**IDS 2935: Mathematics in the Arts of Renaissance Italy, Spring 2025**

Quest 1: The Examined Life

I. General Information

**Class Meetings**

● MWF period 7 (1:55PM – 2:45) LAR 0310

**Instructor**

● Carol Demas

● Office: LIT323

● Office Hours: MWF 6th (please allow a slight delay)

● Office Phone: (352) 294-2350

● Contact: demasc@ufl.edu

**Note: All aspects of the course will be covered objectively without endorsements of viewpoints, observed from multiple perspectives, and taught as objects of analysis within a larger course of instruction.**

**Course Description:**

Explores how mathematics is used in the arts to enhance and add value to life, focusing on the intersection of mathematical principles and artistic expression in The Examined Life. Examines pivotal role of mathematics in shaping aesthetics, design, and innovation in art, architecture, music, and gardens of Italy from 1300-1600 AD. Focuses on history, key themes, principles, terminology, and methodologies. Analyzes key elements, biases, and influences of art, music, and architecture with emphasis on mathematical principles in Western civilization. Explores mathematical influence and inspiration on artistic creativity, focusing on two essential questions: a. Influence of mathematical ideas and concepts on views of reality, understanding of knowledge, and perception of our place in the world. b. Contribution of mathematics to well-being through explorations of truth, beauty, creativity, and imagination in diverse artistic pursuits.

**Quest and General Education Credit**

● Quest 1

● Humanities

● Writing Requirement (WR) 2000 words

*This course accomplishes the* [*Quest*](https://catalog.ufl.edu/UGRD/academic-programs/general-education/#ufquesttext)and [*General Education objectives*](https://catalog.ufl.edu/UGRD/academic-programs/general-education/#objectivesandoutcomestext).(3)) *of the subject areas listed above. A minimum grade of C is required for Quest and General Education credit. Courses intended to satisfy Quest and General Education requirements cannot be taken S-U.*

*The following Quest requirements will be met with details provided in section II below.*

* *Identify, describe, and explain the history, theories, and methodologies used to examine essential questions about the human condition within and across the arts and humanities disciplines incorporated into the course. (Content)*
* *Analyze and evaluate essential questions about the human condition, using established practices appropriate for the arts and humanities disciplines incorporated into the course. (Critical Thinking)*
* *Develop and present clear and effective responses to essential questions in oral and written forms as appropriate to the relevant humanities disciplines incorporated into the course. (Communication)*
* *Connect course content with critical reflection on their intellectual, personal, and professional development at UF and beyond. (Connection)*

**DISCLAIMER:** Works of art may include nudity or controversial subjects with or without accompanying religious themes. These works, whether displayed during class time or in any associated required or recommended readings or videos, and any discussions regarding such works, are not intended to challenge students’ personal beliefs or cause offense. If a student has issues with nudity or other visually represented subjects, they must notify the instructor as to specifics within the first two weeks of the course.

**Required Readings and Works**

**The following will be available at no charge in Canvas:**

* Anderson K (2006) *The Geometry of an Art: The History of the Mathematical Theory of Perspective from Alberti to Monge* (Sources and Studies in the History of Mathematics and Physical Sciences), Springer, ISBN-13**: ‎**978-0387259611
* [Smarthistory Guide to AP® Art History Volume 1](https://smarthistory.org/smarthistory-books/ap-art-history-volume-1/)
* [Smarthistory Guide to Italian Art in the 1300s](https://smarthistory.org/guide-to-italian-art-in-the-1300s/)
* [Smarthistory Guide to Italian Art in the 1400s](https://smarthistory.org/guide-to-italian-art-in-the-1400s/)

**Recommended Readings**

* Writing manual: Strunk, W. (1999*).* [*The elements of style*.](https://www.gutenberg.org/files/37134/37134-h/37134-h.htm)

The following are available at archive.org, free with registration:

