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Class file and sign-up for office hours: Jaffe Bldg., lobby

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 Meyerson, B 1

Mon, Wed 1-2; Fri 1-3

## ARCHITECT AND HISTORY

Human experience is shaped by the built environment. This course introduces students to the interrelated fields of architecture, art history, and engineering and explores great architectural monuments from the ancient to the modern period, from India across the Mediterranean and Europe to the US. The focus will be on understanding these works in their structure and function, both as products of individual ingenuity and reflections of *Zeitgeist*. Questioning these monuments from a present-day perspective across the cultures will be an important ingredient, as will be podium discussions, guest lectures, excursions, and all kinds of visualizations, from digital walk-throughs to practical design exercises. No prerequisites.

Regularly taught in fall term, this course fulfills the Arts & Letters general requirement and is approved as a pilot course. It satisfies History of Art 100-level course requirements. NB: There is only ONE recitation in this course, attached directly to Friday's class at 2-3 pm, in order to provide sufficient time for practica and fields trips.

### COURSE STRUCTURE

- week 1      Sep. 3, 5: '**Ancient vs. Modern**' – structural elements and principles; comparing and contrasting (key approach); the 'right angle' to look at architecture
- PARTHENON, Athens (Iktinos, 440s BC); cf. NASHVILLE PARTHENON (1920s)
  - VILLA SAVOYE, near Paris (Le Corbusier, ca.1930); cf. FARNSWORTH HOUSE, near Chicago (Mies v.d. Rohe, ca.1950)
- \* reading: Stuart and Revett, *Antiquities of Athens* (1762 ff.), esp. intro to vol.1  
 \* basic reading throughout class: *The Annotated Arch* !
- NB! no recitation this Friday; class ends at 2 pm.
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- week 2      Sep. 8, 10, 12: '**Post and Lintel, Arch and Dome**' – stylobate to cornice, formal logic; tectonic and dynamic systems, visible and 'hidden' forces; push/pull: pressure/tension; lateral thrust; our analytical tools: observing, sketching, verbalizing
- PARTHENON and ACROPOLIS (PROPYLAIA: Mnesikles, 430s BC, with TEMPLE OF NIKE; ERECHTHEION, ca. 420s ff.)
  - PANTHEON, Rome (ca.120 AD, span **43** m) vs. PARTHENON (span 10.5 m) cf. TEMPLE OF MARS ULTOR (Augustus, 10s BC)

\* reading: Vitruvius, *De architectura* (ca.25 BC), esp. book 1,1-3, books 3 & 4  
Le Corbusier, *Vers une architecture* (1922)

**Friday Special (9/12):** excursion to SECOND BANK and MERCHANTS' EXCHANGE, Philadelphia (Strickland, ca.1820/1830s)

week 3

Sep. 15, 17, 19: '**Structure vs. Surface**' – body building vs. metaphysical architecture; perceptions of buildings; stereometry, stereotomy; pendentive

• PANTHEON vs. HAGIA SOPHIA, Constantinople (Anthemios, Isidoros, 530s/50s AD, span **31 m**)

\* reading: Procopius, *De aedificiis* (6th c.AD) – handout  
O'Gorman, *ABC of Architecture: 'firmitas'*

**Friday Special (9/19):** discussion of *De architectura* vs. *Vers une architecture*  
**announcing: 1-page assignment**

week 4

Sep. 22, 24, 26: '**Language' of Architecture**' – trabeated vs. arcuated systems; playing with the orders and stacking them; paradeigm and revival

• ATTALOS STOA, Athens (ca.150 BC)  
• COLOSSEUM, Rome (70s AD)  
• CANCELLERIA, Rome (1480s-90s); Pal. RUCELLAI, Florence (Alberti, 1440s-50s)  
• St. PETER's, Rome (cupola: Michelangelo, 1540-60s, span **42 m**)

\* reading: Summerson, *Classical Language*

**Friday Special (9/26):** excursion to GIRARD TRUST Building (McKim etc, 1900s, span 25 m) and FINE ARTS ACADEMY (Furness, 1870s), Philadelphia

week 5

Sep. 29, Oct. 1, 3: '**Classic vs. Gothic**' – a counter-classic system: dematerialising matter; 'flying' buttresses – pointed arch – barrel/cross vault – groined, ribbed; clustered colonnettes (*piliers cantonnes*), columns 'out of proportion'

