## Timeline of architects

### Renaissance to Industrial Revolution

<table>
<thead>
<tr>
<th>Year</th>
<th>Architect</th>
</tr>
</thead>
<tbody>
<tr>
<td>1300</td>
<td>Filippo Brunelleschi 1377–1446</td>
</tr>
<tr>
<td>1330</td>
<td>Leon Battista Alberti 1404–1472</td>
</tr>
<tr>
<td>1452</td>
<td>Leonardo da Vinci 1452–1519</td>
</tr>
<tr>
<td>1471</td>
<td>Albrecht Dürer 1471–1528</td>
</tr>
<tr>
<td>1475</td>
<td>Michelangelo 1475–1564</td>
</tr>
<tr>
<td>1483</td>
<td>Raphael 1483–1520</td>
</tr>
<tr>
<td>1508</td>
<td>Andrea Palladio 1508–1580</td>
</tr>
<tr>
<td>1598</td>
<td>Gian Lorenzo Bernini 1598–1680</td>
</tr>
<tr>
<td>1599</td>
<td>Francesco Borromini 1599–1667</td>
</tr>
<tr>
<td>1743</td>
<td>Thomas Jefferson 1743–1826</td>
</tr>
<tr>
<td>1753</td>
<td>Sir John Soane 1753–1837</td>
</tr>
<tr>
<td>1781</td>
<td>Karl Friedrich Schinkel 1781–1841</td>
</tr>
<tr>
<td>1843</td>
<td>Claude-Nicholas Ledoux 1736–1806</td>
</tr>
<tr>
<td>1871</td>
<td>Sir John Soane 1753–1837</td>
</tr>
<tr>
<td>2000</td>
<td>Karl Friedrich Schinkel 1781–1841</td>
</tr>
</tbody>
</table>
### Timeline of architects

<table>
<thead>
<tr>
<th>INDUSTRIAL REVOLUTION TO PRESENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1800</td>
</tr>
<tr>
<td>Joseph Paxton 1801–1865</td>
</tr>
<tr>
<td>E.E. Viollet-le-Duc 1814–1879</td>
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<tr>
<td>Henry Hobson Richardson 1838–1866</td>
</tr>
<tr>
<td>Otto Wagner 1841–1918</td>
</tr>
<tr>
<td>Antoni Gaudi 1852–1926</td>
</tr>
<tr>
<td>Louis Sullivan 1856–1924</td>
</tr>
<tr>
<td>Frank Lloyd Wright 1867–1959</td>
</tr>
<tr>
<td>Charles Rennie Mackintosh 1868–1928</td>
</tr>
<tr>
<td>Adolf Loos 1870–1933</td>
</tr>
<tr>
<td>Piet Mondrian (artist) 1872–1944</td>
</tr>
<tr>
<td>Walter Gropius 1883–1969</td>
</tr>
<tr>
<td>Ludwig Mies van der Rohe 1886–1969</td>
</tr>
<tr>
<td>Le Corbusier 1887–1965</td>
</tr>
<tr>
<td>Antonio Sant’ Elia 1888–1916</td>
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<tr>
<td>Hugh Ferris (illustrator) 1889–1962</td>
</tr>
<tr>
<td>El Lissitzky 1890–1941</td>
</tr>
<tr>
<td>Alvar Aalto 1898–1976</td>
</tr>
<tr>
<td>Louis I. Kahn 1901–1974</td>
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<tr>
<td>Marcel Breuer 1902–1981</td>
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<tr>
<td>Giuseppe Terragni 1904–1943</td>
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<tr>
<td>Carlo Scarpa 1906–1978</td>
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<tr>
<td>Charles (1907–1978) and Ray (1912–1988) Eames</td>
</tr>
<tr>
<td>Oscar Niemeyer 1907–</td>
</tr>
<tr>
<td>Eero Saarinen 1910–1961</td>
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<tr>
<td>Paul Rudolph 1918–1997</td>
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<tr>
<td>Frank Gehry 1929–</td>
</tr>
<tr>
<td>Aldo Rossi 1931–1997</td>
</tr>
<tr>
<td>Peter Eisenman 1932–</td>
</tr>
<tr>
<td>Richard Rogers 1933–</td>
</tr>
<tr>
<td>Alvaro Siza 1933–</td>
</tr>
<tr>
<td>Richard Meier 1934–</td>
</tr>
<tr>
<td>Michael Graves 1934–</td>
</tr>
<tr>
<td>Norman Foster 1935–</td>
</tr>
<tr>
<td>Raphael Moneo 1937–</td>
</tr>
<tr>
<td>Renzo Piano 1937–</td>
</tr>
<tr>
<td>Robert A.M. Stern 1939–</td>
</tr>
<tr>
<td>Tadao Ando 1941–</td>
</tr>
<tr>
<td>Tod Williams Billie Tsi 1943–</td>
</tr>
<tr>
<td>Morphosis 1944–Contemporary firm date 1972</td>
</tr>
<tr>
<td>Rem Koolhaas 1944–</td>
</tr>
<tr>
<td>Steven Holl 1947–</td>
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<tr>
<td>Zaha Hadid 1950–</td>
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<tr>
<td>Douglas Darden 1954–1996</td>
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<tr>
<td>Archigram 1960s</td>
</tr>
<tr>
<td>Machado and Silvetti</td>
</tr>
<tr>
<td>Contemporary firm date 1974</td>
</tr>
<tr>
<td>Patkau (Patricia and John)</td>
</tr>
<tr>
<td>Contemporary firm date 1978</td>
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Additive design
The joining of two planar elements to create space.

