

课程信息

目录

课程号	课程名称	英文名	开课系所	学分	授课教师
02233030	现代建筑构造与结构选型	Architectural construction and Structure Type-selection	考古文博学院	2	张剑葳

课程目录Course Catalog

课程号 (Course Number) : 02233030

课程名称 (Course Title) : 现代建筑构造与结构选型/Architectural construction and Structure Type-selection

开课院系 (School/Department) : 考古文博学院/School of Archaeology and Museology

学分 (Credits) : 2

授课教师 (Faculty) : 张剑葳

教师简介 (Faculty Introduction) :

研究方向:

科研成绩:

先修课程 (Prerequisites) : 中国建筑史

中文简介:

课程分结构选型与建筑构造两部分。

结构选型部分介绍建筑结构设计的基本概念,着重讲解整体结构设计的方法,从结构体系入手,以结构的合理性和经济性为目标,分别介绍建筑结构几何形态、竖向分体系、水平结构分体系、基础等结构部分的概念和初步计算方法。通过本课程的学习,帮助学生掌握影响结构各个部分的主要因素,建立关于结构的整体概念,为建筑结构的初步设计打下基础。

建筑构造部分讲授建筑构造原理与方法。通过学习,使学生了解和初步掌握大量性民用建筑各组成部分(基础、墙或柱、楼地层、楼梯、门窗、屋顶等)的构造原理和构造方法。通过三个方面的学习:建筑材料,结构体系,构造节点和细部处理,使学生能够对建筑的设计与建造有更为深刻的认识和理解。

英文简介 (Course Description) :

This course consists of two important parts:

Structural type-selection shows basic mechanical concepts of the structural plans, focusing on the whole design methods from intact structural system, emphasizing choosing the most reasonable major forces and the importance of being geometrical characteristic of buildings in the whole structural system. This part aims at helping students to master the behavior and partial systems of structures that are a decisive factor of architecture style and to conduct the concept of the whole structural design.

Architectural construction is to impart the theory and methodology of architectural construction details within a building. By learning, students will understand and grasp preliminarily how various parts of a civil building, for instance, foundations, walls, floors, stairs, windows and roofs are connected. Through studying the knowledge of building material, structure system and details design, students will have profound knowledge of Architectural design and construction.

学时分配:

1. 混合结构体系 (2学时)
2. 框架结构体系 (2学时)
3. 剪力墙结构体系 (2学时)
4. 多高层建筑结构选型实例分析 (2学时)
5. 门式钢架结构、薄腹梁结构和桁架结构 (2学时)
6. 拱结构和薄壳结构 (2学时)
7. 网架结构、悬索结构和薄膜结构 (2学时)
8. 大跨结构选型实例分析 (2学时)
9. 建筑构造设计概论 (2学时)
10. 地基与基础 (2学时)
11. 墙体 (一) (2学时)
12. 墙体 (二) (2学时)
13. 楼板层、地坪及阳台雨篷 (2学时)
14. 楼梯、坡道及电梯、自动扶梯 (2学时)
15. 门窗构造 (2学时)
16. 屋顶构造 (2学时)

-End-

Class hours allocation:

1. Mixed structure system (2 class hours)
2. Frame structure system (2 class hours)
3. Shear wall structure system (2 class hours)
4. Example analysis of structure selection for multi-high-rise buildings (2 class hours)
5. Portal steel frame structure, thin web beam structure and truss structure (2 class hours)
6. Arch structure and thin shell structure (2 class hours)
7. Grid structure, suspension cable structure and membrane structure (2 class hours)
8. Case analysis of large-span structure selection (2 class hours)
9. Introduction to building structure design (2 class hours)
10. Foundation and foundation (2 class hours)
11. Wall (1) (2 class hours)
12. Wall (2) (2 class hours)
13. Floor, floor and balcony awning (2 class hours)
14. Stairs, ramps, elevators, escalators (2 class hours)
15. Door and window structure (2 class hours)

16. Roof structure (2 class hours)