• NOTRE DAME, Paris (1160s-1240s, span 10 m)  
• REIMS cathedral, near Paris (1210 ff.), cf. Villard d'Honnecourt  
• BEAUVAIS cathedral, near Paris (1220s ff.-1600s, span 15 m)

\* reading: Villard d'Honnecourt, *Carnet* (1220s/30s)  
O'Gorman, *ABC of Architecture*; Salvadori, *Why buildings stand up*

**Friday Special (10/3):** film on AMIENS cathedral, near Paris (1220s-80s)  
**announcing: architectural sketch (2 pg.)**

week 6

Oct. 6, 8: '**Periods, and -isms**' – taste, style, epoch; continuity, discontinuity, and revival; style as 'predominant formal language'

• LORSCH, abbey gate house, Germany (770s),  
cf. ARCH OF CONSTANTINE (Rome, ca.300)  
PALATINE CHAPEL, Aachen (Odo von Metz, ca.800, span 15 m)  
**Carolingian** – re-connecting with Roman Antiquity

cf. Early Islamic: CAIROUAN, GREAT MOSQUE, Tunisia (ca.800);  
CORDOBA, GREAT MOSQUE, Spain (ca.800–900s)

- ST. MICHAEL, Hildesheim (1010-30s); cf. S. PAOLO (Rome, ca. 400)  
**Romanesque** – the 'Roman' style
- S. GIORGIO MAGGIORE, Venice (Palladio, 1560s ff.)  
**Renaissance** – Antiquity reborn
- S. CARLO (4 Fount.), Rome (Borromini, 1630s-60s)  
**Baroque** – Antiquity twisted
- S. SULPICE (facade), Paris (Servandoni, 1730s-50s)  
**Neo-Classicism** – Antiquity 'truly' revived: back to basics!

\* reading: Laugier, *Essay sur l'architecture* (1753) – handout

Wednesday (10/8): **announcing 4-page paper ('First Paper')**

**no Friday class** (10/10): to be made up on 11/21!

*fall break, 10/11-14*

week 7

Oct. 15, 17: '**Periods and -isms**' – *continued*; the 'leading task' of building

- PIAZZA d'ITALIA, New Orleans (Moore, 1970s)  
**Post-Modernism** – 'forbidden' plays (with Antiquity)
- 'PLAIN HOUSING', Amsterdam; VILLA d'AVA, St. Cloud/France;  
FUKUOKA Project, Fukuoka/Japan (all Koolhaas, 1990s)  
GEHRY HOUSE, St. Monica (1970s); DUTCH OFFICE, Prague (1990s); BILBAO  
Museum, Spain (1990s); DISNEY HALL, L.A. (compl. 2003; all Gehry)  
**Deconstructivism** – 'chaotic' plays: back to basics! Where are we now?

\* reading: *NewsWeek* article on Koolhaas – handout

**Friday (10/17): MIDTERM EXAM (1-3 pm) – mark this mandatory date!**

week 8

Oct. 20, 22, 24: '**How To ...**' – plans and planning of buildings

- DIDYMA, Temple of Apollo, Turkey (3rd c. BC ff.)
- PANTHEON (2nd c. AD; bell towers: Borromini, 1600s)
- COLOGNE CATHEDRAL (1250s ff.–19th c.); YORK CATHEDRAL (13<sup>th</sup> c.)