* Van der Ree, P et al, (1992) Italian Villas and Gardens, Munich; Prestel ISBN-13 ‏ : ‎ 978-3791311814
* Gargus, J (1994) Ideas of Order: A Formal Approach to Architecture, Dubuque, Iowa, Kendall/Hunt, ISBN-13 ‏ : ‎ 978-0840383976
* Field, J V (1997) *The Invention of Infinity: Mathematics and the Arts in the Renaissance*. New York; Oxford University Press, ISBN-13 ‏ : ‎ 978-0198523949
* Anderson K (2007) The Geometry of an Art: The History of the Mathematical Theory of Perspective from Alberti to Monge, New York Springer, ISBN-13 ‏ : ‎ 978-0387259611
* Jestaz, B (1999) Architecture of the Renaissance, London, Thames Hudson, ISBN-13 ‏ : ‎ 978-0500300626
* de Robeck N (1969) Music of the Italian Renaissance, New York, Da Capo Press, ISBN-13 ‏ : ‎ 978-0306712326
* Brauchitsch B, Renaissance (2000), Hauppauge, NY, Barrons, ISBN-13 ‏ : ‎ 978-0764113369
* Kemp M. (1992) The Science of Art: Optical Themes in Western Art from Brunelleschi to Seurat, New Haven, Yale University Press, ISBN-13 ‏ : ‎ 978-0300052411 pp.6-52, 260-274
* Murray, P (1985) Renaissance architecture, Milan, Rizzoli, ISBN-13 ‏ : ‎ 978-0847804740
* Spilsbury, R (2008) Renaissance, Portsmouth, NH, Heinemann, ISBN-13 ‏ : ‎ 978-1432913724
* Wundram M (2004), Palladio, Los Angeles, Taschen America Llc; ISBN-13 ‏ : ‎ 978-3836550215

All other readings and works are available in Canvas.

