An introduction to concepts, production techniques, and histories of artists moving image work. Students will investigate the origins and evolution of animation, film, video, and sound recording for cinema, with classroom instruction and experimentation in the techniques and production of each. Alongside a historical and theoretical framework, a wide range of practical tools will be introduced, including precinematic image capture, 16mm film and digital cinema production, stop action animation, sound recording and lighting. One-semester course. May not be repeated. Pre-Req: N/A

**AV: The Film Essay: A Form That Thinks**

**Fusco**  
Monday, 6-9:50pm  
FA-386-1  
3 credits  
Rm 530F/215F  
Pre-Req: AV II

The film essay is sometimes called “A Form that Thinks.” Many influential and highly imaginative film and video makers have created works that blend fiction and non-fiction to reflect on happenings in the world and offer alternative visions of the past and future. These works often take the form of stylistic collages, incorporating a variety of source material, such as film clips, photographs, newsreel footage, animations, and drawings that are woven together, reflected upon, and interpreted through narration. They are considered critical because they question the relationship between images and our perception of reality.

In this course we will watch and discuss films by Alain Resnais, Chris Marker, Jean Luc Godard, Trinh T MinhHa, John Akomfrah, Harun Faroki, Kidlat Tahimik, Chantal Akerman, Jorge Furtado and New Red Order.

Students will also develop their own videos and films throughout the semester and will engage in group critiques of their works in progress.

**AV: Beyond Sight: Haptics and Opacity in Moving Image Arts**

**Lazard**  
Tuesday, 2-5:50pm  
FA-387-2  
3 credits  
Rm 530F/539F  
Pre-Req: AV II

What does it mean to feel sound? What does it mean to hear an image? How can theories of touch and opacity help us think through the materiality of film, video, and sound? In this course we will explore artworks that work against the preconditions of the moving image. Students will be asked to consider site, spectatorship, and
accessibility in their own practices. Critiques, discussions, and screenings will be framed by readings in Black studies, disability studies, and queer theory. This course welcomes students working in a wide range of genres and media.

**Animation Workshop**
**Reeves**
Thursday, 2-5:50pm
FA-376-I
3 credits
Rm 530F/539F
Pre-Req: AV I

An advanced course in frame by frame film making. An examination of existing work in the field will accompany the development of independent projects, ranging from traditional cartoon animation to fine art-based experimentation. Films begun in Animation I can be carried to completion in this course. Techniques can vary from simple index card animation to elaborate combinations of cel and rotoscope. The relationship of sound to image will be explored and sound tracks produced. Individual projects will be completed on 16mm film with the option to transfer final work to video. **Prerequisite: AV I.**
The course is designed to explore the phenomena of drawing as basic to the visual language of all disciplines. The fundamental notion of observation and analysis in drawing is investigated. As preparation for work in an advanced level, the course involves further development of drawing skills and techniques, as well as an emphasis on individual aesthetic development. Assignments and group critiques are central to the course. 3 credits. May be repeated once. Prerequisite to all Advanced Drawing.

Adv. Drawing
Barth
FA-341A-1
Monday, 2-5:50pm
3 Credits
Rm 903CS
Pre-Req: One Semester of Drawing I

Advanced studies in drawing emphasizing the student’s conceptual independence from traditional draftsmanship. This course is for students who have an established direction in drawing.

Adv. Drawing
Miller
FA-345A-1
Wednesday, 2-5:50pm
3 Credits
Rm 903CS
Pre-Req: One Semester of Drawing I

Offered to students working independently in any medium. Must be self-motivated. Class meetings will include workshops with traditional and non-traditional drawing materials, as well as group and individual critiques.
Graphic Design I

Key
FA-211-1
Monday, 2-5:50pm
3 Credits
Rm 806CS/624CS
Pre-Req: N/A

The complex relationship between word and image is explored. The study of semiotics, emphasizing the philosophy of communication, provides a rich historical and intellectual base for experimental projects combining verbal and pictorial information. Weekly projects reflect a broad range of disciplines within the field of design. Computer instruction will be provided as it relates to specific projects. Fall only.

Adv. Design: Icons, Marks and Emojis
Glauber
Frank Stanton Chair in Graphic Design
FA-317A-1
Tuesday, 2-5:50pm
3 credits
Rm 901CS
Pre-Req: GD II and Pre/Co-Req: Typography I

From the thumbs up in a text message to the power-off button on an appliance, the swoosh on a sneaker to the cloud on a weather report, we rely on icons, marks, and emojis to help us communicate. In this course, students will be exposed to a wide range of systems that use non-verbal forms to communicate function, define categories, reflect identity, or display emotion and will develop and apply their own through a series of assignments.

