

# Early Renaissance Architecture

by Sophia



## WHAT'S COVERED

Early Renaissance architecture includes examples such as the Florence Cathedral, Santo Spirito, and Palazzo Medici. During this period, some engineering design obstacles were overcome. This lesson covers:

1. [Period and Location: Early Renaissance Architecture](#)
2. [Florence Cathedral](#)
3. [Santo Spirito](#)
4. [Palazzo Medici](#)

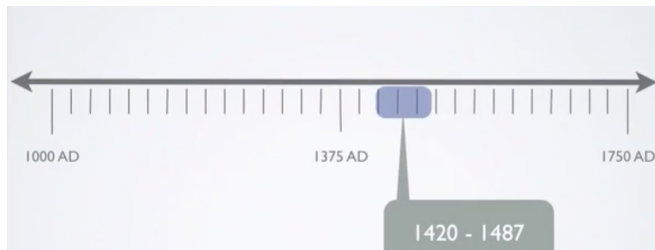


### BIG IDEA

The Gothic and Renaissance design elements of the Florence Cathedral mark a turning point in the architecture of Italy, moving from a medieval to a classical architectural style.

## 1. Period and Location: Early Renaissance Architecture

This lesson covers architecture from the years 1420 to 1487 in Florence, Italy, as highlighted in the timeline below.



## 2. Florence Cathedral

The architect and artist Brunelleschi was the runner-up in the panel competition for the Florence baptistery doors. Later this accomplished artist was hired to solve a major problem with the final construction phase of the Florence Cathedral, shown below. There was a huge open span, some 140 feet in length, that needed to be covered. It was an engineering nightmare, and it was up to Brunelleschi to create a solution by devising new building methods.



Filippo Brunelleschi  
Florence Cathedral dome  
Florence, Italy  
1420–1436

#### DID YOU KNOW

The distance of the span was about half the distance of an American football field, which is quite large! Rather than using a hemispherical dome, Brunelleschi turned to a previous generation for his solution. Essentially, he took an ogival, or pointed, arch and spun it around its axis to create an **ogival dome**.

#### THINK ABOUT IT

Something interesting to consider is how the Florence Cathedral, which came to be so closely associated with the Renaissance in Florence, had its most notable feature designed using Gothic techniques. The design by Brunelleschi was inherently stronger because the outward thrust was limited. To conserve weight, he designed the dome as a double-walled shell with a ribbed, semi-hollow interior. The eight primary supports can be seen on the outside, but there are 24 ribs altogether. There is also a heavy lantern on top that anchors the entire structure.

#### TERM TO KNOW

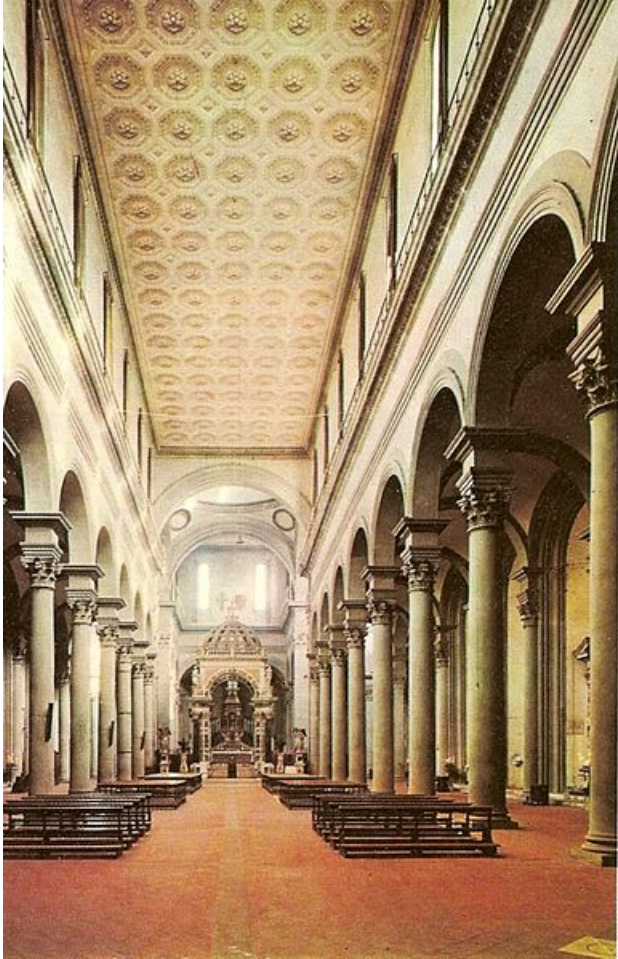
##### **Ogival Dome**

A primary quality of Gothic architecture; also seen in Islamic architecture and characterized by the pointed arch.

