

COURSE SYLLABUS

1. **Term:** Fall 2022 - October 29 - Florida Chapter
2. **Submitted by:** Steve Bass
3. **Proposed Instructor(s):** Steve Bass

**Instructor Bio**

Steve Bass grew up in New York City where he has maintained a small personal architectural practice since 1974. He holds a Bachelor of Architecture degree from Pratt Institute, 1970; a Master of Arts from the Royal College of Art, London, 1991, where he studied under the direction of Dr. Keith Critchlow; and was a participant in the initial Prince of Wales's Summer Course in Architecture, 1990. Steve is currently a Fellow of the Institute of Classical Architecture & Art in New York City where he teaches on the theoretical and applied aspects of proportion and geometry in design. He has also taught at Notre Dame University, the Grand Central Academy of Art, the New York Open Center and other venues. His book, 'Beauty Memory Unity - A Theory of Proportion in Architecture and Design' is currently available from Lindisfarne Books.

4. **Course Title:** Introduction to Proportion

5. **Course Description:**

The class provides an overview of the concept of proportion as a design tool in traditional architecture; presented in the form of lectures and demonstrations. The content includes an explanation of the idea of symbolic or qualitative number; an introduction to Pythagorean and Platonic numerical philosophy; the nature of beauty, its relation to number, and its positive, healthful effects; the derivation of the ancient musical octave and its use as a guide to harmony; a discussion of the Golden Section, its mathematics, geometry, relation to philosophy, and particularly its role as a geometrical "logos"; and the connection of all these ideas to the numerical-geometrical canons of classical architecture. These ideas are applied to historical archetypes, such as the four column portico, through demonstrations using arithmetic, geometric, and harmonic ratio methods of application to achieve harmonic and uplifting design outcomes. The course may be taken as an introduction to these ideas or as a review for those who have some background with the subject.

**Learning Objectives:** *the course will enable students to:*

1. appreciate the nature of beauty and the role it plays in individual and social health and welfare.
2. understand number in a symbolic rather than mathematical sense and how this connects aesthetics to aspects of ancient philosophy which may be used to obtain positive, salutary effects on human perception.

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CONTINUING EDUCATION PROGRAM

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3. understand the nature of rational ratios, composed of whole numbers, and transcendental ratios such as the Golden Section which are not composed of whole numbers, as an approach to achieving the beautiful and its beneficial effects, in architectural composition.
4. use geometric, arithmetic and harmonic methods of application of proportion for analysis of historical design examples and to create new designs that achieve a balanced and harmonious state in the users and observers of design work.

6. **Teaching Assistant Requested:** *no*

7. **Proposed Date(s), Times, Number of Sessions:** Fall 2022 - 4 hours on Saturday October 29 2022

8. **Location:** ICAA classroom

9. **Target Audience and Class Size:** Regional audience, expected enrollment 15 to 18

10. **Course Type:** *select all that apply*

- Core Curriculum Subject Category (select one):
  - Elements
  - Design & Composition
  - Proportion XXXX
  - Drawing and Rendering
  - History/Precedent Study/Theory
  - Building Arts
- Professional Practice
- Master Class
- Field Study (specify location)
- Other (specify)

11. **Course Level:** *(if applicable)*

- Introductory XXXXX
- Advanced
- Pre-requisites (if any):

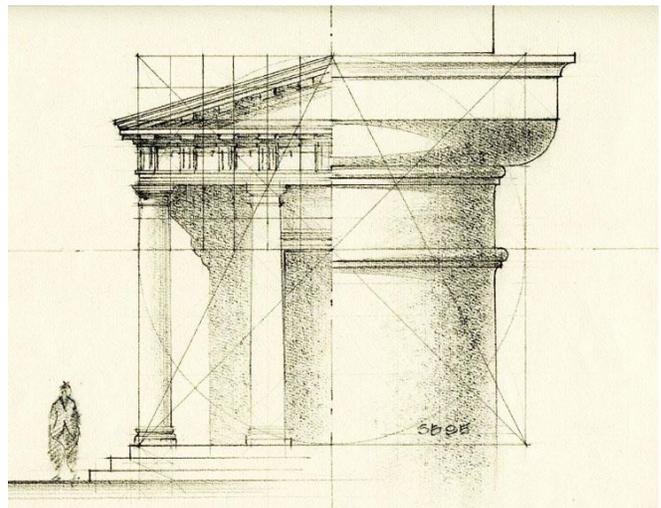
12. **Credits towards Certificate in Classical Architecture:** *if unknown, TBD per committee*

- Core Credit (specify category) **Proportion**
- Elective Credit

13. **Required Course Materials:**

Participants should bring pencils or graphic markers, a compass, straightedge, and paper, either loose or in a notebook, 9" x 12" or larger. Students may use wet media, pen and wash, if they wish. Surfaces for drawing need to be provided.