Adv. Design: Type Design
Famira
FA-315A-1
Wednesday, 9am-12:50pm
3 credits
Rm 806CS/901CS
Pre-Req: GD II and Pre/Co-Req: Typography I

This course will establish a fundamental understanding of how typefaces work, both technically and aesthetically, and provide experience in the techniques used to create them. After a basic introduction to the design space shaped by the different kinds of contrast and construction the students will acquire manual drawing skills and the digital drafting techniques which will lead them to their own, original design. The class will focus on developing a concept into a structurally sound typeface. This practical in-depth project will help develop an analytical grasp of the design space.
Motion Graphics
Vondracek
FA-328
Wednesday, 6-9:50pm
3 Credits
Rm 804CS
Pre-Req: GD II and Pre/Co-Req: Typography I

Students will explore the conceptual and technical challenges of design for the television screen. All aspects of industry video/ broadcast production are introduced and integrated into a design core focused on strong communication. Projects include identity design, combining kinetic typography, animation, sound and video. The course includes workshops in After Effects, Final Cut Pro and Protools. Prerequisites: Graphic Design I and II. Pre- or corequisite: Typography.

Typography
Tep
FA-215
Monday, 2-5:50pm
3 Credits
Rm 901CS
Pre-Req: GD II

Empirical explorations of typographic messages through placement, massing, weight, size and color are analyzed to develop an understanding of aesthetic composition of typographic form and meaning. Legibility, unpredictability and sequencing, as well as the use of grid structures, are investigated. The development of critical judgment about typography is emphasized. Prerequisite: Graphic Design II.
PAINTING

A studio experience with the physical, compositional and conceptual components of pictorial invention and image-making. Readings, assignments and critiques will enhance the development and articulation of an inventive individual approach to the painting discipline in preparation for advanced level work.

Adv. Painting: Katz Guest Artist Series
Miller
FA-339A-1
Monday, 2-5:50pm
3 Credits
Rm 630 C F
Pre-Req: FA-130A & B

This course will support students’ individually determined painting projects with emphasis on building sustainable studio practices and generating research strategies. We will focus on personal artistic tool-building, through visual theory and material processes, considering each artist’s studio as an adaptive instrument for experimentation. Individual and Group critiques will dictate the assignment of readings, projects, and exhibition visits.

Adv. Painting:
Baez, Alex Katz Chair in Painting
FA-336A
Monday, 6-9:50pm
3 Credits
Rm 630 C F
Pre-Req: FA-130A & B

N/A

Adv. Painting
Bluestone
FA-331A-1
Thursday, 6-9:50pm
3 Credits
Rm 630 C F
Pre-Req: FA-130A & B

This course will work with students in individual and group settings to discuss their work and personal development as an artist, as well as engage students with relevant practical, historical and contemporary discussions around painting. Discussions, critical feedback, suggestions, and prescriptions given to students are
sounding boards and/or opportunities for students to further locate their practice and voice as an artist. Students will rely more on their individual studio spaces as sites from creation, research, presentations and meetings with faculty and visitors. In this way, the course might reflect the professional space of the artist studio. Debate around ideas, process and material should be expected as well as respect for each student's personal journey. Lectures, field trips and the presentation of various media and demonstrations can be expected.
LSP I Lens/Screen/Print I is the first section of a two-semester trajectory. This is an immersive foundation course in the practice of photography focusing on a critical engagement with lens technology, color theory/management and combined analog/digital workflows. Topics include: exploratory and technical knowledge of 35mm and medium-format analog cameras, DSLR cameras, lenses and lighting conditions, fluid movement through digital black-and-white and color processes, such as digital imaging editing software, scanning analog color, and digital printing in black-and-white and color. Exposure to critical theory and major philosophical arguments central to lens, screen and print based practices will be explored. This is an assignment driven class.

Photography
Barrada, Henry Wolf Chair in Photography
FA-364A-1
Tuesday, 2-5:50pm
3 Credits
Rm 604F
Pre/Co-Req: L/S/P II; or Photo I, or Permission from Instructor

This course aims to advance students' own work in photography, film, installation and sculpture, through group and individual critiques, classroom presentations and discussions with the instructor.

