School of Art Courses

Note on Course Numbers

Each Carnegie Mellon course number begins with a two-digit prefix which designates the department offering the course (76-xxxx courses are offered by the Department of English, etc.). Although each department maintains its own course numbering practices, typically the first digit after the prefix indicates the class level: xx-1xx courses are freshmen-level, xx-2xx courses are sophomore level, etc. xx-6xx courses may be either undergraduate senior-level or graduate-level, depending on the department. xx-7xx courses and higher are graduate-level. Please consult the Schedule of Classes (https://enr-apps.as.cmu.edu/open/SOC/SOCServlet) each semester for course offerings and for any necessary pre-requisites or co-requisites.

60-101 Concept Studio I
Fall: 10 units
"The Self and the Human Being" The first of a sequence of six studio courses designed to develop a personal approach to generating art and to learning transferable conceptual skills. The topics of the first three Concept Studios are addressed through a sequence of structured, media-independent projects. Open to freshmen admitted to the School of Art, or by instructor permission.

60-104 Contemporary Issues Forum
Fall: 6 units
This introductory class presents to students a diverse range of contemporary issues in the visual arts. It is organized in a thematic way rather than chronologically. There will be readings, discussions, and papers. Lecture/discussion format. All students are required to attend the School of Art lecture series. Open to freshmen in the School of Art, or by instructor permission.

60-109 Adventures in Arts Time
Spring: 9 units
Adventures in Arts Time is an anthropological view of humans as culture-makers from the earliest archaeological records to the technological developments of the present day. Each week the class becomes a time capsule, where the students engage with the art, architecture, music, drama, and literature of a particular civilization within a particular time period. Students gain an understanding of different historical and contemporary aspects of global cultural interaction, and an appreciation for the differing aesthetic ethos of other major cultures.

60-110 Electronic Media Studio I
Spring: 10 units
Electronic Media Studio One (EMS1) is an introduction to the computer as a dynamic tool for time-based media production. In this course students develop skills in digital video and audio production through the exploration of narrative, experimental, performance, documentary and animation themes and forms. Historical and contemporary works are presented and discussed to provide a context for studio projects.

60-130 3-D Media Studio I
Fall: 5 units
An introduction to three-dimensional form. Various materials and methods are explored through projects covering a broad range of sculptural concerns. Art majors must complete one Mini-1 course and one Mini-2 course to satisfy the 3DI requirement. Students are required to select two of the following four sections: Hey Robot, Let's Make Something; The Structural Imagination (Wood and Steel); Clay Modeling; and Small Metals Fabrication. Materials fee may be required. Open to freshmen in the School of Art, or by instructor permission.

60-131 3D Media Studio II
Spring: 5 units
Three unique mini classes offer an introduction to basic language and approaches of sculptural practice. Move It: kinetic art using exclusively non-electronic mechanical processes. Wearables: wearable objects that combine conceptual issues of body with performance, site, and audience. Multiples: reproducing objects in quantities using a combination of digital and hands on processes. Art majors must complete one Mini-3 course and one Mini-4 course to satisfy the 3DI requirement. Materials fee may be required. Open to School of Art freshmen or by instructor permission.

60-141 Black and White Photography I
Fall and Spring: 10 units
This course will teach you the basic craft of photography from exposure of the negative through darkroom developing and printing to print finishing and presentation. Content includes student presentations, class discussions, shooting assignments, darkroom sessions and class critiques. We will concentrate not only on the technical aspects of photography, but also the aesthetics of seeing with a camera. The course concentrates on photography as a fine art — what is unique to it and the concerns that are shared with other visual arts, such as composition, tonal values, etc. and aims to equip students with an understanding of the formal issues and the expressive potentials of the medium. Lab fee and 35mm manual camera required. Each student is responsible for the cost of paper and film.

60-150 2D Media Studio: Drawing
Fall: 10 units
This course focuses on the language, materials and concepts of drawing as foundation for all the visual arts. Initial emphasis on the development of perceptual, analytical, and structural drawing skills with increasing attention to idea development. Exposure to methods of creating pictorial and illusionistic space; recording the external world of light and form; and making visible the internal world of the heart, the mind, the soul. Experience with line, texture, tone, shape and mass; in a variety of wet and dry drawing media. Open to freshmen in the School of Art, or by instructor permission.

60-160 2D Media Studio: Imaging
Spring: 10 units
A continuation of Two-Dimensional Media Studio: Drawing. Includes an expansion of drawing to include multimedia approaches, painterly issues, digital input/output and work with digital image processing tools. Prerequisite: 60-150.

60-200 Sophomore Review
Fall and Spring
Students present their work and their ideas about their work to a faculty committee. A successful review is required for advancement to the junior year. Although this is a non-credit course, it is required of all Art (BFA, BHA, BSA, and BCSA) sophomores.

