



THE INSTITUTE OF CLASSICAL ARCHITECTURE & ART
NATIONAL CORE CURRICULUM

ELEMENTS – THE CLASSICAL ORDERS

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ELEMENTS – THE CLASSICAL ORDERS

I. DESCRIPTION OF CORE SUBJECT AREA

Elements is defined as the formalized canon of proportioning systems and geometries for columns and horizontal members, their constituent parts and related components that has guided the practice of classical architecture since antiquity.

This includes the five established orders within the classical Canon as delineated and described by Renaissance architects such as Vignola: the Tuscan, Doric, Ionic, Corinthian and Composite.

The Doric, Ionic and Corinthian Types evolve through Ancient Greece, develop further and inspire the Composite in Ancient Rome, while the Tuscan develops from Etruscan traditions. All five are codified and systemized by Renaissance Authors. Collectively they represent a spectrum of complexity in detail and of proportional relationships.

II. LEARNING OBJECTIVES

- To introduce the terminology and grammar of Classical Moldings, the Classical Orders and related Classical Elements.
- To introduce a methodology for constructing through drawing, canonical versions of the Classical Orders such as that outlined by Giacomo Barozzi da Vignola in his treatise on the orders, *Regola delli Cinque Ordine d'Architettura* (*Canon of the Five Orders of Architecture*), further elaborated upon in William Ware's *The American Vignola*, in the *ICAA Classical Primer* and in other treatises on the Classical Language.
- To provide a foundational introduction to the essential dispositions and relationships between the parts of the Classical Orders and related Classical Elements on which to build broader knowledge of the classical language in the areas of history, theory, delineation and composition for the purposes of application to practice and for general appreciation.
- To learn how to construct through drawing molding profiles and each of the Classical Orders.



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III. LEARNING OUTCOMES

- Overview of Molding Types
 - Nomenclature of Standard Types – term origin, description of profile, variations and alternate profile names, effect and use
 - Systems of Classification
 - Profile Geometry
 - Planar – Fascia, Fillet
 - Curvilinear, Convex: Bead, Ovolo, Torus, $\frac{3}{4}$ Round, Echinus, Thumb
 - Curvilinear, Concave: Cavetto, Conge, Scotia, $\frac{3}{4}$ Hollow
 - Curvilinear, Compound: Cyma Recta/Reversa, Bolection, Beak
 - Function – crowning, supporting, binding, separating, bearing, transferring
 - Variations on Standard Types – Geometrical adjustments, etc.
 - Geometrical Construction of Standard Types – Drawing the Ovolo, Echinus, Torus, Scotia, Cyma, etc.
 - Embellishment of moldings
 - Molding Theory and Design Considerations – facial angle, selective use, scale and size, repetition alternation and contrast, hierarchy, harmony in character, simplification/abstraction, material implications, optical refinements, etc.
- Terminology of the Classical Orders
 - The Orders – Standard Types: Tuscan, Doric, Ionic, Corinthian, Composite
 - The Column – Base (pinth, etc.), Shaft (cincture/apophyge, flute, channel, etc.), Capital (astragal, neck, echinus, abacus, bell, etc.)
 - Entablature – Architrave, Frieze, Bedmould, Cornice, etc.
 - Pedestal – Base, Die, Cap
- Proportions of the Classical Orders
 - Introduction to columnar proportion systems as expressed in terms of modules or units of measure based on the column diameter.
 - Proportions of each of the Orders and their constituent parts.
 - Methodology for blocking out the general proportions of the orders
 - Diminution and Entasis
- Characteristics and Features of the Orders:
 - Tuscan – Least adorned, bold profiles, minimally detailed, standardization by



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- renaissance authors, origins in Etruscan culture
- Doric – Triglyphs/Metopes, denticulated and mutulary versions, channels, Greek/Roman/Renaissance distinctions, origins in Greek culture
- Ionic – attic base, fluting, pulvination of frieze, denticulated and modillioned versions, construction of the scrolled capital, capital variations (corner conditions), directional quality, origins in Greek culture
- Corinthian – richness of detail, capital parts, entablature combination of denticulated Doric and Ionic, origins in Greek culture and myth
- Composite – combined ionic and Corinthian
- Syntax and Related Classical Element Families and their Terminology:
 - Intercolumniation, Superposition, Arches (fornix motif, Serliana, with/without Pedestals), Pediment, Balustrades and Balusters, Pilasters and Engaged Columns, Doorways and Windows, Temple Front, etc.
- Comparative Orders – Introduction to other versions of the Classical Orders
 - Other Treatises and Resources – i.e. Vitruvius, Serlio, Palladio, Scamozzi, Perrault, Chambers, Gibbs, Mauch and Normand, etc.
 - Applied Examples – Key historic and contemporary variations on each type, in different contexts and materials.

IV. RESOURCES

Recommended Primary Texts:

ICAA Handbook of the Classical Tradition.

Clearly delineated plates with text developed by ICAA instructors based on the Vignola methodology. Includes plates on all of the orders, moldings, syntax and related elements.

Alberti, Leon Battista. *The Ten Books of Architecture: The 1755 Leoni Edition*. New York: Dover Publications, Inc., 1986.

Rykwert, Joesph. *The Dancing Column: On Order in Architecture*. Cambridge, Mass: The MIT Press, 1998.

Tzonis, Alexander. *Classical Architecture, the Poetics of Order*. Cambridge, Mass.: The MIT Press, 1986.