Our frameworks for discussion will focus on research and archival methodology and include the ideas of micro-histories; memory, narrative and community building; and ways to create dialogue between various narrative modes, performative strategies and image regimes. We will also look into examples of experimental art practices and decolonial histories (Jumana Manna, Uriel Orlow, Bouchra Khalili, Kader Attia...).

Photography: Alternative Processes
Williams
FA-366-1
Friday, 2-5:50pm
3 Credits
Rm 604F
Pre-Req: L/S/P II, or Photo I

This course breaks down barriers between digital and analog photography, transforming meaning and content through various forms of manipulation. Its fast-paced, hands-on demos include hand-applied photographic emulsions (such as cyanotype, Van Dyke, palladium, and liquid light) and digital printing/transferring options (beyond emulating the traditional print, on surfaces such as paper, wood, metal, fabric, etc.). The production of large-format analog and digital negatives will also be explored.
Etching I
Ancona
FA-252-1
Monday, 2-5:50pm
3 Credits
Rm 515F
Pre-Req: N/A

This course’s objective is to introduce and familiarize students with the fundamental techniques and concepts of intaglio printmaking: drypoint, hard ground, soft ground, aquatint, and scraping/burnishing, among others. Historical and contemporary references will be utilized throughout the semester to underscore the importance of combining technique with individual ideas. Students will learn the proper use of materials, and through critiques, discussions, and demonstrations develop a knowledge and skill level necessary to create effective works in intaglio print.

Over the course of the semester students will complete a series of projects crafted to introduce and then expand upon techniques, as well as to explore different approaches to generating imagery. Throughout, students will be challenged to use etching to relate to, expand upon and dialogue with other areas of their work. We will periodically take time during class to hang and discuss work. Through critiques students will share what they have made and how they have solved problems. Student development of a visual vocabulary, technical skills, critical thinking, and an aesthetic understanding integral to this course.

Lithography I
Nobles
FA-251-1
Wednesday, 9am-12:50pm
3 Credits
Rm 515F
Pre-Req: N/A

An introduction to traditional and contemporary image-making on lithographic stones and commercial aluminum plates, with emphasis on the technical aspect of the medium. The various areas to be examined include stone graining, crayon and tusche drawing, processing, proofing and edition printing procedures, etc.

Silkscreen I
Nobles
FA-250-1
Wednesday, 6-9:50pm
3 Credits
Rm 544F
Pre-Req: N/A

This course explores screen printing as a means of communication with emphasis on the execution of these images. Students visit museums to learn to appreciate posters from various historical periods. The actual screen printing will be taught with the use of images, type and color. The goal of the course is to combine the components of art, printing and communication.
Experimental Printmaking
Beltré
FA-354A-1
Thursday, 2-5:50pm
3 Credits
Rm 515F
Pre-Req: 2 Printmaking Classes

In this course we will explore techniques and concepts that compliment, and augment traditional modes of printmaking. Students will develop self-directed projects as they work to understand printmaking within an expanded field of visual inquiry. We will explore the potential of the multiple to create unique pieces and further develop our aesthetic understanding of print. Traditional, yet somewhat alternative, processes such as trace monotype, pochoir, and white line woodcut will be explored as well as multiple color printing. Work in series and book formats may also be discussed as possibilities in developing student projects. Contemporary methods such as laser engraving and digital printing will also offer possibilities for developing projects.

Experimental Printmaking
Adili
FA-354A-2
Thursday, 6-9:50pm
3 Credits
Rm 515F
Pre-Req: 2 Printmaking Classes

This course will supplement the traditional printmaking techniques of etching, lithography, and silk screen with an introduction to more immediate processes such as linoleum woodcut techniques, stamping, monoprint/monotype, and a multitude of photo transfer techniques. This course aims to investigate layering, and deconstruction and reconstruction in an iterative manner. The photographic, is layered with the drawn while emphasizing process and experimentation over outcome. Working in series, examining paper or book formats will be discussed in developing student projects.