60-201 Concept Studio II
Fall: 10 units
"Space and Time" A continuation of Concept Studio I with a focus on space and time through projects of increasing complexity. Such topics as biological time, historical time, psychological time, celestial time, clock time, and public space, private space, mathematical space, and virtual space are addressed through projects. Open to freshmen in the School of Art, or by instructor permission. Prerequisite: 60-101.

60-202 Concept Studio III
Spring: 10 units
"Systems and Processes" A continuation of Concept Studios I and II with a focus on systems and processes. The utility, discovery, and the generation of systems and processes are addressed through projects. Open to sophomores in the School of Art, or by permission of instructor. Section B (Rich Pelli) - This Concept Studio III section is a special edition of the Systems and Processes theme that will focus on the use of media to engage with the dynamic world we inhabit. This course considers the history, theory and practice of tactical media, hacktivism, and other media-based strategies of cultural expression, protest and critique. The course examines the social, economic and electronic networks that shape the world, and looks towards creative ways of intervening in these systems, as exemplified by such groups as The Yes Men, Critical Art Ensemble, Preemptive Media, Franko and Eva Mattes and others. Students will develop several projects that employ skills in digital and physical media to create works that creatively engage with audiences in contexts that may not be traditionally associated with art. Open to non-art students.
60-203 Concept Studio: EcoArt  
Intermittent: 10 units  
An interdisciplinary studio course that provides an introduction to an art practice focused primarily on ecology and the environment. Combines the exploration of the history of environmentalism and ecological art with the production of creative projects to address related issues such as sustainability. Shorter initial exercises and collaborative projects will precede and evolve into larger and more extended individual and/or collaborative projects. Considers both indoor and outdoor sites with an emphasis on context and the use of natural and recycled materials. Open to freshman and sophomores in the School of Art and to students in other disciplines.

60-204 Concept Studio: Networked Narrative  
Intermittent: 10 units  
Networked Narrative is a studio class that uses social networking sites such as Facebook, Twitter and YouTube as venues to develop fictional stories. The class will explore traditional and experimental narrative forms in a variety of media. Students will develop and produce narrative events that are exhibited on their fictional character’s various social networking sites.

60-205 Modern Visual Culture 1789-1960  
Fall: 9 units  
Explores the diverse roles of artists in the complexity of modern society from the Industrial Revolution through 1960. Contextual issues include the relationship of artists and art to culture, politics, economics and modern technologies. Attention is paid to the decline of patronage, the diminishing role of the academy and the emergence of an avant-garde and art promotion. Open to sophomores in the School of Art, or by instructor permission.

60-206 Contemporary Visual Culture 1960 - Present  
Spring: 9 units  
This course traces the shifts in art from late Modernism until our After Post era. It will examine the diversity of art produced, as well as the critical ideas that arose over a span of 60 years. The rise of a pluralist / conceptual art will be discussed within the context of social change, technology and globalization. Open to sophomores in the School of Art, or by instructor permission. 
Prerequisite: 60-205.

60-210 Electronic Media Studio II  
Fall: 10 units  
Electronic Media Studio Two (EMS2) is an introduction to software programming and physical computing within the context of the arts. In this course students develop the skills and confidence to produce interactive artworks using audiovisual, networked and tangible media. Section A will be taught at an accelerated pace, and is intended for BCSA students, CS students with Art minors, or other students with prior programming experience.

60-241 Black and White Photography II  
Fall and Spring: 10 units  
A continuation of topics explored in Black and White Photography I with an emphasis on aesthetic development and image evaluation. Students will gain experience with a variety of formats; experimental methods and media will be encouraged. Folio or equivalent required by end of the semester. Course has lab fee. Black & White I (62141, 60141, or 51265) or consent of instructor. 
Prerequisites: 62-141 or 60-141 or 51-265.

60-244 Contemporary Photo Theory  
Intermittent: 9 units  
Because, you know, the photographs are more a question than a reply. (Sebastiao Salgado) A photograph is a moral decision taken in one eighth of a second, or one one-hundred-and-twenty-eighth. (Salman Rushdie) This seminar investigates current topics in photography and the image; our goals are twofold: identification of photo theory as it applies to current practice from both the viewpoint of maker and consumer. The course is designed to address philosophical issues for photographers working now and will favor conversation over written word; students are expected to fully participate in critical analysis and discussions. Readings include works by Roland Barthes, Stephen Shore, Susan Sontag, Hollis Frampton, John Szarkowski, Robert Adams, Italo Calvino, Berenice Abbott, John Berger and James Elkins. No pre-requisites.