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Serlio, Sebastian. *The Five Books of Architecture*. New York: Dover Publications Inc., 1982.

Ware, William. R. *The American Vignola: A Guide to the Making of Classical Architecture*. New York: Dover Publications, Inc., 1994.
Plates and text on all of the orders, related elements, and syntax based on Vignola's codification of Ancient Roman examples by the founder of MIT and Columbia Schools of Architecture.

Vignola, Giacomo Barozzi. *Canon of the Five Orders of Architecture*. New York: Dover Publications, Inc., 2011.

Mauch, J. & Normand, C. *Parallel of the Classical Orders*. New York: Acanthus Press, 1998.
An essential comparative parallel of applied examples of the orders from Antiquity through the Renaissance.

Walker, C. Howard. *Theory of Mouldings*. New York: Norton, 2007.
An in-depth presentation of Molding types and their use.

Rattner, Donlad M. (1993) "Moldings: The Atomic Units of Classical Architecture". *Traditional Building*, 6 (4) 4, 72-3
A summary of themes and topics in The Theory of Moldings. Link to article provided below:
<http://web.archive.org/web/20080611165758/http://www.traditionalbuilding.com/article/moldings.htm>

Additional Suggested Resources:

See also references cited in Literature, History and Drawing and Delineation groups.

Adam, Robert. *Classical Architecture*. New York: Harry N. Abrams, 1991.

Brown, Frank Chouteau. *The Study of the Orders*. Chicago: American School of Correspondence, 1906.

Chambers, William. *Treatise on the Decorative Part of Civil Architecture*. New York: Dover Publications, Inc., 2003.



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- Chitham, Robert. (1985). *The Classical Orders of Architecture*. New York: Rizzoli, 1991.
- Curl, J. S. (1992). *Classical Architecture*. New York: Van Nostrand Reinhold.
- Curl, James Stevens. *Classical Architecture: An Introduction to Its Vocabulary and Essentials, with a Select Glossary of Terms*. New York: W. W. Norton & Company, 2003.
- D'Espouy, H. (1981 reprint). Greek and Roman Architecture in Classic Drawings. (J. Blatteau, Ed.) Mineola: Dover.
- Gibbs, James. (various reprints) Rules for Drawing the Several Parts of Architecture.
- Gromort, G. (2001 reprint). The Elements of Classical Architecture. (H. H. Reed, Ed.) New York: Norton.
- Letarouilly, P. (1982 reprint). Edifices de Rome Moderne. New York: Princeton Architectural Press.
- Palladio, A. (1965). The Four Books of Architecture. Mineola: Dover.
- Stratton, A. (2004 reprint). Elements of Forma and Design in Classical Architecture. Mineola: Dover
- Stuart, J. (2008 reprint). Antiquities of Athens. New York: Princeton Architectural Press.
- Vignola, G. (2011 reprint). Canon of the Five Orders of Architecture. Mineola: Dover.
- Vitruvius, (various reprints, incl. 1960) The Ten Books of Architecture. Mineola: Dover.
- Vitruvius, Trans. Smith, T.G. (2003) On Architecture. New York: Monacelli.

VI. METHODS AND MATERIALS [PROTOTYPE OF ADDITIONAL SECTION]

A) Typical Course Formats:

Courses inclusive of core content can vary in length and format and course content may expand upon core learning objectives/outcomes and utilize additional resources. Examples of course formats in which core content of the Elements/Orders has been effectively covered include: intensives, half – day workshops, multi evening classes, etc. See Course Examples section for examples of course types and syllabi.

In planning courses, sufficient time should be allowed for students to draw the order and receive guidance and feedback from the instructor. Experience indicates that approximately



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3 - 6 hours class time is required to introduce a single order and for students to block out its general proportions and draw in detail its base, capital and entablature. This estimate is subject to variables such as order type (i.e. Corinthian is more time intensive than Tuscan), class size, experience level, etc.

B) Teaching Methods:

Suggested:

- Lecture and demonstration with visual aids such as drawings, images (i.e. Power Point etc.), casts and models, etc.
- Practice – Sketched or drafted construction (either in class or out) with Instructor/T.A. guidance and feedback.

Adjuncts to Minimum Presentation:

- Copying of examples/precedent
- Focused Comparative Studies of the Orders
- Light and Shade studies of the Orders
- Field Study - Visiting and sketching actual built examples, Measured Drawing, etc.
- Application – Use of the Classical Orders / Classical Elements in short design exercises of limited complexity and minimal program (i.e. temple front, portico, pavilion, etc.).

C) Sample Syllabi, Resources, Handouts:

See Course Examples section.

D) Typical Materials for Class:

For Instructor:

- Large Drawing surface: i.e. easel pad, chalk/marker board, etc.
- Visual Aids: Digital Images via PowerPoint, Casts of Capitals etc...
- Handouts: See examples. At a minimum, handouts should include relevant plates used in constructing the Order (i.e. from ICAA primer, American Vignola, etc.) for reference when drawing each order.

For Students: See syllabi examples

- Sketchbook or Drawing Pad/Paper – minimum size 8.5 x 11
- Soft and hard drawing pencils or lead holder with soft and hard drawing leads (min. H, F, HB, B, 2B)
- Erasers – white and/or kneaded



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- Pencil Sharpener or Lead Sharpener
- Tape
- Architects scale
- Triangle Straight Edge – 45 deg triangles, or adjustable triangle
- Compass
- Dividers (optional)