Paper: Materiality and Sustainability
Martin
FA-253-1
Friday, 9am-12:50pm
3 Credits
Rm 515F
Pre-Req: N/A

This studio course explores making paper from traditional to contemporary approaches. The course incorporates specified instruction and experimentation driven by student independent projects. The exploration of the structural and historical uses of Western and Eastern methods including contemporary issues of recycled and alternative fibers will frame an understanding of the potential uses and appearances of handmade paper. From a basis in sheet forming, pigmenting, sizing, and the use of additives, the class will move into an emphasis on paper as a visual and sculptural object, covering paper casting and other three-dimensional approaches.
Relief
Ewing
FA-355-2
Monday, 6-9:50pm
3 Credits
Rm 515F
Pre-Req: N/A
NEW

In this relief printmaking course students will explore techniques of hand carving and printing from linoleum and woodblocks. Students will learn relief techniques through demonstration and practical application as we progress from an etching press to a Vandercook proof press. Assignments and critiques will integrate formal qualities, concepts and technical explorations. Students will see the possibilities combining text and image to make their own visual language.
SCULPTURE

Sculpture
Raven
FA-391A-1
Monday, 9am-12:50pm
3 Credits
Rm 414F
Pre-Req: N/A

This course takes a concrete approach to the development of critical discourse about works of art. It exercises the student's ability to analyze the activity of making sculpture in particular and advances the student's understanding of how to proceed in the studio. Problems of structure, materials, meaning, intention, and context are the subject of class discussion.

Sculpture
Magid
FA-397A-1
Monday, 2-5:50pm
3 Credits
Rm 414F
Pre-Req: N/A

This is a sculpture studio course. While all media are welcome, we will approach the course with sculptural concerns. The theme of the class is Narrative and Sculpture with a focus on Relationships to Systems. This class is loosely defining a system as a group of interacting or interrelated elements that act according to a set of rules to form a unified whole. The class is broken into three ways of exploring this theme: Artists intervening within existing systems; Artists reinventing or creating their own systems; Artists displacing or circulating material from one system to another. Together we will look at examples of artists practice which fall within these themes, visit related exhibitions, and host visiting artists. Throughout the class, students will make their own works or projects with these themes in mind.

Sculpture
Harrington
FA-392A-1
Tuesday, 2-5:50pm
3 Credits
Rm 414F
Pre-Req: N/A

This course takes a concrete approach to the development of critical discourse about works of art. It exercises the student's ability to analyze the activity of making sculpture in particular and advances the student's understanding of how to proceed in the studio. Problems of structure, materials, meaning, intention, and context are the subject of class discussion.
This course takes a concrete approach to the development of critical discourse about works of art. It exercises the student’s ability to analyze the activity of making sculpture in particular and advances the student’s understanding of how to proceed in the studio. Problems of structure, materials, meaning, intention, and context are the subject of class discussion. 3 credits. One-semester course.

“Sculpture” will be understood as open to an expansive and morphing definition of its limits. Students may draw from its historical traditions or choose more experimental modes of production. Given the limitations created by the pandemic, the course will be structured as an open studio, where students can work in a variety of media. Students are expected to work independently in initiating their research, concepts, choice of mediums, and the installation/context for their projects.

The structure of the course will be divided between group critiques and individual studio visits. Students are required to present between three to six completed projects to the class over the course of the semester—depending on the complexity of their production. Additional presentations to the class, including works in progress, may be presented, time permitting. Group critiques will be scheduled one week prior to their presentation and will begin promptly at 10:00 AM. If applicable, students presenting, should consider the installation of their projects as central to its reception. At the completion of the day’s scheduled class critiques, given the time left, Professor Adams will do individual studio visits based on the emerging needs of the students.

All students are expected to be there each week—on time—and to participate in the group critiques. Close looking and close listening will be essential to generating the atmosphere for class discussions. Rigor, respect and generosity will be the ground rules in addressing both the artwork and comments of other students.

This course takes a concrete approach to the development of critical discourse about works of art. It exercises the student's ability to analyze the activity of making sculpture in particular and advances the student's
understanding of how to proceed in the studio. Problems of structure, materials, meaning, intention, and context are the subject of class discussion.

**Sculpture**

**Lehyt**

FA-393A-1
Friday, 2-5:50pm
3 Credits
Rm 414F7
Pre-Req: N/A

Class is structured around the student’s projects. There is freedom in mediums to be used by each student, with a minimum requirement of showing three times during the semester, more times is encouraged. Critiques will be thorough, and there is an expectation of each student being able to think with, and through, the work in critique. Nothing is final, projects can be re-shown and altered, re-presented, and re-considered. The goal of the class is to be able to identify how the pieces work, in which discursive space they exist, how they can be read and experienced, and how much they embody the goals of each student. Open dialogue with respect to the work being shown, and to each other, is required.
Projects: Exhibition: Design and Practice
Ashford
FA-384A-1
Wednesday, 2-5:50pm
3 Credits
Rm 901CS
Pre-Req: Juniors/Seniors

This practical studio course will design and produce exhibitions. We will explore critical theory and histories only to the extent that they enable this practice.

