

# 香港結構工程師



## 結構工程師的工作性質

結構工程師需要運用數學和物理理論、材料科學、力學等的知識，負責建築物結構的設計、物料的運用、建築物施工時的監管、舊建築物的活化與拆卸等，確保建築物的強度和耐用性能夠抵禦各類環境和災害，並確保建築物能供人們提供安全穩固的環境。

## 結構工程師的工作前景

不論是政府部門(例如屋宇署、建築署等)、公營機構(例如房屋委員會、機管局、市區重建局等)，還是工程顧問公司、承建商，都可以見到結構工程師的身影。

結構工程師的工作職責範圍廣闊，小至強制驗樓計劃和強制驗窗計劃，大至市區重建、大型建築及樓宇發展項目等，都需要結構工程師的參與。

## 如何成為專業結構工程師

修讀經香港工程師學會  
審批的高等教育課程

或

35歲或以上  
&  
14年結構工程相關  
的工作經驗

5年結構工程相關  
的工作經驗

完成為期3年的  
工程師培訓計畫(結構界別)  
或(土木界別\*)

通過香港工程師學會結構分部的專業資格評核(筆試和面試)

成為專業結構工程師

\*:參加土木界別工程師培訓計畫的工程師需至少有1.5年的結構工程設計經驗



## 結構工程師需要具備的特質與能力

- 良好的數理能力

結構工程師的日常工作需要接觸大量計算、結構設計，良好的數理基礎有助工程師建立專業判斷能力

- 清晰的邏輯判斷、解決問題能力

結構工程師面對的問題和挑戰日新月異，清晰的邏輯思維有助我們能將複雜事情簡單化，並且能在平衡時間、成本、施工或計算程序之間找到最適合的解決方案

- 良好的溝通能力和團隊合作能力

結構工程師的工作並非閉門造車，結構工程項目亦並非單槍匹馬可以完成，我們需要良好的溝通和合作能力，與不同的持份者、政府部門，或專家，其他專業人士磋商和合作，共同完成工程項目。

- 終身學業，不卑不亢

學海無涯，結構工程師需要學習的知識很多，而工程可以發展亦一日千里，不論是建築技術，還是電腦軟件，建築模型分析程式，所以即使我們通過了結構工程師的考核，亦需要持續進修，終身學習，裝備自己。



## 關於我們

**HK工E** THE HONG KONG  
INSTITUTION OF ENGINEERS  
香港工程師學會

Structural Division  
結構分部

香港工程師學會結構分部於 1979 年創立，為香港工程師學會的六大創會分部之一，亦是規模最大的分部之一。截至 2022 年 4 月，我們有 6030 名會員，當中有 312 名資深會員。

我們恆常舉辦不同的學術活動，例如工地考察、技術講座、學術交流座談會等等，為會員提供一個持續進修的平台，致力推動結構工程師的專業發展。此外，我們亦舉辦不同的聯誼活動(如:週年晚宴)和結構設計獎項，積極鼓勵業界在我們的專業領域上精益求精，力臻完美。



# Hong Kong Structural Engineers



## Job Nature of Structural Engineers



Structural engineers need to apply the knowledge of mathematics, physics, material science, structural mechanics, etc. in our daily work. We are responsible for structural design of buildings and infrastructures, selection of construction materials, inspection during construction, rehabilitation and demolition of structures, etc. We analyse and design structures to withstand stresses and pressures imposed through environmental conditions and human use, and to ensure buildings have the desired strength, durability and structural safety.



## Career Opportunities of Structural Engineers

Structural engineers can develop their career in different government departments (such as Buildings Department, Architectural Services Department, Highways Department, etc.), public organizations (such as Housing Authority, Airport Authority, Urban Renewal Authority, etc.), engineering consultancy firms or contractors.

We have a wide range of job opportunities, ranging from the Mandatory Building Inspection Scheme and Mandatory Window Inspection Scheme (MBIS and MWIS) to urban renewal projects, large-scale infrastructure and building development projects.



## How to Become a Professional Structural Engineer

Process an accredited /  
recognized degree by HKIE

OR

35 years old or above  
&  
14 years relevant  
working experience

5 years relevant  
working experience

Complete 3 years Scheme A  
Training (Structural Discipline or  
Civil Discipline\*)

Pass the Professional Review Assessment of HKIE Structural Discipline

Become a Professional  
Structural Engineer



\*:at least 1.5 years working experience in structural design is required for the candidates joining Scheme A Training in Civil Discipline



## Essential Qualities of Structural Engineers

- **SOLID KNOWLEDGE FOUNDATION IN SCIENCE AND MATHEMATICS**

We need to deal with lots of calculations and structural design in our daily work. Good mathematical and physics knowledge can help us to develop our analytical skills and engineering sense.

- **STRONG LOGICAL ANALYTICAL SKILLS AND PROBLEM-SOLVING SKILLS**

Facing the ever-changing world, strong logical analytical skills and problem-solving skills can help structural engineers to simplify complex and complicated problems, and also find out the best solution by balancing the consideration of time, cost and easiness of calculation and construction.

- **GOOD COMMUNICATION SKILLS AND TEAMWORK**

Structural engineers always work alongside a team of other construction professionals. We need to collaborate with various parties to accomplish a project. A great structural engineer should be able to blend in the team to ensure that the project is successful and completed in time.

- **LIFELONG LEARNING**

Structural engineers need to learn lots of knowledge, such as new construction techniques and calculation methods, updated computational software and design standards, etc. Even after passing the professional assessment, continuous learning to equip our professional knowledge is required for every structural engineer.



## ABOUT US

**HKIE** THE HONG KONG  
INSTITUTION OF ENGINEERS  
香港工程師學會

Structural Division  
結構分部



Established in 1979, the Structural Division of the Hong Kong Institution of Engineers was established as one of the six founding divisions of the HKIE. It is also one of the largest divisions. Up to April 2022, we have 6,030 members, including 312 Fellows.

We organize different academic activities regularly to provide a platform for our members' continuous learning and professional development, such as site visits, technical seminars, etc. Meanwhile, we organize different social gathering events (such as: Annual Dinner) and we host the Structural Excellence Award each year to encourage the industry to strive for perfection in our professional field.

