design.

# DEPARTMENT OF THE BUILT ENVIRONMENT

The MSc (BPS) programme is offered by the Department of the Built Environment under CDE. The Department seeks to advance knowledge, educate learners, and foster enterprise in the management of projects, facilities, contracts and technology within the sustainable built environment. It also aims to establish an academic centre of excellence for the pursuit of knowledge in science, technology and management in the building design and construction processes, both of which are relevant to the built environment, nation-building and the region.

## CONTACT US

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