\* reading: *Sc. American* article on Pantheon – handout

**Friday Specials** (10/24): film on BILBAO Museum;  
design exercise "shaping a square" (**Practicum I**)

week 9

Oct. 27, 29, 31: '**Numbers and Proportions**' – 'calculating' a building;  
proportion and module; transmission of design; role of treatises

- Polykleitos' *Canon* and *Doryphoros* (5th c. BC)
- 'Vitruvian Man' (Da Vinci, 1480s), cf. R. Mapplethorpe, 1980s
- C. Cesariano's *Vitruvius* (1521) and Milan cathedral ((1380s-1480s)
- Palladio, *Quattro libri dell'architettura* (1570) and

VILLA ROTONDA, Vicenza (1550s-90s)  
cf. Alberti (1485), Serlio (1537 ff.), Vignola (1562)

- Le Corbusier's *Modulor* (1950s) and  
L'UNITE D'HABITATION, Marseilles (ca. 1950)

\* reading: Pollitt's article on Polykleitos – handout  
Palladio, *Quattro libri*

**Friday Special** (10/31): excursion to PMA, Philadelphia (Borie, Trumbauer,  
and Zantinger, 1910s-20s) and FAIRMOUNT WATERWORKS (Graf, 1810s)

week 10

Nov. 3, 5, 7: '**Constructing Curves and Cupolas**' – intended 'deviations' and  
refinements, entasis; semicircular/pointed arch and parabola; catenary  
and structural engineering; constructing and rescuing domes; inclined supports

- DIDYMA (*entasis* curve, 3<sup>rd</sup> c. BC)
- ST. PETER'S (rescue operations: Poleni, *Memorie storiche della gran cupola  
del tempio Vaticano*, 1748)
- ST. PAUL'S, London (Wren, 1670s-1700s, span **31** m)
- US CAPITOL, cupola (Walter, ca. 1860, span ... m)
- SAGRADA FAMILIA, Barcelona (Gaudi, 1880s–pres.)
- PALAZZETTO/PALAZZO DELLO SPORT (span **100** m), Rome (Nervi, 1950s/60s)

\* reading: *Sc.American* article on Didyma – handout  
Poleni, *Memorie*

**Friday Special** (11/7): constructing a curve (**Practicum II**)  
**announcing: 5-page paper ('Second Paper')**

week 11

Nov. 10, 12, 14: '**Naissance of Renaissance**' – emergence and evolution  
of a period. Pointed arch and 'quinto acuto'

*"Structure and emulation, not style → Renaissance"*

- VITRUVIUS' rediscovery (ca.1420, St.Gall); cf. Vitruvian Man
- FOUNDLING HOSPITAL, Florence (Brunelleschi, ca.1420)
- S. MARIA DEL FIORE, Florence (beg. 1290s; Campanile: Giotto, 1330s-50s):  
cupola (ca.1420-30s, span **43** m! 1440s lantern, Brunelleschi)  
cf. S. Miniato, Florence (ca.1100)  
MILAN cathedral (1380s-1480s, with Cesariano)
- S. PIETRO IN MONTORIO, Rome (Bramante, ca.1500)
- ST. PETER'S, Rome (Bramante, Michelangelo, and Della Porta, 1500s)  
cf. VILLA ROTONDA (Palladio)

*"Baroque – twisted Renaissance"*

- BALDACHINO, St.Peter's (Bernini, 1620-30s)
- ST. PETER'S PIAZZA, Rome (Bernini, 1650s-60s)

\* reading: King, *Brunelleschi's Dome*

**Friday Special** (11/14): Rare Book Exploration: Van Pelt, Fisher Fine Arts,  
Architectural Archives (Vitruvius, Desgodetz, Borromini, Haviland, et al.)

week 12 Nov. 17, 19, 21: **'East of West'** – Ottoman and Indian Classics. Corbeling and squinch/trompe; mosque – minaret – mihrab – qibla

- Early Islamic: DOME OF THE ROCK, Jerusalem (ca. 690, span 20 m)

*Early and Classical Ottoman Turkey*

- GREEN MOSQUE, Iznik; GREEN MOSQUE, Bursa (ca. 1400)
- HAGIA SOPHIA – the turning point
- SEHZADE MOSQUE, Istanbul (Sinan, 1540s, span 19 m)
- SÜLEYMANIYE, Istanbul (Sinan, 1550s, span 27 m)
- SELIMIYE, Edirne (Sinan, 1560s-70s, span 31 m!)

*Islamicate architecture in India*

- TAJ MAHAL, Agra (1630s-40s)
- GOL GUMBAD, Bijapur (ca.1660s, span 38 m)

\* reading: Sinan – handout

**Friday Special (11/21):** excursion to PSFS BUILDING, Philadelphia (Howe and Lescaze, 1930s) – NB: extended **until 4 pm!**

week 13 Nov. 24, 26: **'19/20th c. Ambivalences'** – continuations, 'affinities', and revolutions; Modern vs. Classic, or 'Modern Classic'?

