WELCOME TO ARCH 1121-HISTORY OF ARCHITECTURAL TECHNOLOGY

1. PLEASE TURN OFF CELL PHONES FOR ENTIRE DURATION OF CLASS
2. PLEASE TURN OFF ALL IPODS, WALKMANS, ETC.
3. PLEASE NO EATING OR DRINKING DURING CLASS
4. PLEASE BE CONSIDERATE OF OTHERS-RESPECT IS KEY TO YOUR PROFESSIONAL CAREERS & DAILY LIVES.
5-21 Doric and Ionic orders. (After I. H. Grinnell.)
5-22 The “Basilica,” Paestum, Italy, c. 550 B.C.
5-24 “Basilica” colonnade, with view of the Temple of Hera I beyond.

5-25 Evolution of Doric order proportions, Archaic to Classical. (Examples are not drawn to same scale.)
5-26 Temple of Hera II at Paestum, Italy, c. 460 B.C.

5-27 Plan (left) and section (right) of the Temple of Hera II at Paestum. (After Sir Banister Fletcher.)
183. The “Basilica,” c. 550 B.C.; and the “Temple of Poseidon,” c. 460 B.C. Paestum, Italy
187. Sectional view (restored) of the Temple of Aphaia, Aegina
5-28 Treasury of the Siphnians from the Sanctuary of Apollo at Delphi, c. 530 B.C. Archeological Museum, Delphi.
(Facade reconstructed.)
3.27 Propylea, Athens, ca. 432–437 B.C., iron-bar insert in ceiling beam (after Coulton).

3.29 "Bow-tie" courses employed in Greek temple construction (after Coulton).
Greece: 480 - 431 BCE

480 BCE Persians destroyed many of the buildings

479 BCE ends the Persian invasion of Greece

450 BCE Pericles allocates defensive funds for rebuilding

Begins rebuilding the Acropolis
Acropolis (High Point in the City)

Complex Site
Commanding shape
Highly defensible – surrounded by sheer cliffs except the west
Religious and Cultural Center
Built of marble - allowed fine detail (previously mainly limestone)
Acropolis (High Point in the City)
Site Planning:

Each Building was sited and designed with others in mind

The observer went up a zigzag ramp – many glimpses

Avoid strictly frontal views of monuments (Unwritten Rule)

Symmetry in Buildings, not in Site Planning

Wanted observer to view buildings in 3-D not flat elevations
Parthenon: 447-438 BCE

Thought to be the world's most perfect building

Doric Temple dedicated to Athena – Patron Goddess of Athens

Highest Point of the Acropolis

20,000 Tons of Marble

Designed by Iktinus & Kalikrates

Symbol of Architecture Refinement
5.44 Iktinos and Kallikrates, the Parthenon, Acropolis, Athens, 448–432 B.C. (view from the northwest).
Parthenon: 447-438 BCE
8 x 17 doric columns
6 Columns at front and rear entrances
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Parthenon: 447-438 BCE

101’ x 228’
8 x 17 doric columns
Columns: 6’2” wide and 34’3” tall
Ratio: 1 : 5-1/2

Three step around the Temple
Statue of Athena – Fully Armed
Marble transported 16k from Mt. Penelicus
Remained intact until 1687 when a Venetian shell exploded destroying interior and roof
Many sculptures
Terracotta tiled roof
Parthenon: 447-438 BCE

Drawing of the Parthenon, Athens, ca. 447-432 B.C., and the Architectural Relationship to the Golden Section

Analysis of golden section proportions according to the golden section construction diagram.

Golden Section Harmonic Analysis
Analysis of golden section proportions according to a diagram of a harmonic analysis of the golden section.
Propylaia: 437-432 BCE
Gateway to the Acropolis

Designed by Mnesikles

2 levels due to uneven ground

Gateway from Land of Humans to The Land of Gods
5-51 Mniesikles, the Propylaia, Acropolis, Athens, c. 437-432 B.C. (view from the east).
Temple of Nike:
427- 410 BCE
Goddess of Victory

Earliest Ionic Building at the Acropolis

Columns: 11’ high
Ratio: 1:7

Frieze: battle scenes depicting Greeks versus Persians

Set on 4 steps

Pediment decorated with winged victories or Nike(s) created by Callimachus
Temple of Nike: 427-410 BCE

4 Column projecting Porches
The Erechtheion 421-405 BCE

Sloping site inspired split level design
Built at the Acropolis
No continuous colonnade – 4 separate porticos
Accommodates diverse hallowed areas
Departs from traditional symmetry
Continuous frieze running above architrave
Abundance of sculpted ornament
3-54. Reconstructed elevations of the east and west facades of the Erechtheum, Acropolis, Athens.