Analysis
A reductive process; a simplification of one idea in isolation.

Assisting planes
Planes created in perspective construction to facilitate the transfer of height measurements to non-coplanar surfaces.

Axial
A strong single relationship between parts that are aligned with one another along an axis. Radial and linear are two types of axial relationships.

Axonometric
An objective three-dimensional representation that combines plan and elevation information on a single, abstract drawing. It depicts a view that cannot ever be perceived in real space. The axon is measured along three axes in three directions and its ease of construction is due to the fact that parallel elements remain parallel. There are many types of axonometric drawings, including paraline projection, (plan) oblique projection, and isometric.

Composition
The arrangement of parts including their placement, quantity, geometry, and scale in relationship to themselves and to the whole.

Cone of vision
The conical volume of 60 degrees taken from the eye of someone located at the station point in perspective construction. Distortion begins outside the 60-degree cone.

Construction lines
The lightest lines in a drawing, used to ensure alignments between elements in a single drawing or between two drawings such as plan and section. Typically these lines are visible when viewed up close but disappear at a distance of 3 ft (90 cm) or farther.

Cut lines
In plan or section these are the darkest lines representing cut elements.

Diagram
The process of visually abstracting a building or object into its main ideas.

Elevation
A two-dimensional drawing depicting a vertical cut outside of an object, looking toward its face. Imagine a plane perpendicular to the ground that does not intersect with the building or object. Elements outside of the object, for example the ground, are rendered as a cut line. The object or building itself is not cut through; all of the lines related to the building are elevation lines. Elevation lines vary with distance from the projected picture plane. Elements farther away are lighter than those that are closer.

Elevation lines
These delineate between spatial edges. Typically elevation lines farther away from the cut are constructed with a lighter lineweight than those surfaces closer to the cut. All elevation lines are lighter than cut lines.

Enfilade
The alignment of openings between rooms that provides a view along the length of the adjacent rooms. The Shotgun, a typical U.S. vernacular-style house, is an excellent example of the enfilade condition.

Entourage
Elements like people, cars, trees, bushes, and other landscape elements added to drawings to provide scale, character, and texture.

Figure-ground plan
A diagram of the building fabric which uses black and white to depict buildings and space, respectively. No other delineations are made—no streets or pavements, for example. It provides a method to understand patterns of the built environment and the relative size and shape of figural spaces.

Hidden lines
These are dashed lines that depict objects or planes that are technically not visible in a drawing. For example, hidden lines are used to show objects above the cut line in plans.

Hierarchy
The emphasis of one element over all others; useful for diagramming.

Horizon line (HL)
In perspective construction, the horizon line is the height of the viewer standing at the station point.

Isometric
A type of axonometric projection that provides a lower-angle view than a plan oblique. Equal emphasis is given to the three major planes. The isometric does not allow for construction to be extruded directly from the existing plan but requires the reconstruction of the plan with its front corner being drawn at 120 degrees instead of 90 degrees. Vertical information is typically true to scale. The measurements are transferred along the receding 30 degree axes.
Measuring line (ML)
In perspective construction, the vertical line established from the intersection of the picture plane and the plan. All measurements must be taken from this line.

Negative space
The residual, or leftover, space outside of an object or building. Negative space should be considered as a design opportunity.

One-point perspective
A type of perspective construction with a single vanishing point.

Orthographic projections
Two-dimensional abstractions of three-dimensional objects; orthographic projections include plan, section, and elevation.

Parti
The graphic depiction of the main idea, or concept, of a project.

Perspective
Perspective construction is a subjective representation that aims to translate the experience of a three-dimensional space, building, or object onto a two-dimensional surface. It is a prescriptive single point of view. A perspective cannot mimic the complexity of the human eye, which perceives peripheral and binocular vision, but it is an acceptable representational tool.

Picture plane (PP)
In perspective construction, a transparent plane, intersecting the cone of vision, that receives the projected perspective image and is perpendicular to the viewer. In the two-dimensional construction of perspective its location helps to determine how large the perspective image will be.

Plan
A horizontal cut through an object, building, or space, typically directed down. Imagine a plane, parallel to the ground plane, intersecting a building or object. The cut represents those elements sliced by the plane and is rendered with the darkest linewidth. There are a number of types of plan drawings including site plan, floor plan, roof plan, reflected ceiling plan, and figure-ground plan.