- ALTES MUSEUM, Berlin (Schinkel, 1820s)
- WERDER CHURCH, Berlin (Schinkel, 1820s)
- BAUAKADEMIE, Berlin (Schinkel, 1830s)
- BRITISH MUSEUM, London (Smirke, 1820s ff., facade 1840s, Rdg. Rm. 1850s/60s + 1990s by Foster)
- CRYSTAL PALACE(s), London and Sydenham (Paxton, 1850s)
- AEG TURBINE FACTORY, Berlin (Behrens, 1900s)
- GERMAN EMBASSY, St.Petersburg (Behrens, 1910s)
- WEISSENHOF house, Stuttgart (Behrens, 1920s)
- PARK GUELL, Barcelona (Gaudi, 1900s-10s)
- SAGRADA FAMILIA
- CASA MILA (La Pedrera), Barcelona (Gaudi, 1900s)
- GERMAN PAVILLION, Barcelona (Mies v.d.Rohe, 1920s, reconstr. 1980s)
- FARNSWORTH Hs.
- NATIONAL GALLERY, Berlin (Mies, 1960s)
- AT&T Building, N.Y. (Johnson, 1970-80s)

\* reading: Hitchcock and Johnson, *The International Style* (1932).

*Thanksgiving break, 11/27-30*

week 14 Dec. 1, 3, 5: **'Urban Context'** – city planning in old and new worlds

- PHILADELPHIA (orig. plan: Penn, 1680s; B.FRANKLIN PARKWAY 1900s-20s, final design: Gréber, 1910s)

- NEUF-BRISACH, Alsace (Vauban, ca.1700)
- PALMANOVA, Italy (Scamozzi, ca.1600)
- NEW HAVEN (nine-square, 1630s)
- BOSTON (18th c., 'grown city')
- NEW YORK (18th/19th c. ('grown' and 'gridded' city, esp. Commissioner's Plan, 1811)
- WASHINGTON, D.C. (L'Enfant, 1790s, cf. VERSAILLES: LeNotre, 1660s-80s)

**Friday Special** (12/5): Grand review (2-3 pm)

**final exam** scheduled by the registrar, 12/10–17; *happy winter!*

## COURSE REQUIREMENTS

### PREREQUISITS

- regular attendance, incl. all excursions and practica
- homework readings, sketchings, and (short) writings
- keeping notebook (ungraded, checked upon presentation)
- intensive image study (web-site)

### PAPERS

- 1-page paper *ungraded, but must be accepted*
- architectural sketch (ground plan: 1-2 pg.)  
with explanatory notes *ungraded, but must be accepted*
- 4-page paper (with additional sketches  
and illustrations) 25%
- 5-page paper (with additional sketches  
and illustrations) 25%

### EXAMS

- mid-term exam 25%
- final exam 25%

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**NB** *Absence from mid-term and final exams due to athletic commitments will not be granted under any circumstances!*

*Missed practica (I-II) must be made up and presented!*

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## BIBLIOGRAPHY

\* note-book (letter size, blank pages, stich-bound, hard cover): **mandatory!** \$ 10.–

• **recommended to buy** (available at BOOK CENTER, 34th St.)

- \* C. Strickland, *The Annotated Arch* (Kansas City 2001). \$ 25.–
- \* Le Corbusier, *Towards a New Architecture* (1922; N.Y. 1986). \$ 12.–
- \* M.H. Morgan (ed.), *Vitruvius. The Ten Books on Architecture* (N.Y. 1960). \$ 11.–
- \* J. Summerson, *The Classical Language of Architecture* (London 1980). \$ 15.–
- \* J. O'Gorman, *ABC of Architecture* (Philadelphia 1998). \$ 15.–
- \* R. King, *Brunelleschi's Dome* (N.Y. 2000). \$ 13.–
- \* H.-R. Hitchcock and P. Johnson, *The International Style* (N.Y. 1966). \$ ....