3-55. Portico of the Maidens, the Erechtheum.
The Erechtheion 421-405 BCE
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The Erechtheion 421-405 BCE
431 BCE: Peloponnesian War: Greece loses to Sparta; democracy remains

336 BCE: Alexander the Great conquers Greece: democracy survives, but its vitality was gone

Hellenism began after the death of Alexander the Great

Change in the Greek citizen: specialized – not involved in all aspects of public life (politically, military and economically)

Change in Architecture: greater freedom, shift in Architectural style, introduction of the Corinthian Column
Corinthian: Late 2\textsuperscript{nd} Century BCE

Thin and decorative

Columns were 10 times taller than the diameter

Designed by Callimachus combining a goblet and scrolls and acanthus leaves

There were 24 flutes
Corinthian:

Ionic and Corinthian fluting

Doric fluting
5.69 Corinthian capital from the temple at Epidauros, c. 350 B.C. Museum, Epidauros.

5.70 The Monument of Lysikrates, Athens, 334 B.C.
5-88 City of Priene, fourth century B.C. Right: Simplified ground plan. Shaded rectangle indicates area shown in detail at left.

1. Temple ruins
2. Wells
3. Fish and meat market
4. Sanctuary of Olympian Zeus
5. Gymnasium
6. Bouleuterion

1: 250
2: 500
5: 100
1: 250
5: 100

METERS
FEET
Temple of Zeus Olympius, Athens: 170 BCE

Started in the 6th Century BCE with Ionic Columns, but abandoned.

Construction began again in the 2nd Century BCE, but changed Order to Corinthian by Roman Architect, Cossutius.
Temple of Zeus Olympius, Athens: 170 BCE
Temple of Zeus Olympius, Athens: 170 BCE

Located east of the Acropolis

Over 100 Columns, double rows of 20(N&S) and triple rows of 8 (E&W)

Columns: 56’ high 5’6 wide
Civic Architecture

Agora:

Place of public assembly in a Greek city; the focus of political, commercial, administrative and social activity, the religious and cultural center, and the seat of justice
Civic Architecture
Agora:
Civic Architecture

Agora:

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Civic Architecture

Agora:
Bouleuterion 5th Century BCE

The Council of 500 (Boule) held its regular meetings here. Had tiered seating.
5-89 Bouleuterion at Miletus, late third century B.C.

5-90 Reconstruction of council chamber, Bouleuterion at Miletus.
Metroon 2\textsuperscript{nd} Century BCE

The building has an Ionic propylon. It accommodated both the sanctuary of the Mother of the Gods and the state archives, including the proceedings of the meetings of the Council of 500 and various official documents, protected by the goddess.
Temple of Hephaistos 449 BCE
Doric temple
It is sited on the hill.
It is the most prominent and better preserved monument of the Agora.
The temple was dedicated to two gods, Hephaistos and Athena, whose bronze cult statues stood in the interior.
Temple of Hephaistos 449 BCE
Tholos 460 BCE
Circular building

The chairmen (prytaneis) of the Council of 500 (Boule) dined and spent the night in the Tholos so as to be available if necessary.

A set of standard weights and measures was also kept in the building.
Stoa of Zeus Eleutherios 5th Century BCE

The stoa was erected in honor of those who fought for the freedom and security of the city.

Socrates is said to have met his friends in this stoa.
Stoa of Attalos 150 BCE
Two-story building, 381 ft x 63 ft 8 in,

Doric colonnade on the ground floor, and an Ionic upper colonnade incorporating a balustrade.

More important is the way the stoas are used to close off the agora to a regular plan.

In 1953-56 it was reconstructed in order to house the finds from the excavations at the Agora - The Agora museum
Stoa of Attalos 150 BCE
Theater of Epidaurus 350 BCE
Semicircular outdoor theater
Consists of 55 tiers of steeply banked stone seats
Used for: Political assemblies, religious festivals and plays
Perfect acoustics
Seating extends more than half way around the orchestra
Theater of Epidaurus 350 BCE
5-71 Polycleitos the Younger, theater at Epidaurus, Greece, c. 350 B.C.

5-72 Plan of the theater at Epidaurus. (After F. Krischen.)