

# National University Centre for Oral Health (NUCOHS) Singapore

## 新加坡国立大学口腔医学中心 新加坡

项目规模：34,317 平方米

建设单位：新加坡国立大学医院

服务范围：建筑设计、室内设计、医疗规划

深化单位：Architects 61 Pte Ltd

景观设计：ICN Design International Pte Ltd

项目状态：2018 年竣工

Size: 34,317 m<sup>2</sup>

Client: National University Hospital (Singapore) Pte Ltd

B+H Services: Architecture Design, Interior Design, Medical Planning

Executive Architect: Architects 61 Pte Ltd

Landscape design: ICN Design International Pte Ltd

Status: Completed in 2018

新加坡国立大学口腔医学中心 (NUCOHS) 坐落于新加坡国立大学肯特岗校区东门旁边，现为国立大学医学组织新成员。

就总体规划层面而言，此建筑将整座校园串联起来，促进校园内部沟通和交流。国立大学医学组织塔楼、国立大学医院、新加坡国立大学心脏中心、新加坡国立大学癌症中心、国大杨潞龄医学院和新建的NUCOHS 之间通过大片公共绿地连接，校园与当地公共交通站点连通，辅以有顶走廊、地下通道和人行天桥。

B+H的设计旨在打造一个跨学科中心，具备临床牙科服务、教学和研究能力，并集各功能于一身，实现部门之间的轻松衔接。

业主最初是希望打造一个集合教学、医疗和实践功能的一体化设施。这些功能通常设置在设施相互独立的位置及不同楼层，以满足这些功能的不同需求。随着可持续城市和社区理念的发展，建筑类型之间的日益融合，建筑环境内部空间界线也日益模糊。建筑旨在打破了教学、医疗和实践之间的界线，体现了一种全新的建筑形式。B+H的设计采用了综合设计方式：邻近的教学空间内可灵活实现医疗处理；医生和临床医师可在共享休息室内交流，整个大学可共用此学习空间。

为营造良好的学习环境，我们的设计还为学生和教师配备了各种综合设施套房，从设备齐全的手术间到为特殊需要人士而设的工作间，可谓应有尽有。设计也为教学空间提供了一定的灵活性，尽可能提供多样化的空间配置，以适合不同的教学风格。研讨室的陈设强调合作和凝聚力。医学模拟区设计为连续的开放空间，用于增强互动性。

设计还在建筑内外部都融入了天然绿植。景观规划中大量引入新加坡本地的树木和灌木，并尽可能选取维护需求较低的植物。绿色混凝土及环保产品为整体设计建立了绿环保的基调。除作为主要人行空间的室外景观区之外，建筑一层还设有户外绿色公共空间，五楼建有屋顶露台，九层设有绿色庭院。

NUCOHS 大楼立面设计采用大面积玻璃材质落地窗，利用水平遮阳保持舒适的室内环境，同时借助

铰接百叶窗提升采光和景观效果；另一方面则是尽可能地利用自然光节省人工照明成本，如选用采光架，可以使阳光更深层次穿透内部空间。该项目在2018年获得了新加坡建设局颁发的绿色建筑标志白金奖(非住宅类)。

设计还预先考虑到校园未来可能新增的空间：预留更多空间来适应学院增长的本科生数量和牙科服务人数，打造经得起未来考验的建筑。预留空间包括牙科操作台以及配套的实验室、教室以及楼宇机电设备等。

Situated at the eastern gateway to the National University of Singapore Kent Ridge Campus, the National University Centre for Oral Health, Singapore (NUCOHS) is the newest addition to the National University Health System.

On a master plan scale, the building plays a unique role in the connectivity of the overall campus, to facilitate ease of movement and accessibility. A large landscaped Green Area provides outdoor civic spaces to connect the National University Health System Tower Block, National University Hospital, National University Heart Centre, Singapore and National University Cancer Institute, Singapore, NUS Yong Loo Lin School of Medicine and NUCOHS, while a strategic network of bridges and covered walkways link the NUS campus and its users to the convenience of public transit.

B+H's design aims to establish a multi-disciplinary facility that includes capacity for clinical dental services, education, and research facilities – all under one roof and easily accessible between one function and department to the next.

The original brief for NUCOHS called for a combination teaching, healing, and practice facility. Typically, these types of facilities address the diverse needs of these functions in separate wings, on separate floors. As building typologies blur and merge to create dynamic and sustainable cities and communities, so too do the boundaries of our spaces within our built environments. The design tends to create a new building typology that obscures the lines between teaching, healing, and practice. Our integrated design allows flexibility for treatments to take place proximate to tutorial space, where doctors and clinicians can rub shoulders in shared lounges, and learning environments are shared with the entire university.

To support an environment of learning excellence, comprehensive suites are designed for students and teachers that support everything from fully equipped surgical suites to suites equipped to serve those with special needs. Flexibility is built into tutorial spaces through configurable learning environments, which can adapt to suit various teaching styles, while seminar rooms are equipped with features that further promote gathering and collaboration. Finally, simulation areas are designed as contiguous open spaces to promote interaction.

The design incorporates natural green spaces directly outside the building, as well as within the structure of the building itself. Through an extensive use of native trees and shrubs, the landscape plan creates green spaces that require as little maintenance as possible. Green concrete and environmentally friendly products build a healthy foundation for the overall design. In addition to the outdoor landscaped areas, which act as main pedestrian traffic spaces, level one of the building features a green outdoor public space, while level five incorporates a rooftop terrace and level nine integrates a green courtyard into its design.

The facade design for the NUCOHS tower features extensive use of glass through floor-to-ceiling windows. Horizontal shading is provided to maintain a comfortable interior environment while articulated louvres maximise daylight and views, and temper solar gain. On the other hand, the design for the tower uses natural daylight as much as possible to save costs on artificial lighting, and to increase the health and wellbeing of occupants and users. NUCOHS has been awarded BCA Green Mark Platinum under Non-Residential category by BCA in 2018.

The design also explicitly provides for the expansion space required to support anticipated growth. 'Futureproofing' is achieved by reserving space for undergraduate growth and additional dental services capacity. Reserve space for additional operatory modules is matched by additional capacity designed into labs and lecture/seminar facilities and the capacity of the building infrastructure (mechanical and electrical systems and lifts) to accommodate the future state.