Materials and Supplies Fees: n/a

II. Graded Work

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Assignment** | **Assignment Description** | **General Education SLOs Met** | **Quest 1 Humanities SLO Met** | **Percent** |
| **Discussions (6, due every other week in Canvas Discussions)** | Canvas assignment in which students discuss topics related to the weekly lectures and readings. Three of these will be inspired by the experiential learning component. Requirements:  a. Answer the question(s) posted in the discussions. (100 points)  b. Respond to at least two other students' original posts. (50 points) | *Communication (students communicate their ideas on the discussion board), Content (students identify, describe, and explain weekly topics) Critical Thinking (Students analyze and connect course content with critical reflection on their personal and professional development)* | Display knowledge of topics, demonstrate understanding of ideas, identify, explain, and describe theories and methodologies, apply knowledge to new situations, analyze other student contributions | **15** |
| **Google Slides Presentation (tentatively due 11/18)** | Students will create a presentation using Google Slides. Through images and written narrative they will describe and analyze two works of art or architecture. Focus should be on the connection, or the lack thereof, between the artworks and certain mathematical  concepts that discussed in class, such as patterns, symmetry, perspective, etc. Examples of sample Google Slides will be provided to guide students. | *Communication, Critical Thinking*  *(students communicate their ideas in a visual medium incorporating graphics and text), Content (students identify, describe, and explain two works examined in experiential learning) Critical Thinking (Students analyze and connect course content with critical reflection on their personal and professional development)* | Connect course content to own lives, display knowledge of principles, organize and summarize main ideas, apply acquired knowledge to new situations, analyze elements and relationships. | **20** |
| **Analytical Essay Proposal (due TBD)** | Students will draft a 500-600 words proposal on a given essay prompt. The essay prompt is to examine a question or theme of a class text or to compare or contrast a theme from two class texts. The proposal should include an introductory paragraph, an outline of the points that are being addressed, and a draft bibliography of at least two sources. The essay proposal will be graded and marked for content, punctuation, spelling, syntax, and diction. The proposal does not count towards the WR 2000 words requirement. | *Communication and Critical Thinking*  Select, analyze and evaluate essential questions in the course. (Critical Thinking)  Develop and present clear and effective responses to essential questions in written form. (Communication) | Analyze and evaluate essential questions, display knowledge of principles, organize and summarize main ideas, apply acquired knowledge to new situations, analyze elements and relationships. | **5** |
| **Analytical Essay (due TBD)** | A 2,000 words thesis-driven essay on the previous essay prompt. It will use the proposal as the mainframe. Grading is on content, organization and coherence, argument and support, punctuation, spelling, syntax, and diction.  The essay counts towards the WR 2000 words requirement. | *Communication, Content, Critical Thinking (Analyze and Connect*)  Select, analyze and evaluate essential questions in the course. (Critical Thinking)  Develop and present clear and effective responses to essential questions in written form. (Communication)  Identify and describe a theme in class to examine essential questions about the human condition (Content)  Include critical reflection connecting to their own personal and professional development (Connect) | Analyze and evaluate essential questions. display knowledge of principles, organize and summarize main ideas, apply acquired knowledge to new situations, analyze elements and relationships., synthesize knowledge to explore the chosen theme, present and defend opinions based on criteria discussed in class and reading. | **25** |
