Baroque Architecture
Baroque architecture describes the style developed out from the late renaissance mannerism by the turn of the 16th century in Italy and diffused later on into other parts of Europe.

While renaissance architecture flourished with the support of wealthy families, Baroque came as a counter reform movement supported by the Catholic Church.

It developed the humanist mannerist style into rhetorical and theatrical expressions reflecting the control of the Catholic Church and absolute state.

Baroque architecture developed more emotional contents while at the same time expressed the wealth and power of the Church.
The start and the main architects

- It is believed that its roots started with Michelangelo in his design for Saint Peter’s Basilica.
- Giacomo Della Porta followed the same path in his design for the façade of the Il Gesu Church.
- Carlo Maderno then followed in his design for the façade of the Santa Susanna Church which is considered the most important building in the development of Baroque.
- Other architects greatly influenced the development of the Baroque style are Gian Lorenzo Bernini, Francesco Borromini and the painter Pietro da Cortona.
Characteristics of Baroque architecture

- Space is independent and extends outwards in a tendency to control larger areas.
- Wide use of ornaments
- Large-scale ceiling frescoes.
- Great emphasis on details and the use of color, light and shade, sculptural values and intense incorporation of arts.
- External facades are characterized by a central projection.
- Interior spaces are used for painting and sculpture.
- The use of illusory effects through the use of painting and sculpture.
- In contrast to renaissance building which can be easily and quickly understood and perceived, baroque buildings are huge and complicated with great concentration on the reflection of power and supremacy.
- The use of columns, domes, towers and oval windows.
IL Gesu Church, Rome, 1568 by Vignola and then by Giacomo Della Porta
Plan of Il Gesu
interior of Il Gesu
Features of Il Gesù

- The work started by Vignola in 1568
- The plan has short transept arms and thin choir then a semicircular apse. The nave is very wide with narrow square chapels on both sides. The plan conveys the simplicity and clarity of late renaissance.
- In 1571, Vignola died and Giacomo della Porta's became the principal architect and designed the façade of the church.
- Della Porta's façade expresses harmony and seriousness that fulfil the goal of the Counter-Reformation to assert the authority and majesty of the Catholic Church.
- The façade is divided into two parts. The lower part is evocative of Palladian architecture. Its columns and pilasters refer to the harmonious lines of Greek and Roman temples.
- The upper part has scroll-shaped buttresses on each side.
- This design of the façade provided the base for the development into the baroque style.
Santa Susanna Church, Rome, 1593-1603, Carlo Maderno
- It was commissioned by the Cardinal Girolamo Rusticucci and it was a turning point in the career of Carlo Maderno.
- Its façade is similar to that of Il Gesù.
- It is covered vertically with niches of sculpture in addition to pediments and pilasters.
- The main door itself is inside a niche with two pairs of Corinthian columns on each side.
- The centrality of the façade increases towards the center with the increase of the number of the columns and making separating them the façade. This in addition increased the depth of the center of the façade and greatly emphasized the main door.
- The façade is built from marble making it very significant in the surrounding context where all the buildings are built from bricks.
- The central massing and the extrusion and condensation of central elements added complexity and dynamics to the structure.
The monumental facade of St. Peter's Basilica, Carlo Maderno, 1605-1612
Carlo Maderno added a huge entrance bay with a great façade.

- The stone façade is 114.69 metres wide and 45.55 metres high
- It has a giant order of Corinthian columns and a central pediment
- A tall attic rises above the pediment with thirteen statues
- The façade has some problems in the proportions between its height and width, too much details and too heavy attic storey.
- The façade and the addition to the nave blocked out the view of the dome and made the building without vertical feature dimension.
Saint Peter’s Square, by Gian Lorenzo Bernini

- Between 1655 and 1667 the famous square was created by Gian Lorenzo Bernini who divided it into 2 parts, the closer one to the basilica is a trapezoid which extends outwards into an ellipse with two fountains at both sides and an Egyptian obelisk at the center.
- The colonnade was made by a double layer of columns supporting an entablature of a Tuscan order.
Gian Lorenzo Bernini

- Born December 7, 1598 in Naples and died November 28, 1680 (aged 81). He was an important Baroque sculptor and architect and had support of most powerful powers in the Roman church.
Church of Saint Andrea al Quinirale, Rome, 1658

- It is one of the important examples of Baroque architecture.
- Although the longitudinal church plan became the model for 17th century churches, Circular plan continued to be used as this one. Extended arms in the main façade provide a welcoming approach.
- An oval cylinder enclosed the dome, where large volutes transfer the lateral thrust.
- The main façade has a pedimented frame and a semicircular porch with two Ionic columns at the center to mark the main entrance.
- The heraldic coat of arms of the Pamphili patron lies above the porch entablature.
- The church has no perpendicular axis but 4 chapels instead.
- A hidden source of light in the back gives a mystical feeling, an element Bernini used creatively in his sculptural and architectural works.
Church of Saint Andrea al Quirinale

Volutess transfer the lateral thrust of the dome
Church of Saint Andrea al Quinirale