14. **Proposed image for course promotion:**



COURSE SYLLABUS

**Syllabus**

**Course:** Theory of Proportion

**Instructor:** Steve Bass

**Class Dates:** October 29, 2022

**COURSE DESCRIPTION:**

The class provides an overview of the concept of proportion as a design tool in traditional architecture; presented in the form of lectures and demonstrations. The content includes an explanation of the idea of symbolic or qualitative number; an introduction to Pythagorean and Platonic numerical philosophy; the nature of beauty, its relation to number, and its positive, healthful effects; the derivation of the ancient musical octave and its use as a guide to harmony; a discussion of the Golden Section, its mathematics, geometry, relation to philosophy, and particularly its role as a geometrical “logos”; and the connection of all these ideas to the numerical-geometrical canons of classical architecture. These ideas are applied to historical archetypes, such as the four column portico, through demonstrations using arithmetic, geometric, and harmonic ratio methods of application to achieve harmonic and uplifting design outcomes. The course may be taken as an introduction to these ideas or as a review for those who have some background with the subject.

**LEARNING OBJECTIVES:** the course will enable students to:

1. appreciate the nature of beauty and the role it plays in individual and social health and welfare.
2. understand number in a symbolic rather than mathematical sense and how this connects aesthetics to aspects of ancient philosophy used to obtain positive, salutary effects on human perception.
3. understand the nature of rational ratios, composed of whole numbers, and transcendental ratios such as the Golden Section which are not composed of whole numbers, as an approach to achieving the beautiful, and its beneficial effects, in architectural composition.
4. use geometric, arithmetic and harmonic methods of application of proportion for analysis of historical designs and to create new designs that achieve a balanced and harmonious state in the users and observers of design work.

**COURSE FORMAT:**

Course instruction combines lecture and geometrical demonstrations. Students may take notes if they wish, either in notebooks or on loose sheets - 9" x 12" or similar size

**COURSE PRE-REQUISITES:**

None required. Course content is designed to be suitable for those with limited exposure to the classical language, as well as for those seeking to increase their understanding.

COURSE SYLLABUS

**SCHEDULE OF CLASSES:**

1. 10:00 AM to 12:00 AM, with break. The concept of symbolic number - Pythagorean & Platonic number philosophy - number and geometry of the ancient musical octave - a relation of number and beauty - design of a portico using musical ratios.
2. 12:30 to 2:30 PM, with break. The trans-rational ratios - the Golden Section - construction of the pentagon - the squaring of the circle - design of a portico using the Golden Section.

**TEXT AND MATERIALS:**

**Materials** - Participants should bring pencils or graphic markers, a compass, straightedge, and paper, either loose or in a notebook, 9" x 12" or larger. Students may use wet media, pen and wash, if they wish.

**Required Texts:** There is no required reading for the course.

**Recommended Reading:**

This list includes books that treat the concept of symbolic number in architecture and fine art. They are either written for the beginning student or are key, often cited references. Most are in print and readily available.

Allen, Jon, **Drawing Geometry**, Floris, 2007, Edinburgh

*A good introduction to constructing polygons, providing a foundation for further study.*

Bamford, Christopher, editor, **Homage to Pythagoras**, Lindisfarne Press, 1994.

*Includes the following essays:*

Critchlow, Keith, **The Platonic Tradition and the Nature of Proportion**,

*Critchlow's contemporary statement of the Platonic Quadrivium. Defines many aspects of the tradition's history and terminology.*

Lawlor, Robert, **Pythagorean Number as Form, Color and Light**,

*Deeply insightful view of Pythagorean cosmology.*

Bragdon, Claude, **The Beautiful Necessity**, Theosophical publishing, 1978

*A modern view of architecture as an expression of an occult Unity. A good introduction.*

Critchlow, Keith, **Islamic Patterns**, Schocken, New York, 1978

*Geometrical construction and philosophical background of patterns used in Islamic architecture. A good book to start with.*

Critchlow, Keith, **Time Stands Still**, Gordon Fraser, 1979

*Pythagorean analysis of stone circles and ancient symbolic consciousness.*

Fletcher, Rachel, **Infinite Measure**, George F Thompson Publishing, 2013

*A clear, elegant contemporary presentation of the principles of sacred geometry, particularly the Golden Section, as they relate to traditional and modern architectural design.*

Guthrie, Kenneth, **The Pythagorean Sourcebook**, Phanes Press, 1987

*A compendium of writings and fragments from ancient Pythagorean sources, with a good introduction by David Fideler, publisher of Phanes Press. See also his 'Alexandria' series.*

Lawlor, Robert, **Sacred Geometry**, Thames & Hudson, 1982

*A key statement of geometric principles for our generation, written with dramatic flare. Follow the workbook style exercises into the more profound discussions.*

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CONTINUING EDUCATION PROGRAM

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Martineau, John, **Quadrivium**, Wooden Books, New York 2010

*A knowledgeable contemporary formulation of the mathematical subjects. Good visuals and clear text; up to the usual Wooden Book standards.*

Michell, John, **Dimensions of Paradise**, Thames & Hudson, 1987

*The book deals with mythic encoding of number and geometry in early civilization. Michell is an often cited reference.*

Olsen, Scott, **The Golden Section: Nature's Greatest Secret**, Wooden Books, 2006

*Popular, contemporary exposition of the GS - good background for the designer.*

Schneider, Michael, **A Beginner's Guide to Constructing the Universe**, Harper, 1994

*An exposition of the perennial tradition written for the contemporary general reader. A good book to start with. Also see [www.constructingtheuniverse.com](http://www.constructingtheuniverse.com)*

Wittkower, Rudolf, **Architectural Principles in the Age of Humanism**, Norton, 71

*An often cited reference and an excellent discussion of Pythagorean musical theory behind the architecture of Alberti and Palladio.*

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