| **Examinations (in class, dates TBD)** | Two fifty-minute open book Midterm Exam in lecture based on the course material consisting of forty (40) multiple-choice questions and five (5) free-response questions. | *Content (Analyze and Connect), Communication*  Display knowledge of history, theories, and methodologies used to examine essential questions about the human condition within and across the arts and humanities disciplines incorporated into the course. (Content)  Develop and present concise and effective responses to essential questions in free-response questions as appropriate to the relevant humanities disciplines incorporated into the course. (Communication) | Identify, explain and describe theories and methodologies, display knowledge of specific facts, terms, categories, principles, theories, and generalization. | **25** |
| **Attendance and Class Participation** | Participation in lectures via various in-class activities, such as think-pair-share, debates, peer-review, etc. On some days attendance will be taken in lieu of participation activities. | Content (Analyze and Connect), Communication  (students communicate their ideas orally which each other or in front of the classroom), Content (students identify, describe, and explain weekly topics) Critical Thinking (Students analyze and connect course content with critical reflection on their personal andprofessional development) | Identify, explain, and describe theories and methodologies, synthesize course lecture content to convey new ideas, evaluate information and validity of ideas. | **10** |
| **Total Percentage** |  |  |  | **100** |

**Grading Scale**

For information on how UF assigns grade points, visit: https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/

|  |  |  |  |
| --- | --- | --- | --- |
| A | 94 – 100% | C | 74 – 76% |
| A- | 90 – 93% | C- | 70 – 73% |
| B+ | 87 – 89% | D+ | 67 – 69% |
| B | 84 – 86% | D | 64 – 66% |
| B- | 80 – 83% | D- | 60 – 63% |
| C+ | 77 – 79% | E | <60 |

**Grading Rubrics**

|  |  |  |
| --- | --- | --- |
| **Writing Assessment Rubric and Statements** | SATISFACTORY (Y) | UNSATISFACTORY (N) |
| CONTENT | Papers exhibit at least some evidence of ideas that respond to the topic with complexity, critically evaluating and synthesizing sources, and provide at least an adequate discussion with basic understanding of sources. | Papers either include a central idea(s) that is unclear or off-topic or provide only minimal or inadequate discussion of ideas. Papers may also lack sufficient or appropriate sources. |
| ORGANIZATION AND COHERENCE | Documents and paragraphs exhibit at least some identifiable structure for topics, including a clear thesis statement but may require readers to work to follow progression of ideas. | Documents and paragraphs lack clearly identifiable organization, may lack any coherent sense of logic in associating and organizing ideas, and may also lack transitions and coherence to guide the reader. |
| ARGUMENT AND SUPPORT | Documents use persuasive and confident presentation of ideas, strongly supported with evidence. At the weak end of the Satisfactory range, documents may provide only generalized discussion of ideas or may provide adequate discussion but rely on weak support for arguments. | Documents make only weak generalizations, providing little or no support, as in summaries or narratives that fail to provide critical analysis. |
| STYLE | Documents use a writing style with word choice appropriate to the context, genre, and discipline. Sentences should display complexity and logical sentence structure. At a minimum, documents will display a less precise use of vocabulary and an uneven use of sentence structure or a writing style that occasionally veers away from word choice or tone appropriate to the context, genre, and discipline. | Documents rely on word usage that is inappropriate for the context, genre, or discipline. Sentences may be overly long or short with awkward construction. Documents may also use words incorrectly. |
| MECHANICS | Papers will feature correct or error-free presentation of ideas. At the weak end of the Satisfactory range, papers may contain some spelling, punctuation, or grammatical errors that remain unobtrusive so they do not muddy the paper’s argument or points. | Papers contain so many mechanical or grammatical errors that they impede the reader’s understanding or severely undermine the writer’s credibility. |