• **special aspects** (on reserve, Fisher FA Library)

- J. Stuart and N. Revett, *Antiquities of Athens I-III, 1762-94* (reprint).  
FA, Res. NA 280. S 913 (vol. 1-3)
- M. Levy and M. Salvadori, *Why Buildings Fall Down* (N.Y. 1992).  
FA, Res. TH 441. L 48. 1992
- R. Mark, *Experiments in Gothic Structure* (Cambridge, Mass. 1984).  
FA, Res. NA 440. M 36. 1984
- I. Rowland and T. Howe, *Vitruvius – Ten Books on Architecture* (Cambridge 1999).  
FA, Res. NA 2515. V 6135. 1999
- R. Mark et al., *Hagia Sophia from the Age of Justinian to the Present* (Cambridge 1992).  
FA, Res. NA 5870. A 9. H 34. 1992
- A. Erlande-Brandenburg et al., *Carnet de Villard de' Honnecourt* (Paris 1986).  
FA: NA 1053. V 6. A 4. 1986
- A. Palladio. *Four Books on Architecture* (Engl. transl. 1997, by R. Tavernor and  
R. Schofield). FA, Res. NA 2515. P 253. 1997
- McKim, Mead, and White, *The Architecture of McKim, Mead, and White* (N.Y. 1990).  
FA: NA 737. M 4. A 4. 1990
- P. Blake, *The Masterbuilders: Le Corbusier, Mies van der Rohe, Frank Lloyd Wright*  
(new ed. N.Y. 1996). FA, Res. NA 680. B 52. 1996
- M.-A. Laugier, *Essay on Architecture* (Engl. transl. and commt. by W. & A. Herrmann).  
FA, Res. NA 2515. L 2913
- G. Poleni, *Memorie istoriche della gran cupola ...*, 1748 (reprint).  
FA, Res. NA 5620. S 9. P 65. 1991
- Le Corbusier, *Modulor* (Engl. transl., 2000).  
FA, Res. NA 2760. J 413. 2000
- J. Reps, *Town Planning in Frontier America* (2nd ed. Princeton 1980).  
FA, Res. NA 9106. R 46. 1980

- S. Kostof (ed.), *The Architect. Chapters in the History of the Profession* (Oxford 1977).  
FA, Res. NA 200. K 65. 1985
- A. Saint, *Architect and Engineer. A Study in Sibling Rivalry* (Yale 2008).  
FA: NA 2543. E 54. S 25. 2007

• **general** (on reserve, Fisher FA Library)

- M. Moffett et al., *Buildings across Time. An Introduction to World Architecture*  
(Boston 2004) FA, .....
- S. Kostof, *A History of Architecture. Settings and Rituals* (Oxford 1995).  
FA, Res. NA 200. K 65. 1995
- H.-W. Krufft, *A History of Architectural Theory: From Vitruvius to the Present* (1985;  
London 1994). FA: NA 2500. K 7513. 1994
- N. Pevsner et al., *A Dictionary of Architecture* (2nd ed. Woodstock 1976).  
FA, Ref. NA 31. F 55. 1976b
- W. Rybczynski, *The Look of Architecture* (Oxford 2001).  
FA, Res. NA 2550. R 968. 2001

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*Monumentorum artis – qui unum vidit, nullum vidit; qui mille vidit, unum vidit.*

LH 8/22/08



This era of architectural history was transitional and transformational. 800 to 1200 â€” Romanesque. Romanesque Architecture of the Basilica of St. Sernin (1070-1120) in Toulouse, France.Â History and Research: Silbury Hill, English Heritage Foundation, <http://www.english-heritage.org.uk/daysout/properties/silbury-hill/history-and-research/>; Stonehenge, Avebury and Associated Sites, UNESCO World Heritage Centre, United Nations, <http://whc.unesco.org/en/list/373>. Architecture first evolved out of the dynamics between needs (shelter, security, worship, etc.) and means (available building materials and attendant skills). As human cultures developed and knowledge began to be formalized through oral traditions and practices, architecture became a craft. Here there is a process of trial and error, and later improvisation or replication of a successful trial. What is termed Vernacular architecture continues to be produced in many parts of the world.