

# **MOLLOY UNIVERSITY**

## **School of Education and Human Services**

### **Department of Teacher Education**

**Course Title:** The Renaissance Mind: Leonardo da Vinci's Legacy in Art, Science, and Innovation  
**Fall 2025**

**Instructor:** Susan Zaratini

**Contact Hours:** If you have any questions, I can be reached by email at [susanblinn@gmail.com](mailto:susanblinn@gmail.com) or by phone (516) 993-6095 (3pm-7PM M-F).

**Course Description: The Renaissance Mind: Leonardo da Vinci's Legacy in Art, Science, and Innovation:** Leonardo Da Vinci's ability to combine science and art made him history's most creative genius. This course will cover Leonardo da Vinci's unique upbringing that led him to be known as "The Renaissance Man". The course will explore the scientific methods he used to invent and create art, including, anatomy, physics, optics, botany, geology and chemistry. This comprehensive interdisciplinary course explores the extraordinary contributions of Leonardo da Vinci, examining how his work bridges art, science, engineering, and numerous other academic disciplines. Students will discover how da Vinci's innovative thinking and methodologies can inform modern professional practice across various fields. This course is designed for professional staff seeking to enhance their understanding of interdisciplinary approaches to knowledge and innovation through the lens of one of history's greatest polymaths.

#### **Shared Vision**

The Molloy University Teacher Education faculty has derived its vision for the exemplary teacher from the University's mission statement, the four pillars of the Dominican tradition, comments and input from the Professional Education Unit's Advisory Board and degree candidates as well as numerous faculty discussions rooted in the department's knowledge base which undergirds the initial and advanced programs' curriculum, pedagogy, and values

The teaching professionals who complete Molloy's teacher preparation programs are distinguished by their ability to exemplify and promote core values in their own teaching. These values include:

Belief that all children can learn

Learner-centered and value-centered curriculum and pedagogy

Ethics and spirituality

Intellectual curiosity

Independence and risk taking, while promoting collective identity and responsibility

Diversity, multiculturalism and pluralism, including divergent thinking

Passion for teaching

Commitment to students and their communities

Civic responsibility through the promotion of social justice and interdependence

Commitment to democracy

**Learning Objectives:**

Participants will:

- Understand da Vinci's integrated approach to knowledge.
- Develop cross-disciplinary thinking skills.
- Apply observational techniques to their professional practice.
- Analyze complex problems using multiple perspectives.
- Create connections between art, science, and innovation.
- Participants will be able to identify the links between science.
- Participants will be able to link science and art and any K-12 classroom.
- Explores da Vinci's integrated approach to art and science
- Examines his contributions to anatomy, engineering, architecture, and visual arts
- Analyzes his scientific methodology and observational techniques
- Investigates his influence on modern interdisciplinary thinking
- Explore techniques in perspective and composition.
- Analysis of masterworks including The Last Supper and Mona Lisa.
- Study of da Vinci's unique drawing and painting methods.

- Analyze anatomical studies and medical illustrations.
- Apply engineering principles and mechanical designs.
- Understand mathematical concepts in art and architecture.
- Analyze natural science observations and documentation.
- Design thinking and problem-solving methods.
- Analyze architectural principles and urban planning.
- Apply the integration of art and technology.
- Apply technical drawing and documentation.
- Research methodology and scientific inquiry.

### **Course Format:**

This course will be offered online through Canvas, Molloy's learning management system. The course will open on the start date and close on the last day of class. This section is offered during the spring semester of 2026. There will be daily activities and discussions that must be completed at the end of each day. All work will be due on the last day of class.

### **Required Readings, Videos, and Other Materials:**

All materials will be provided throughout the course.

### **Course Requirements and Evaluation:**

Discussion #1: Introduction to Leonardo da Vinci (5 pts)

Module #1: Anatomy and Art (10 pts)

Module #2: Physics and Art (10 pts)

Module #3 Optics and Art (10 pts)

Discussion #2 Botany and Art (5 pts)

Module #4: Geology and Art (10 pts)

Module #5 Chemistry and Art (10 pts)

Module #6: Engineering and Art (10 pts)

Module #7: Final Project: Participants will create a lesson plan that is designed for their grade level and subject area using concepts learned in this course. (10 pts)

Module #8 (10 pts)

Final Project: (20 pts)

## **Molloy University and School of Education and Human Services Policies and Supports:**

### **Expectations of Academic Integrity for All Students**

[Honor Pledge and Academic Honesty Policy](#)

### **Course Withdrawals**

View [Withdrawal Policy](#) for potential financial implications

View [the Academic Calendar](#) and/or the course syllabus for the last day to withdraw dates

### **Incompletes**

[Incompletes Policy](#)

### **Health and Wellness**

[Student Health Services](#)

[Student Counseling Center \(SCC\)](#)

### **Center for Access and Disability (Access)**

[Center for Access and Disability](#)

### **Technical Support**

[Student Account, Technology and Canvas](#)

### **Ally for Canvas**

[Supportive Tools and Resources/ Ally](#)

### **Use of Proctorio for Exams/Quizzes (if applicable)**

[Proctorio Resources for Students](#)

### **Email Accounts**

Students are to utilize their Molloy e-mail account or via Canvas when communicating throughout the semester. Those who use a non-Molloy account may miss important messages.

Students are responsible for responding to all methods of communication in a timely fashion relating to this course. Instructors will respond to emails from students within 24 hours. When/if you email the instructor(s), please indicate what course you are in with the course number and section.

### **APA Manuscript Style**

All manuscripts in the field of education are written in the style format of the American Psychological Association. Candidates in the Graduate Education Programs are required to purchase the Publication Manual of the American Psychological Association (7<sup>th</sup> ed.). (2010). Washington, DC: American Psychological Association.

All papers written in every course must adhere to the manuscript prescriptions defined in this manual.