The Writing Requirement (WR) ensures students both maintain their fluency in writing and use writing as a tool to facilitate learning.

● The instructor will evaluate and provide feedback before the end of the course on all of the student's written assignments with respect to grammar, punctuation, clarity, coherence, and organization.

● WR course grades have two components. To receive writing requirement credit, a student must receive a grade of C or higher and a satisfactory completion of the writing component of the course.

**Attendance and Participation**

**Participation:** We believe that participation during class is crucial, and it constitutes an important avenue for learning. We encourage you to be active in every class session. Class Participation will be evaluated using the rubric below. This Participation Grading Rubric covers expectations for individual contributions in all class discussions and smaller group discussions (think-pair-share, debate, etc.).

**Note:** We understand that we all have different levels of comfort regarding speaking in class. If you have any issues that prohibit you from participating in class, we encourage you to contact us so we can find ways to make participation work for you in this class.

On some days, attendance alone will comprise the participation grade. Students are expected to participate in class discussions and attendance is essential. *If you must miss a class or assignment due to a religious observance, please notify your instructor within the first two weeks of the course.* The three lowest attendance/participation scores are dropped. Excused absences are consistent with university policies in the undergraduate catalog and require appropriate documentation.

https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx

**Participation Rubric**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **High Quality** | **Average** | **Needs Improvement** |
| Informed: Shows evidence of having done the assigned work. (40 points total) | Student contributes often in class to discuss the assigned work in relation to the topics discussed. (36-40 points) | Student contributes occasionally in class to discuss the assigned work in relation to the topics discussed. (32-35 points) | Student contributes rarely in class to discuss the assigned work in relation to the topics discussed. (0-31 points) |
| Thoughtful: Shows evidence of having understood and considered topics and ideas discussed. (30 points total) | Student contributes often in class to discuss readings and ideas, in relation to the topics discussed. (27-30 points) | Student contributes occasionally in class to discuss readings and ideas, in relation to the topics discussed. (24-26 points) | Student contributes rarely in class to discuss readings and ideas, in relation to the topics discussed. (0-23 points) |
| Considerate: Takes the perspective of others into account. (30 points total) | Student almost always listens to the ideas of others and incorporates them into their own perspectives. (27-30 points) | Student usually listens to the ideas of others and incorporates them into their own perspectives. 24-26 points) | Student rarely or never listens to the ideas of others. (0-23 points) |