- The main entrance
Church of Saint Andrea al Quinirale

- **Floor plan:**
  1. Main entrance
  2. Chapel of Saint Francis Xavier
  3. Chapel of the Passion
  4. Chapel Saint Stanislas Kostka
  5. Chapel of Saint Ignatius of Loyola
  6. Main altar
  7. Entrance to novitiate and access to the rooms of Saint Stanislas Kostka
Church of Saint Andrea al Quinirale

- Hidden light source
Church of Saint Andrea al Quinirale

- Main elevation
Francesco Borromini (1599 –1667)

- An architect from Ticino, Italy, who had a leading role in the emergence of the Baroque style.
- He was a student of Michelangelo.
- He developed his own creative methods in design and building using the manipulation of classical architecture.
- His work was characterized by individuality and had less spread than the work of Bernini.
The church of San Carlo alle Quattro Fontane (San Carlino) - 1634-1667, Rome

External facade

- The church has a concave-convex facade which undulates in a non-classic way.
- Tall Corinthian columns stand on plinths and bear the main entablatures and between them, smaller columns with their entablatures weave behind and frame niches, windows, a and sculptures.
- Another row of columns support the upper entablature and the oval framed medallion held by angels
- Smaller columns frame the central oval aedicule and niches at both sides
The church of San Carlo alle Quattro Fontane

- Main façade
The church of San Carlo alle Quattro Fontane

Interior design

- The church has a complex interior.
- Vertically, it has three principal parts: the lower order at ground level, the transition zone of the pendentives and the oval coffered dome with its oval lantern.
- In the lower part of the church, the main altar is on the same longitudinal axis of the main door.
- Sixteen columns (arranged in groups of four) carry a broad and continuous entablature.
- A wavy movement is thus created and enhanced by the variation in the treatment of the bays between the columns with niches, moldings, and doors.
The church of San Carlo alle Quattro Fontane

- Interior of the church

http://romafelix.com/scarlino2.htm
The church of San Carlo alle Quattro Fontane

- Coffer domed with pediments and the lantern

http://www.greatbuildings.com/buildings/S_Carlo_Ale_Quattro_Fonta.html
The palazzo was originally built in 1540 for Cardinal Girolamo Capodiferro by the architect Bartolomeo Baronino.

In 1632, the palazzo was purchased by Cardinal Spada who commissioned Borromini to modify it.

Borromini created the masterpiece of forced perspective optical illusion in the arcaded Gallery.

Two diminishing rows of columns and a rising floor create the visual illusion of the gallery with a life-size sculpture at the end of the vista.
Plan of the palace and gallery
plan and section of the Gallery
Interior of Palazzo Spada gallery
French Baroque: Versailles palace and garden, Paris,
The layout of palace and the garden express the new baroque conception of space reflecting the tendency to unlimited extension.

At the same time it strongly emphasizes the extended main axis from the king’s own room at the center of the Chateau.

Although designed by French architects, the palace and the gardens were greatly affected by the Italian style of architecture and landscape architecture.

In addition to the vast extension, the gardens maintained extraordinary visual effects by using grand water canals, hundreds of fountains and diversified plantations.
Rococo architecture 1650-1790

- “Rococo” name is originated in the French words, rocaille and coquille (rock and shell) two of the most popular design elements in the genre.

- It combined the delicacy of French rocaille with Italian barocco - Baroque. It is most often found in Germany, Austria, Eastern Europe, and Russia. While there are many similarities between the Baroque and the Rococo styles, Rococo buildings tend to be softer and more graceful. Colors are pale and curving shapes dominate.
Main features of Rococo architecture

- The extensive use of curves and scrolls
- The use of shells and plants ornaments
- Complex patterns
- Touchy details
- Complex, asymmetrical shapes
- Light, pastel colors
- Space shaped on the expense of structural truth
- In contrast to Baroque architecture, Rococo is considered a secular style which did not draw on religious matters in design and ornamentation.
- Rococo architecture was the first style to arise as a style of primarily residential interior decoration.
Hôtel Matignon, 1722-1724, Paris, by Jean Courtonne

- Low rise building with principal rooms open to the garden.
- White color and pale plaster were used inside rooms with much concentration on interior decoration.
- Exterior ornamentation was less and concentrated on natural forms like shells, flowers, ....etc.
Hôtel de Matignon, Paris, 1721, J. Courtonne
Hotel Matignon - main entrance from the courtyard
Hôtel Matignon-
Interior

Amalienburg palace 1734-39, Munich, Germany by Francois Cuvillies
Karl Albrecht built it as a small pleasure palace and hunting lodge for his wife.

The architect François Cuvilliés designed the architecture and decoration of the palace.

It is considered as one of the most exquisite splendors in the European Rococo style.

It is a one story building with exterior and sequence of rooms form a master piece of rare beauty.

Its central section is slightly accentuated by a flat dome with a platform, houses a suite of rooms of striking unity.