Poche
This word comes from the French pocher meaning “to make a rough sketch.” It is typically understood to be the solid elements in a building rendered in solid black.

Profile lines
These define the edges between an object or plane and open space in axonometric drawings.

Program
The uses of a building or space.

Proportion
The compositional relationship between parts.

Section
A vertical cut through an object, building, or space. Sections describe vertical relationships and help define the spatial characteristic of the building. Imagine a plane, perpendicular to the ground plane, intersecting a building or object. As in the plan, the information that is cut by the plane is rendered using the darkest line weights.

Sightlines
In perspective construction, the projected lines connecting the eye to the object being viewed. The perspectival image occurs where the sightlines cross the picture plane.

Station point (SP)
The location of the viewer in perspective construction.

Subtractive design
The method of carving into a solid element to create space.

Threshold
The point at which two spaces or elements join together.

Two-point perspective
A perspective construction with two vanishing points.

Vanishing point (VP)
The point (or points) at which parallel elements in a perspective converge.
Resources

Bibliography


Websites

www.greatbuildings.com
www.mapjunction.com
http://nolli.uoregon.edu
www.deathbyarchitecture.com

Architecture Organizations

The American Institute of Architects (AIA)
The professional organization that represents American architects. With over 80,000 members, the AIA supports high professional standards (code of ethics) and provides access to resources, education, and advice.
1735 New York Avenue, NW
Washington, DC 20006-5292, USA
1-800-AIA-3837, www.aia.org

American Institute of Architecture Students (AIAS)
This nonprofit, student-run organization is the voice of architecture and design students. The AIAS promotes both education, training, and professional excellence.
1735 New York Avenue, NW
Washington, DC 20006, USA

Association of Collegiate Schools of Architecture (ACSA)
Founded in 1912, over 250 schools in the U.S. and Canada now make up the membership association of the ACSA. The promotion of quality architectural education is the main focus of the body.
1735 New York Avenue, NW
3rd floor
Washington, DC 20006, USA

National Architectural Accrediting Board (NAAB)
NAAB is the accrediting agency for professional architecture degree programs. Available on their website is the most up-to-date list of accredited degree programs in the U.S. and Canada.
1735 New York Avenue, NW
Washington, DC 20006, USA

National Council of Architectural Registration Boards (NCARB)
The mission of NCARB is to safeguard the health, safety, and welfare of the public. NCARB works on professional practice standards as well as applicant registration standards.
1801 K Street, NW, Suite 1100-K
Washington, DC 20006-1310
202/783-6500, www.ncarb.org

Related Organizations

The American Architectural Foundation (AAF)
The AAF educates the public about the importance of architecture and design on improving lives.
1799 New York Avenue, NW
Washington, DC 20006
202-626-7318, www.archfoundation.org

State Architecture Board of Registration
www.ncarb.org/stateboards/index.html
Individual state boards will provide the requirements for licensing in that state. Registration, examination, and practice requirements are regulated by this agency.

www.archcareers.org
This website, part of the AIA, lays out the procedures to become an architect. They highlight the 3 E’s of the process: Education, Experience, and Examination.
U.S. Architecture schools accredited with NAAB

Academy of Art University
Andrews University
Arizona State University
Auburn University
Ball State University
Boston Architectural College
California College of the Arts
California Polytechnic State University, San Luis Obispo
California State Polytechnic University, Pomona
Carnegie Mellon University
Catholic University of America
City College of the City University of New York
Clemson University
Columbia University
Cooper Union
Cornell University
Drexel University
Drury University
Florida A&M University
Florida Atlantic University
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Hampton University
Harvard University
Howard University
Illinois Institute of Technology
Iowa State University
Judson College
Kansas State University
Kent State University
Lawrence Technological University
Louisiana State University
Louisiana Tech University
Massachusetts Institute of Technology
Miami University
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Montana State University
Morgan State University
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Roger Williams University
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Southern Polytechnic State University
Southern University and A&M College
State University of New York at Buffalo
Syracuse University
Temple University
Texas A&M University
Texas Tech University
Tulane University
Tuskegee University
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Emphasizing architecture's creative aspects, this book gives you a foundation course in architectural design. It introduces you to the visual language of architecture, encourages you to think spatially, and inspires you to question the built environment.

Step-by-step tutorials explain the entire design process. In addition, there are hands-on exercises that inspire you to practice your new skills, from conceptualizing a space and visualizing it three-dimensionally to creating sections, elevations, and fully-realized perspective drawings.

You'll find information about building techniques and materials that impact on design. You'll also learn from case studies that show different designers' interpretations of a range of assignments. Finally, you'll get professional advice that will help you take your next steps toward a career in architectural design.

Mo Zell has taught drawing at several colleges and universities across the United States. She studied architecture at the University of Virginia and Yale before spending several years working in the profession. She is currently the coordinator of the foundation studio, manual representation at Northeastern University in Boston. Mo is also a founding partner in the design firm Bauen Studio, where she co-designed the winning entry in the competition to create a Veterans Memorial on Northeastern University's campus.