The function and habits of the contemporary museum and its supporting partner, the commercial gallery, are under tremendous critical and social pressure. Vital interventions by artists into the appearance and function of these institutions have proved to be explosively important to what art can and could do.

The course proposes that architectural space, catalogs, signage, and archives are opportunities for the public presentation of artistic invention. Students will be encouraged to approach public display beyond the containment of single practices, authors, or disciplines. Transfigured by formal arrangement, the conditions of an exhibition's ability to address consciousness, community, education, and social reality will be our subject.

Students will use the exhibition spaces, archives, and histories of the Cooper Union as well as sites and contexts beyond campus, when possible.

Projects
W. Raad
FA-384A-2
Monday, 6-9:50pm
3 Credits
Rm 414F
Pre-Req: Juniors/Seniors

This course is open to all third and fourth year students who intend to initiate or pursue a longer term (longer than a semester) art project. Students are expected to present their work-in progress weekly, to research the works of other artists, writers, and thinkers, and to participate actively in class discussions. Open to all 3rd and 4th year students. May be repeated with instructor’s permission.
Project in Sound Art
Poff
FA-281-1
Monday, 6-9:50pm
3 Credits
Rm 539F
Pre-Req: N/A

This class will introduce strategies for understanding and participating in the aural world. The course is divided into specific weekly topics, including acoustic ecology, circuit-bending, radio transmission, synaesthesia and others. Screenings, readings, and discussion are supported by hands-on workshops in capturing, manipulating, and reproducing sound in unconventional ways. Grading is based on three student projects and participating in class discussions.

Projects: Art as Institutional Therapy
Backström
FA-384A-3
Wednesday, 9am-12:50pm
3 Credits
Rm PCS
Pre-Req: N/A

Do institutions need therapy? Yes, many probably do. This class explores the concept and legacy of institutional therapy in relation to art making through field trips, visitors, discussions, presentations, readings, class critiques, and a collaborative assignment. We will approach institutional therapy as a creative, nonhierarchical practice for transforming systems within institutions in order to generate change from within. Originally a term used in alternative psychiatry, we will consider its use in relation to broader institutions such as settler colonialism, capitalism, and the art system. This class will ask questions such as: Which institutions are in need of remediation and what might an art practice that can do that look like? How does institutional therapy compare to institutional critique as an art practice? Can art ‘heal’ or even shift systemic issues, and if so, how could desire be an important component of that practice?
This course will explore practical and theoretical uses for art and cryptocurrency. The development of Bitcoin cryptocurrency and decentralized computing on public blockchains have created the template for what is slated to become the next iteration of the internet – Web3. The rapid growth of this dynamic technological infrastructure over the last decade has reshaped fields such as economics, philosophy, and art.

With the introduction of Ethereum (Ether or ETH) and the programmability of blockchain protocols in 2015, the most conspicuous impact of ETH on art production has been the non-fungible token (NFT). There is also a long lineage of artworks made with blockchain, and of artists working with currency outside of the blockchain context. We will examine art as an economic media and financialization as a dynamic for artistic production, community building, and critical dissent. Students will engage with market mechanisms to shape their practices in both the domain of blockchain art, and the contemporary art world at large.

Taking a hands-on approach, we will dig into the code behind wallets, cryptocurrencies, and blockchain applications like NFTs, and DAOs. Student projects can take the form of direct interventions into the technology, or investigations into contracts, systems of ownership, and rulesets using any medium. Space will be made to consider the political and ethical questions of what is afforded by blockchains and emerging p2p technology. Invited guests speakers will include both technical practitioners and artists who have taken alternative economics as the subject matter and medium of their work.