**III. a. Daily Content**

**Topics and readings are tentative and subject to change**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Week | Date | Lecture | Topics and Events | Suggested Readings/Videos |
| 1 | 1/13 | 1 | Onset, Ancient Roots of Perspective, Dante, Petrarch, Boccaccio | Anderson 723-730, Brauchitsch, pp. 8-17, SH1300 pp.13-16, 35-40 |
| 1 | 1/15 | 2 | Early math, science, and optics in Renaissance art, Euclid, Pythagoras, Heron of Alexandria | Field, pp.4-16 |
| 1 | 1/17 | 3 | Plato/Neoplatonism, Ficino | Plato, Timaeus excerpts |
| 2 | 1/22 | 4 | Cimabue/Duccio/Lorenzetti/Alberti and the birth of perspective  Discussion 1 due | Anderson pp 1-11, SHI1300 pp. 41-42 |
| 2 | 1/24 | 5 | Brunelleschi, Elements of Renaissance Painting | Anderson pp 11-14 |
| 3 | 1/27 | 6 | Masaccio/Uccello/  Ghiberti/Perugino/  Giotto/Pisano/  Cavallini | Field, pp. 43-59, SHI1300 pp 53-56, 57-92, 93-98, 145-148, pp. SHI1400 175-190 |
| 3 | 1/29 | 7 | Piero della Francesca/Andrea Mantegna/Fra Angelico/Fra Fillippo Lippi | Anderson pp. 15-80  Field, pp. 62-115, SHI1400 pp.175-190, 107-114, 119-128, 363-384 |
| 3 | 1/31 | 8 | Veneziano/  Pollaiouolo/  Botticellli | Field, pp. 114-136, SHI 1400 pp. 151-170 |
| 4 | 2/3 | 9 | Rise of Venice  Discussion 2 due | Brauchitsch, pp. 102-113, SHI 1400 pp 281-288 |
| 4 | 2/5 | 10 | Da Vinci | Anderson pp. 81-113, 731-734  https://smarthistory.org/about-leonardo/ |
| 4 | 2/7 | 11 | Michelangelo | Brauchitsch, pp. 123-126  https://smarthistory.org/europe-1300-1800/italy-16th-century/michelangelo/ |
| 5 | 2/10 | 12 | Raphael | Brauchitsch, pp. 128-133 |
| 5 | 2/12 | 13 | Verrochio/Perugino/Giorgione/  Titian/Correggio |  |
| 5 | 2/14 | 14 | Color, color perspective, shading | Kemp, pp 260-274  Spilsbury, pp.28-30 |
| 6 | 2/17 | 15a,b | Mannerism: Pontormo/Parmigianino/Bronzino/  Tintoretto/Nelli/Anguissola  Discussion 3 due | Brauchitsch, pp. 148-170 |
| 6 | 2/19 | 16 | Sculpture Donatello/Mazzoni/Cellini/  Giambologna | Spilsbury, p.27 |
| 6 | 2/21 |  | Open Book Midterm 1 |  |
| 7 | 2/24 |  | Experiential Learning Field Trip: Harn Museum |  |
| 7 | 2/26 | 17 | Architectural Theory and Antiquity/Vitruvius | Jestaz, pp.13-24, Brauchitsch, pp. 20-27, |
| 7 | 2/28 | 18 | Brunelleschi and Il Duomo | Murray, pp.31-50  Smarthistory guide to AP® Art History pp, 117-118 |
| 8 | 3/3 | 19 | Arch: Alberti, Plans, bays, alignment, symmetry, central entrance, proportion, columns, domes, vaults | Smarthistory guide to AP® Art History pp, 129-134, Peter pp. 51-62, Jestaz pp.25-64, [Volutes](https://www.youtube.com/watch?v=HBh04ZtnLDM) |
| 8 | 3/5 | 20 | Arch: Palaces, Churches, Milan  Discussion 9 due Friday | Jestaz, pp.65-99, Murray, pp. 63-120 |
| 8 | 3/7 | 21/22 | Arch: Rome and St. Peters  Arch: The Ideal City  Discussion 4 due | Murray, pp. 121-142 Gargus, pp. 166-195 |
| 9 | 3/10 | 23 | Arch: Mannerist/ Michelangelo | Murray, pp. 171-183 |
| 9 | 3/12 | 24-25 | Arch : Late Renaissance, Palladio Villas, Proportions | Brauchitsch, pp. 172-180 |
| 9 | 3/14 | 25-26 | Arch: Palladio Public Buildings  Essay proposal due | Murray, pp 207-236 |
| 10 | 3/17-3/22 |  | Spring Break, no class |  |
| 11 | 3/24 |  | Experiential Learning Field Trip: Fraternity Row |  |
| 11 | 3/26 | 27 | Gardens: Theoretical Reconstruction, Elements, Water Features, Mazes | Van der Ree, pp. 15-27 |
| 11 | 3/28 | 28 | Gardens: Tuscany  Discussion 5 due | Video: [Monty Don’s Italian Gardens](https://hdclump.com/monty-dons-italian-gardens/) 2: Florence |
| 12 | 3/31 | 29 | Gardens: Rome | Van der Ree, pp. 82-119 |
| 12 | 4/2 | 30a | Gardens: The Roman Campagna and Frascati | Van der Ree, pp. 120-224 |
| 12 | 4/4 | 30b | Gardens: Sacro Bosco | Van der Ree, pp. 186-195 |
| 13 | 4/7 |  | Experiential Learning Field Trip: Wilmot Botanical Gardens |  |
| 13 | 4/9 |  | Open Book Midterm 2 |  |
| 13 | 4/11 | 31-32 | Music: Preliminaries, Modes, Waves, Harmonics |  |
| 14 | 4/14 | 33 | Music: Consonance, Dissonance, Scales, Polyphony, Symmetry, Instruments  Google Slides Presentation Due | De Robeck pp. 38-58,  [Tuning Video](https://www.youtube.com/watch?v=nK2jYk37Rlg),  [Circle of Fifths Video](https://www.youtube.com/watch?v=O43EBVnwNvo&t=446s&pp=ygUQY2lyY2xlIG9mIGZpZnRocw%3D%3D) |
| 14 | 4/16 | 34 | Music: The Ars Nova in Florence, The Rise in Choral Music  Discussion 6 due | De Robeck pp. 1-37 |
| 14 | 4/18 | 35 | Music: Courts of Florence, Ferrara, Mantua, and Urbino, Florentine Reform | De Robeck pp. 58-126 |
| 15 | 4/21 | 36 | Renaissance Influences Today  Essay due |  |
| 15 | 4/23 |  | Conclusion and Final Thoughts |  |

