INTRODUCTION TO ARCHITECTURAL PROPORTION: Parts I - IV

Instructor: Rachel Fletcher

SYLLABUS:

Lecture:
Why proportion? Why the compass? (11-16); the circle (19-21); vesica piscis (21-22); symmetry; Pythagorean theorem (25-27); Bramante’s Tempietto elevation (42-43); theorem of Thales, law of similar triangles (38-39); 6+1 circles, circle and hexagon, star of David, six directions (45-49); swallowtail butterfly (69); snow crystals (49-50); elements of dynamic symmetry, incommensurable ratios, diagonal, reciprocal, $\sqrt{2}$, $\sqrt{3}$, and $\Phi$ (29, 141-46, 219-22); root-two applications: Temple of Theseus (Hephaistos) (268-71); ad quadratum (78-83); sacred cut (85-92); Bramante’s Tempietto plan (93-97); Notre Dame de Paris South Rose Window (95-97); tetractys (98-111); Thomas Jefferson’s Poplar Forest (278-89); golden section (133-134); pentagon and golden ratios (134-137); golden triangle (138-139); whirling square rectangle (141); phi and human anatomy, Le Corbusier’s Modulor (156-157, 162); golden mean applications: triton shell, grass-of-Parnassus (162-63); history of golden ratio (154-155); Palladio’s Villa Emo (184-91); Thomas Jefferson’s Rotunda and the Pantheon of Rome; Velika Planina (169-174)

Drawings:
drawing fundamentals III-1a (72)
how to draw a perpendicular line
how to find a midpoint
circle I-1a (19)
vesica piscis I-1b (21)
vesica piscis and incommensurable ratios $\sqrt{2}$, $\sqrt{3}$, and $\Phi$ I-2, I-3, I-5 (23-25, 27-29)
$\sqrt{3}$ proportional system from a vesica piscis I-7a-c (30-31)
theorem of Thales I-9 (38-39) and demonstration of similarity I-8h-i (40-41)
six plus one circles (II-1) (46-47)
$\sqrt{3}$ proportional system from Star of David II-4a, 5 (55,57)
$\sqrt{2}$ proportional system from square (III-1, 71-73) (VII-2, 248-251)
ad quadratum constructions and spirals III-3 (79-83)
sacred cut constructions III-5 (85-92)
golden triangle and approximate spiral IV-2h-k (139-140)
$\Phi$ proportional system from whirling square rectangle IV-3 (141-146)
divide a line in golden section IV-4 (147-148)
how to draw golden mean proportional dividers IV-15 (164-168)

Numbers in (red) refer to pages in the workbook Infinite Measure
HIGHLY RECOMMENDED WORKBOOK:


RECOMMENDED READING:


ICAA WEBSITE: www.classicist.org/articles/introduction-to-architectural-proportion-part-i/