## 3. Santo Spirito

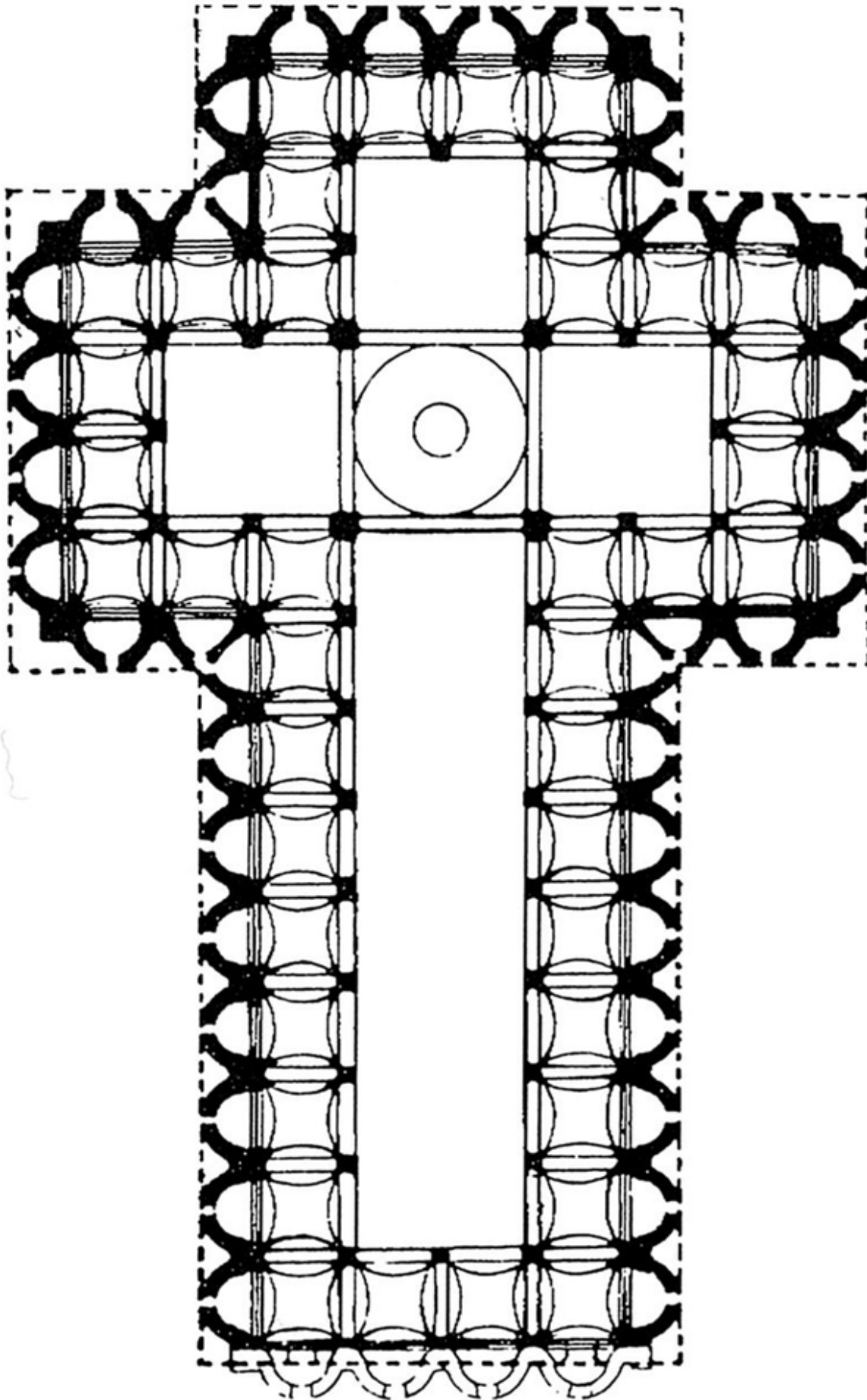
Although Brunelleschi's work on the Florence Cathedral was quite ingenious, it was essentially Gothic in its execution. The Church of Santo Spirito in Florence, Italy (shown below), gave Brunelleschi the opportunity to incorporate the classic rationality found in the Renaissance, such as:

- Rounded arches
- Modular floor plan
- References to **basilicas**



Filippo Brunelleschi  
Santo Spirito  
Florence, Italy  
1444–1487

The term “**modular design**” refers to the way that the floor plan of a church is subdivided into a series of equally sized units, or modules. We first saw this approach to architectural design during the Romanesque period. It reached its height, so to speak, during the Gothic period, when the modules indicated series of ribbed vaults and flying buttresses on the exterior that helped support the weight of the walls and vaulting. Here in the Renaissance, we see modular design, with a return to the classical rounded arch, in Santo Spirito.



Plan of Santo Spirito. In this image, east is up, and west is down.

Brunelleschi also used a defined mathematical constant throughout the design that created a sense of mathematical harmony. This concept was present in the design of Chartres Cathedral and other Gothic churches, and was similar to the classical, architectural temple designs of ancient Greece, such as the Parthenon, which used a similar approach.

Take, for example, the main arcade in the clerestory seen above. These are equal in height, and their combined height is twice that of the width of the nave. This was a marvel of classical influence, and the church stands as perhaps the greatest example of Brunelleschi's Renaissance-styled architecture.



#### DID YOU KNOW

Sadly, Brunelleschi never saw the completion of the main arcade, as he died before it was finished. Construction continued and was completed after his death in 1446.



#### TERMS TO KNOW

##### **Basilica**

A columned meeting hall in ancient Rome; later, a church with columns.

##### **Modular Design**

In architecture, an approach that divides a system into smaller parts that can be created and used in different systems with much functionality.

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## 4. Palazzo Medici

Although it wasn't designed by Brunelleschi, the Palazzo Medici (shown below) by Michelozzo de Bartolommeo, was definitely inspired by his style. In the classic Roman house design, the house is centered around an open, colonnaded courtyard. This house was commissioned by Cosimo de' Medici, of the influential Medici family.





Michelozzo de Bartolommeo  
Palazzo Medici  
Florence, Italy  
1445–1460

The exterior is hardly ostentatious, and yet it is far from plain. It expresses Michelozzo's understanding of classical design while at the same time creating something that was uniquely modern.

Three distinct horizontal bands are combined to create a sense of visual weight that decreases as you move upwards, and this is partially accomplished by the use of finished and unfinished stone. Notice how the stone begins as unfinished on the bottom and is progressively smoother as it moves upward. Finally, to balance the overall appearance, a heavy cornice roof is affixed on the very top. A cornice is the ledge that you can see on the top.

Here is a view of the interior courtyard:



Interior courtyard of Palazzo Medici

Notice the rounded arcade that goes around the central courtyard. This was a common feature in the housing designs in ancient Rome.



#### SUMMARY

Florence Cathedral, Santo Spirito, and Palazzo Medici are all excellent examples of Early Renaissance architecture. In this lesson, you learned about the **period and location of Early Renaissance architecture**.

In doing so, you explored architectural structures such as:

- **Florence Cathedral**
- **Santo Spirito**
- **Palazzo Medici**

Not only did you look at images of these structures, but you also learned in detail what made each unique. Remember, Brunelleschi had to create a solution to fill the large gap in the Florence Cathedral by devising new building methods. The Church of Santo Spirito in Florence, Italy, gave Brunelleschi the opportunity to incorporate the classic elements of the Renaissance back into architecture. The Palazzo Medici, by Michelozzo de Bartolommeo, was inspired by Brunelleschi. The house is centered around an open, colonnaded courtyard.

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