**b. Weekly Summaries**

**Topics and readings are tentative and subject to change**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Week | Date | Topics and Events | Summary | Suggested Readings/Videos as above |
| 1 | 1/13-1/17 | Onset, Ancient Roots of Perspective, Dante, Petrarch, Boccaccio | We provide an overview of the historical and societal factors that led to the onset of the Italian Renaissance. |  |
|  |  | Early math, science, and optics in Renaissance art, Euclid, Pythagorus, Heron of Alexandria | We discuss the historical mathematical ideas and applications to describe reality that were rediscovered during the Renaissance and foundational for artists. |  |
|  |  | Plato/Neoplatonism, Ficino |
| 2 | 1/22-1/24 | Cimabue/Duccio/Lorenzetti/Alberti and the birth of perspective  Discussion 1 due |
|  |  | Brunelleschi, Elements of Renaissance Painting | We discuss how mathematical perspective, projective geometry, and its development led to an increase in realism in Renaissance art. |  |
| 3 | 1/27-1/31 | Masaccio/Uccello/  Ghiberti/Perugino/  Giotto/Pisano/  Cavallini |
| 3 |  | Piero della Francesca/Andrea Mantegna/Fra Angelico/Fra Fillippo Lippi | We continue our discussion of perspective along with the incorporation of mathematical ideas of Fibonacci, Plato, Neoplatonism, and Humanism. |  |
| 3 |  | Veneziano/  Pollaiouolo/  Botticellli |
| 4 | 2/3-2/7 | Rise of Venice  Discussion 2 due |
| 4 |  | Da Vinci | We examine how mathematics can be used to describe beauty, symmetry, and reality in the works of the masters. |  |
| 4 |  | Michelangelo |
| 5 | 2/10-2/14 | Raphael |
| 5 |  | Sixteenth Century | We discuss additional developments in mathematics artists used to create increasingly realistic colors and shading, while simultaneously exaggerating form and proportion in a quest for originality. |  |
| 5 |  | Color, color perspective, shading |
| 6 | 2/17-2/21 | Mannerism  Discussion 3 due |
| 6 |  | Sculpture | We examine mathematics in the three-dimensional realm including contrapposto, foreshortening, and incorporation of curvilinear and dynamic forms. |  |
| 6 |  | Open Book Midterm 1 |
| 7 | 2/24-2/28 | Experiential Learning Field Trip: Harn Museum |
| 7 |  | Architectural Theory and Antiquity/Vitruvius | Continuing our three-dimensional discussions, we examine the mathematical foundations of early architectural theory and practice. |  |
| 7 |  | Brunelleschi and Il Duomo |
| 8 | 3/3-3/7 | Arch: Alberti, Plans, bays, alignment, symmetry, central entrance, proportion, columns, domes, vaults |
| 8 |  | Arch: Palaces, Churches, Milan | Continuing our three-dimensional discussions, we provide refinements of developments in public buildings. |  |
| 8 |  | Arch: Rome and St. Peters |
| 9 | 3/10-3/14 | Arch: Raphael and Romano  Discussion 4 due |
| 9 |  | Arch: Michelangelo | Our architectural excursions culminate in the works of Michelangelo and Palladio, for whom proportion and symmetry were divinely inspired and used to elevate the human experience. |  |
| 9 |  | Arch : Late Renaissance, Palladio Villas, Proportions |
| 11 | 3/24-3/28 | Arch: Palladio Public Buildings  Essay proposal due |
|  |  | Experiential Learning Field Trip: Fraternity Row | We begin our discussion of gardens with elements, geometry, symmetry, and some early examples with the objectives of promoting human contemplation and pleasure as well as to display status, wealth, and power. |  |
|  |  | Gardens: Theoretical Reconstruction, Elements, Water Features, Mazes |
| 12 | 3/31-4/4 | Gardens: Tuscany  Discussion 5 due |
|  |  | Gardens: Rome | We continue our discussion of gardens with stylistic refinements and increasing grandeur and sophistication. |  |
|  |  | Gardens: The Roman Campagna and Frascati |
| 13 | 4/7-4/11 | Gardens: Veneto: Palladio |
|  |  | Experiential Learning Field Trip: Wilmot Botanical Gardens | We end our exploration of gardens with an experiential learning assignment and an assessment. |  |
|  |  | Open Book Midterm 2 |
| 14 | 4/14-4/18 | Music: Preliminaries, Modes, Waves, Harmonics, | We begin our discussion of the mathematical and philosophical ideas of Pythagoras, Plato, and others, and how they shaped musical foundations and development in the Italian Renaissance. |  |
|  |  | Music: Consonance, Dissonance, Scales, Polyphony, Symmetry, Instruments  Google Slides Presentation Due |
|  |  | Music: The Ars Nova in Florence, The Rise in Choral Music  Discussion 6 due |
| 15 | 4/21-4/23 | Music: Courts of Florence, Ferrara, Mantua, and Urbino, Florentine Reform | We conclude our explore of mathematics in music during the late period of the Italian Renaissance and conclude the course with a discussion of the influences of the Italian Renaissance on contemporary society and thinking. |  |
|  |  | Renaissance Influences Today, Conclusion and Final Thoughts  Essay due |

IV. Student Learning Outcomes (SLOs)

At the end of this course, students will be expected to have achieved the Quest and General Education learning outcomes as follows:

● Identify key figures, forces, and impacts driving Renaissance art. (Content SLOs for Gen Ed Hum, and Q1)

● Discuss, analyze, and evaluate key works in the Renaissance and point out their relationship with certain mathematical ideas and methods. (Content and Critical Thinking SLOs for Gen Ed Hum, and Q1)

● Discuss, analyze and evaluate the role and impact of mathematics into art and provide specific examples of art works that demonstrate the impact of mathematics into art. (Content and Critical Thinking SLOs for Gen Ed Hum, and Q1, Connection SLOs for Q1)

● Track development of mathematics within and across various civilizations and cultures and recognize how mathematics and culture are often interconnected. (Critical Thinking SLOs for Gen Ed Hum, and Q1, Connection SLOs for Q1)