60-245 Portrait Photography  
Intermittent: 10 units  
Portrait Photography explores the emotional and visual process of collaboration between subject and photographer that creates a photograph. We’ll use cameras of all formats and levels of sophistication to create portraits in the studio and on location. We’ll find and exploit available light and create artificial light to complete our vision, and we’ll explore a wide range of darkroom strategies to support and add richness to our final print. Through film and video we’ll meet some of the masters of this form like Arbus, Newman, Avedon and Penn, and we’ll take advantage of any opportunities to visit exhibitions and photographers studios. Lab fee required. 
Prerequisites: 62-141 or 60-141 or 51-265.

60-250 2D Media Studio: Painting  
Fall and Spring: 10 units  
A pragmatic introduction to the tools, materials, and techniques of painting, including instruction in the fabrication of sound painting supports and the application of permanent grounds. Students become conversant with the range of visual options unique to the vocabulary of painting. Open to sophomores in the School of Art, or by instructor permission.

60-251 2D Media Studio: Print Media  
Fall and Spring: 10 units  
An introduction to print media with emphasis on reproductive image making in the context of historical and contemporary practice. Students will be introduced to print processes such as intaglio, stencil, relief, linocut, lithography, serigraphy, and digital applications. Informed by readings, presentations on artists, and visits to museums, students will develop a body of work informed by and extending the traditions of print media. Open to sophomores in the School of Art, or by instructor permission. 
Prerequisites: 60-160 or 60-151.

60-257 Computing for the Arts with Processing  
Fall: 9 units  
This course is an introduction to Java programming for designers, architects, artists and other visual thinkers, using the popular “Processing” Java toolkit for interactive graphics. Intended for students with little or no prior programming experience, the course uses interactive visualization as a gateway for learning the traditional programming constructs and the fundamental algorithms typically found in a first course in programming. Students will become familiar with essential programming concepts (types, variables, control, user input, arrays, files, and objects) through the development of interactive games, information visualizations, and computationally-generated forms.

60-301 Making Connections: Individual Projects in the Community  
Fall: 10 units  
This course has an outreach focus, which allows students to create art outside traditional artistic venues. In developing their individual projects, students will explore what it means to be an artist outside the art school studio: how to make connections with a new audience; how to translate artistic vision into statements that are comprehensible and meaningful to a non-artist community; and how to apply personal aesthetics and interests to non-traditional settings. The types of projects chosen are limited only by the students’ imaginations: events, performances, temporary installations, graphics, sculptures, sound works, projected images, and interactive productions are only some of the varieties of projects that may be developed. Projects may be specific to a selected site, or they may address particular characteristics of a location, such as its history or physical setting, or its role in the community. Students may seek support from local organizations or institutions, or create works in collaboration with a selected community.

60-340 The Ballet Russe (The Russian Ballet) and its Artists  
Intermittent: 9 units  
The leading artistic position of the French Avant-Garde in the 1910’s and 1920’s was partly predicated on the assembly, meeting, collaboration and cross-influence of artists from all over Europe. The visual artists, musicians and performers brought with them specific aspects of their native heritage, therefore contributing to the enrichment of the general cultural scene in Paris with its cultural focal point the Ballets Russe became a melting pot of creativity.
60-347 Global Perspectives for Art
9 units
We find ourselves in a constantly intensifying global reality where increasingly there is a tendency beyond traditional boundaries. This seminar will explore the aesthetic concepts of the large historic cultures where there are bodies of articulated aesthetic philosophy: Western traditions from Plato to Heidegger, including Islam as integral to the Abrahamic/biblical traditions; the vast and rich array of aesthetic thought in Hindu, Buddhist, and Shinto cultures. In some specifically interesting cases, we will explore particularly small, isolated or ancient cultures, such as the Hopi or the Aborigines of Australia. In each case, we will explore ideas related to cardinal cultural ‘objects’ of each culture: architecture, painting, sculpture, performance/ritual, dance, film, and other media. We will expand our thought through various appropriate readings and discussions. Research themes can include: iconoclasm, cultural cœption, cultural orthodoxies and purifications, cultural transferences, cultural isolation and extremes, multiple cultural exchanges over long periods of time, cultural antagonism, cultural extermination and genocide, cultural transplantation, cultural destruction and warfare, cultural distinctions, etc. Of particular interest will be the study and understandings of the roots of the iconoclastic, anti-art traditions and their constant struggle and interaction with the meanings and power of the icon, symbol and image. Students will be expected to do specific presentations based on research topics as well as our readings. A final research paper/project will be the major outcome of the course, and in some cases, this will be combined with an artistic project or performance.