It is considered the first and foremost important rococo building in its interior decoration.
Architecture of the Enlightenment
1720-1800: Rational Architecture

- The beginning of the 18th century witnessed the birth of a new movement giving more importance to science and rational thinking calling for lifting the siege imposed on human mind by the state and the church.
- And by 1784, Immanuel Kant managed to publish his influential article: *Answering the Question: What Is Enlightenment?* He said: "Mankind's final coming of age, the emancipation of the human consciousness from an immature state of ignorance and error."
- Rational philosophy undermined absolutism of the state and the church.
- Respect for this philosophy was a result of the successes and popularity of science.
- This as well brought dissatisfaction with Baroque and Rococo architecture in many parts of Europe.
There was a call to return to clear forms and proportional relationships and the revival of Palladian architecture.

There was a search for pure and *uncorrupted* architecture free from the illusion of power and theological mysteries of the church.

Architecture was called to be freed from superficiality and exaggerating ornamentations inside and outside and to use clear and pure reflections of the structural elements in buildings and to reflect the efficiency and functionality of architecture.

The new rationale pushed many architects and builders to seek evidence from the architectural remains of the Greeks and the Romans around the Mediterranean.
Enlightenment architects
William Kent, 1685 – 1748

- He was trained as painter and then became an architect and landscape designer. In the 1720s he worked with Lord Burlington on Chiswick House.
- Chiswick House was the first and one of the finest examples of neo-Palladian design in England.
- It was built for art collections of Lord Burlington and to provide a place for entertainment.
Chiswick House plan
The French architect Claude Nicolas Ledoux (1736 – 1806)

- He was one of the earliest architects of French Enlightenment architecture. He also was a utopian town planner. His greatest works were funded by the state but most of them were destroyed after the French revolution. In 1804 he published his works in a book titled: "Architecture considered in relation to art, morals, and legislation."
Barriere de la Villette, 1784-1789

- He was commissioned to build a ring of royal tax collection stations around Paris. He made them very simple and bold. One of them is Barriere de la Villette which consisted of cylinder over a square base. No decoration was used and the external appearance evoked the function of the building.
The Panthéon, or Sainte Genevieve Church, 1755, Paris, by Soufflot

- King Louis XV ordered the building of the church in 1744 after he returned to health from an illness. Jacques-Germain Soufflot was the architect and in 1764 the king himself laid the cornerstone for the new building. When the French Revolution broke out in the summer of 1789, it was under construction. It was then transformed to a secular mausoleum containing the remains of distinguished French citizens.

- It is an early example of enlightenment architecture, with a facade borrowed from the facade of the Pantheon in Rome, with a dome that resembles the dome of Bramante for Tempietto San Pietro in Montorio. It has a Greek cross plan with four small domes around the central dome and large windows and internal colonnades. Its structure is very clear and reflecting its actual function without any false masks or coverings with plaster or wood. And for this purpose it combines the post and lintle system with the arch and vault system.
Floor plan of the Pantheon
Interior Dome of the Pantheon
The English garden (English landscape park)

- Renaissance gardens up to the baroque period envisaged nature as a medium for expressing power and control through the extensive use of geometric patterns that extensively extending in space. This perception started to be changed in England in the 18th century where gardens were established around houses to emphasize the natural contour and keeping natural streams to form irregular ponds and leaving trees to grow on their primitive nature.

  "Lines were no longer straight, paths curve and wander, and parterres are replaced by grass. Trees were planted in clusters rather than in straight lines, and rounded lakes replaced the rectangular ponds of the earlier style. The garden became open, a park joining the house to the outside world rather than a carefully nurtured refuge from it."

http://www.britainexpress.com/History/english-gardens.htm
The first to bring English garden into a new era during the 18th century was William Kent especially in his design for Chiswick House garden.

After Kent, the English landscape garden continued to develop by his pupil and son-in-law, Lancelot Brown and had great effects upon the course of English gardening and architectural style.

The new garden design made the English country house a part of the nature around it.

All formal and straight artificial lines were replaced by grass parkland, irregular lakes and primitive trees and woodlands.
The gardens at Chiswick House are considered the birthplace of the English Landscape Movement and the inspiration for great gardens all over the world. They have combination of grand vistas and hidden pathways, architectural delights and a dazzling array of flowers, shrubs and rare trees.

It was originally created by Lord Burlington and William Kent in 1729. They replaced the formality of the existing renaissance garden with a freer, more delicate design. ‘Natural’ spaces were created, their informality highlighted by the careful addition of sculpture and other architectural details including an Ionic temple and Doric column.

The lawn that slopes gently downwards from Chiswick House to the artificial river is considered a revolutionary feature in its day.

Great parkland was opened up and made part of the garden. A lacework of meandering paths was introduced to provide exciting and attraction.
The Exedra at Chiswick House Gardens
Stourhead house garden, Warminster, England, 1741-1780, by Henri Hoare

- The Palladian style house at Stourhead built by Nathaniel Ireson 1720 1724
The garden is one of the world's best 18th-century gardens with its piece a magnificent lake in the center surrounded by classical temples and exotic trees. The River Stour was dammed to form a great lake. Classical features were also added, such as the Temple of Flora, the Pantheon, the Temple of Apollo, fake Gothic ruins, obelisk and King Alferd’s tower.
Monument exedra at Stourhead