● Communicate knowledge, thoughts, and reasoning clearly and effectively in written and oral form through class assignments, such as online discussions, the writing of stories, essay, etc. (Communication SLOs for Gen Ed Hum, and Q1)

● Develop critical thinking by identifying and analyzing key figures, main influences, significant contradictions, and potential outcomes and differentiate between opposite points of view and interpreting and evaluating sources. (Critical Thinking SLOs for Gen Ed Hum, and Q1)

V. Quest Learning Experiences

**1. Details of Experiential Learning Component**

This class includes an experiential learning component in which students will actively engage with a UF resource. As such, the class requirements include a visit to the Harn Museum, Wilmot Botanical Gardens, and Fraternity Row on the UF Campus. After their visits, students will create stories in Adobe Express where through images and written narrative they describe and analyze two art works, the garden, or the influence of Renaissance architecture on two buildings, respectively. The students should focus on the connection, or the lack thereof, between the works and certain mathematical concepts that we discussed in class, such as patterns, symmetry, perspective, etc. Examples of similar Google Slides presentations will be provided ahead of time to guide the students.

**2. Details of Self-Reflection Component**

Students will reflect on the reading material provided each week and share their thoughts both through in-class participation as well as by discussion posts on Canvas. These activities will be due weekly.

VI. Required Policies

**Attendance Policy**

Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

**Students Requiring Accommodation**

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the disability Resource Center by visiting https://disability.ufl.edu/students/get-started/. It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

**UF Evaluations Process**

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at https://gatorevals.aa.ufl.edu/students/. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via https://ufl.bluera.com/ufl/. Summaries of course evaluation results are available to students at https://gatorevals.aa.ufl.edu/public-results/.

**University Honesty Policy**

University of Florida students are bound by the Honor Pledge. On all work submitted for credit by a student, the following pledge is required or implied: “On my honor, I have neither given nor received unauthorized aid in doing this assignment.” The Student Honor Code and Conduct Code (Regulation 4.040) specifies a number of behaviors that are in violation of this code, as well as the process for reported allegations and sanctions that may be implemented. All potential violations of the code will be reported to Student Conduct and Conflict Resolution. If a student is found responsible for an Honor Code violation in this course, the instructor will enter a Grade Adjustment sanction which may be up to or including failure of the course.

The Honor Pledge

We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity by abiding by the Student Honor Code. On all work submitted for credit by Students at the University of Florida, the following pledge is either required or implied: “On my honor, I have neither given nor received unauthorized aid in doing this assignment.”

**Counseling and Wellness Center**

Contact information for the Counseling and Wellness Center: http://www.counseling.ufl.edu/ , 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

**The Writing Studio**

The writing studio is committed to helping University of Florida students meet their academic and professional goals by becoming better writers. Visit the writing studio online at http://writing.ufl.edu/writing-studio/ or in 2215 Turlington Hall for one-on-one consultations and workshops.

**In-Class Recordings**

Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor.

A “class lecture” is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or lecturer during a class session.

Publication without the permission of the instructor is prohibited. To “publish” means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third-party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student Honor Code and Student Conduct Code.

VII. Additional Resources (Books)

* Wade, Geometry & Art, Shelter Harbor Press, **ISBN-13 ‏ : ‎**978-1588344939
* Andrews, The Polyhedrists: Art and Geometry in the Long Sixteenth Century, The MIT Press, ISBN-13 ‏ : ‎ 978-1588344939
* Meisner, The Golden Ratio: The Divine Beauty of Mathematics, Race Point Publishing, **ASIN ‏ : ‎**B07DQ8VRMW
* Palladio, The Four Books of Architecture, Dover Publications, **ISBN-13 ‏ : ‎**978-0486213088
* Lazzaro, The Italian Renaissance garden: from the conventions of planting, design, and ornament to the grand gardens of sixteenth-century Central Italy, Yale University Press, New Haven (1990)