**Pre-class Task List (Week 6)**

1. Video Watching：NetEase Open Course

Answer the following questions after watching the video clips：

A.俄亥俄州立大学建筑史公开课中的早期基督教建筑 中00：00-01:20的部分

（Source：<http://open.163.com/movie/2012/10/F/J/M8JHGHLL1_M8KVTO1FJ.html> ）

1. What is the most famous writing of Vitruvius on architecture?

The 10 BOOks ON ARCHITECTURE

1. What are the three qualities that all architecture should have according to Vitruvius?

Firmness, commodity, delight(structural integrity, functionality and beauty)

1. What are some of the attributes mentioned in the video that may constitute beauty?

Proportion, symmetry, rhythm and decorum

1. What does decorum mean?

If you were designing something, you responded with the correct type or the correct materials or the correct use of the orders.

B. 俄亥俄州立大学建筑史公开课中的早期基督教建筑 中28：35-35:15的部分

（Source：<http://open.163.com/movie/2012/10/F/J/M8JHGHLL1_M8KVTO1FJ.html>）

1. What is the first early Christian church?

St. John Lateran

1. What element in the early Christian church is different from Roman basilicas? How does it change the type of basilica?

Transcept.

That is to change the linear type into a cruciform type, which make the very plan of the church becomes a symbol of the church.

1. What structural system is used in St. Peter’s Basilica?

Wooden trusses

1. What is the elongated cross plan called?

Latin cross

1. Why does the lecturer say the plan of St. Peter’s is anthropomorphic?

Kind of looks like a head, arms, legs, so the church becomes a body and the church becomes a symbol.

1. What are the four major basilicas established in the early Christian days?

St Peter’s Basilica, St. Mary Major, St. John Lateran, St Paul’s Outside

C. 俄亥俄州立大学建筑史公开课中的早期基督教建筑 中41：00-43:00的部分

（Source：<http://open.163.com/movie/2012/10/F/J/M8JHGHLL1_M8KVTO1FJ.html>）

1. What is Greek Cross?

A cross that is centralized.

1. What effect does Mosaic have on the walls?

It is really deny the plasticity of the wall entirely.

D. 俄亥俄州立大学建筑史公开课中的拜占庭建筑中00：00-09:10的部分

（Source：<http://open.163.com/movie/2012/10/6/C/M8JHGHLL1_M8KVTOG6C.html> ）

1. Why did Christian churches use wooden trusses instead of vaults to provide roofing of a large structure?

It really required a lot of engineering know how to put the big vaults together and this point the resources and the competencies are becoming diminished.

1. What are the double purposes of the courtyard?

there are assemblies, there are meetings, there are rituals that take place outside.

16) Find two adjectives to describe the spaces of early Christian churches and Byzantine architecture.

Hierarchical, centered

E. 俄亥俄州立大学建筑史公开课中的拜占庭建筑中15：25-30:05的部分

（Source：<http://open.163.com/movie/2012/10/6/C/M8JHGHLL1_M8KVTOG6C.html> ）

1. What is Justinian’s best church? Why is it a shocker?

Hagia Sophia.

Because it seems as though it’s some kind of hybrid, a kind of oscillation between two kinds of conditions.

1. What is the new structural device in Hagia Sophia? How do you understand it?

Pendentive.

The pendentive is just a device to put a circular dome over a square bay.

1. Why does Hagia Sophia look different from Pantheon? How is it different from Pantheon in structural system?

Because Pantheon is a pagan temple.

Hagia Sophia is incredibly light and incredibly delicate.

1. How is the structure of Hagia Sophia dome different than the Pantheon dome?

The technique for building the Pantheon dome is slight displacement of material having to to with compression rings that stack up while that in Hagia Sophia dome is pendentive.

2. Find the Chinese equivalents for the following terms.

| **序号** | **单词** | **中文** |
| --- | --- | --- |
| 1 | Ten Books on Architecture | 建筑十书 |
| 2 | transept | 横廊 |
| 3 | cruciform | 十字形平面 |
| 4 | wooden truss | 木制桁架 |
| 5 | Latin Cross | 拉丁十字 |
| 6 | apse | 半圆形后殿 |
| 7 | axis | 轴线 |
| 8 | Mosaic | 马赛克 |
| 9 | courtyard | 庭院 |
| 10 | Byzantine architecture | 拜占庭建筑 |
| 11 | centralized building | 中心式建筑 |
| 12 | Hagia Sophia | 圣索菲亚大教堂 |
| 13 | pendentive | 悬索圆顶 |
| 14 | perimeter load | 周边荷载 |
| 15 | point load | 点荷载 |
| 16 | buttress | 扶壁 |
| 17 | tessera | 镶嵌石块 |
| 18 | rib | 弧形肋骨结构 |
| 19 | Greek Cross | 希腊十字 |

3. Translate the following two paragraphs into Chinese. (Para. 1 on the left column on P. 20 & Para. 3 on the left column on P. 4 )

In the 4th century, Roman Emperor Constantine the Great converted to Christianity and created a Christian empire, prompting the building of many new churches. The surviving basilicas in Rome that most clearly evoke the Early Christian character include Sant’ Agnese Fuori le Mura (rebuilt in 630 and later) and Santa Sabina (422-432). Byzantine churches, domed and decorated with mosaics, proliferated throughout the Byzantine Empire; most notable is the Hagia Sophia (532-537), built by Eastern emperor Justinian I at Constantinople.

The Romans and the early Christians also used the wooden truss for roofing the wide spans of their basilica halls. Byzantine architects experimented with new principles and developed the pendentives, used brilliantly in the 6th century for the Church of Hagia Sophia in Constanipole.