As a practicum, this course invites students to actively explore the evolving role of the artist engaged in teaching as an art practice. The aim is to support the undergraduate who is currently teaching or who has an interest in teaching in The Saturday Program. In this course, we will explore questions such as: What is [un]learning? What constitutes community? To what extent is teaching an art practice? To what extent is art itself, pedagogical? How is knowledge produced through art? How does art and art-making prompt us to build ecosystems between these emergent bits of knowledge? Introductions to an interdisciplinary set of readings, artists, collectives and institutions that hold varied approaches to the notion of community, learning, social discourse and positionality will also be essential to the class. This course is not designed as an overview or survey. This class is designed as an opportunity for collective inquiry and play. Weekly sessions will include short lectures, collaborative activities, and discussions.
Casting Techniques
Wilhelm
TE-390-1
Monday, 2-5:50pm
2 Credits
Rm 430F
Pre-Req: N/A

Casting Techniques is a process intensive course covering the methods of translating a wax positive into bronze or other non-ferrous metals. All associated techniques from beginning a plaster or rubber mold to casting, chasing, finishing and patination of metal sculptures will be covered. Students will explore a variety of approaches to casting, as well as engage in discussions involving the history of bronze casting, and its place in contemporary art. 2 credits. One-semester course. May not be repeated. Free elective credit.

Techniques in Website Programming: HTML/CSS/JavaScript
D. Bailey
TE-305-1
Tuesday, 2-5:50pm
2 Credits
Rm 804CS
Pre-Req: N/A

This course explores programming techniques using HTML, CSS, JavaScript and other data formats. Students will complete projects that demonstrate their skill and understanding of building web sites and basic programming. The purpose of this course is for the student to develop the skills necessary to utilize the many and varied web technologies for their artistic and professional practices.

Calligraphy
DiEdwardo
TE-216-1
Wednesday, 6-9:50pm
2 Credits
Rm 624CS
Pre-Req: N/A

Geometry, optical balance and the stroke of the broad-edge pen are primary influences that shape the Roman alphabet. Students learn the fundamentals of “beautiful writing” through the study of historical models and the principals that are the basis of classical and modern letter forms. Exercises in ink train the hand kinaesthetically to write letters with graceful movement. Exercises in pencil train the eye to see and analyze the subtle geometry and skeletal “ideal” form of letters. Precise rhythm in letterspacing and careful line-spacing create the color and texture of the page. The class will have an emphasis on page design involving hand written compositions. Roman and Italic capitals and small letters will be the focus of first semester students.
Science: The Foundations of Physics
Istomina
RS-201-H
Thursday, 9-11:50am
3 Credits
Rm 215F
Pre-Req: N/A

The course is the survey of major concepts, methods, and application of physics. It will chart the history of the discipline, tracing the development of ideas about motion, time, space, and the structure of matter from the early Greek philosophy to the present day. The main topics will include Newton’s mechanics, conservation principles, electromagnetism, thermodynamics, and modern physics. Special attention will be given to the radical changes in our understanding of reality brought about by the advances in the main branches of modern physics: special and general relativity, particle physics and quantum mechanics. The course will introduce essential concepts from these fields, such as spacetime, spacetime curvature, uncertainty principle, complementarity, entanglement, dark matter and energy, etc., and discuss their scientific and philosophical implications.

Intrdisciplinary Seminar
Hewitt and Berrada
SE-403A-1
Thursday, 7-9:50pm
2 Credits
Rm Rose Auditorium
Pre-Req: N/A

This course is a hybrid between a lecture series and discussion seminar. It is intended to provide a stimulating and rigorous forum between students’ artistic concerns and those of twelve visiting speakers in a public lecture series of the School of Art. Class discussions will center on diverse presentations by artists, theorists, activists, designers, writers, curators, gallerists and other practitioners involved in the arts from positions that embody an interdisciplinary approach or that imply new uses for disciplinary traditions. Accordingly, the course is designed to introduce students to some of the debates currently driving contemporary art and the larger social context it embodies. Members of the class are expected to be active participants and will therefore be asked to respond with some intellectual invention to a variety of topics with weekly discussions, readings, and written or oral presentations.

Science: Astronomy
Kreis
RS-201-G
Friday, 10am-12:50pm
3 Credits
Rm 215F
Pre-Req: N/A

The course starts with how to measure things, such as units of time, length and mass. We introduce the celestial sphere, which will help us to understand such things as days as measured by the Sun and by a star. This will also help to understand seasons. We then introduce a short history of western astronomy. We look at the universe, starting at home (Earth and Moon) and move out---solar system (Sun and planets), stars, galaxies and cosmos. Along the way, we look at how we look (light and telescopes), and how we measure things (distance, brightness and color).