60-351 Art & Religion
Intermittent: 9 units
The Art and Religion course-seminar will explore several major artistic manifestations prompted by religious beliefs during the history of art. Emphasis will be on the arts, although general historical, eschatological and philosophical explanations will be assessed as well. Major religions will be brought to discussion in one or several of their artistic manifestations. The course-seminar will be based on discussions facilitated lectures given by the professor, in addition to student research presentations.

60-355 Rights to Representation: Indigenous Peoples and Their Media
Intermittent: 9 units
For decades anthropologists have been "picturing" others, in images as well as in words. This course explores the turn-around: when those who have been subjects of description take the opportunity to represent themselves. After a brief history of visual anthropology, we will concentrate on modes of representation developed by indigenous peoples. We will explore the meanings of "indigenous," in connection with various modes of representation, including film, dramatic performances, art, and the Internet. During the semester, we will compare—across time and space—the purposes for which media are used, the transmission of cultural values in media, the organization of production, and the intended audience. Anthropological method and theory will guide our inquiries. Course materials include disciplinary readings, documents dealing with indigenous rights, and examples of the work of indigenous peoples.

60-357 Picasso & 20th Century Art
Intermittent: 9 units
The greatest artist of the twentieth century, Picasso, invented or participated in most of the major styles of modern art. His artistic genius and visual inventiveness will be explored from 1904 (age 13) to his death in 1973 (age 92), against the background of eight decades of modern art. The focus of the investigation will not be limited to psychological and transferences, cultural isolation and extremes, multiple cultural exchanges over long periods of time, cultural antagonism, cultural extermination and genocide, cultural transplantation, cultural destruction and warfare, cultural distinctions, etc. Of particular interest will be the study and understandings of the roots of the iconoclastic traditions and their constant struggle and interaction with the meanings and power of the icon, symbol and image. Students will be expected to do specific presentations based on research topics as well as our readings. A final research paper/project will be the major outcome of the course, and in some cases, this will be combined with an artistic project or performance.

60-360 Feminism - Art - Theory
Intermittent: 9 units
What happened when the women’s movement and the art world encountered each other? What is the relationship between feminism and the theory of art and the practice of feminism? This course will take place on campus, and at the Mattress Factory, where I am curating an exhibition, “Feminist and...” which will open September 7th. The course will cover themes such as the gendered nature of culture; the politics of history and culture; the interaction between feminist activism and art practice; notions of the aesthetic and if there are feminine or feminist aesthetics and representational forms; body, sexuality and representation; the representation of gendered national and racial identities. It will do this through looking at artworks, and through close readings of texts. Some of the material will engage with sensitive issues and challenging images, particularly around sexuality, and students taking the course must be prepared for and accepting of this. At the same time, full debate will be encouraged. The course is open to all students; preference will be given to MFA, senior and junior students.

60-366 Pop International
All Semesters: 9 units
Marcel Duchamp’s Readymades pointed twentieth century artist’s attention in the direction of reframing commodity culture and generated the potential to comment critically on the institution of art. Besides experimenting with strategies of reapropriation across painting, sculpture, and photography, artists associated with Pop Art used communication technologies to hijack popular culture’s ideologies as broadcasted through television, film, video, radio, and print. This seminar, tracks these Pop Art strategies from their inception in 1957 (the first to use the term “pop” programmatically was the British artist Richard Hamilton) through their contemporary legacies (exemplified by the work of Josh Smith, Kelley Walker, Takeshi Murakami, Monika Sosnowska, just to name a few). Discussions of selected works will be supported by theoretical and historical readings of British, French, German, Japanese, Chinese, Eastern European and American Pop art.

60-371 Breathless: International New Wave Cinemas
Intermittent: 9 units
What does Jean-Luc Godard’s “Breathless [A’bout de souffle] (1959) have in common with Wong Kar-Wai’s “In the Mood for Love” [Fa yeung nin wa] (2000)? What does Satyajit Ray’s “Pather Panchali” (1955) share with Mark LaPore’s “The Glass System” (2000)? By examining an array of films from the classic days of International New Wave Cinemas, beginning with French Nouvelle Vague, Indian “Parallel Cinema,” as well as German, Italian and Japanese innovations and moving to contemporary (and experimental) film movements in Iran, Korea, Hong Kong, Eastern Europe, and the US, we will explore the ways a handful of young directors found novel ways to fund and shoot their movies in direct defiance of commercial, narrative, and formal norms. By focusing on mise-en-scène, aesthetics, off-site locations over studios, lesser-known actors over box-office idols, and small production teams over professional crews, these directors were able to turn lo-fi aesthetics and financial shortcomings into a radical new filmic style. Especially central here will be how forms of cinematic experimentation translated internationally—and how these approaches continue to challenge hegemonic forms of media culture.

60-373 Aesthetics from a Global Viewpoint
Intermittent: 9 units
The arts and their making is a behavior that differentiates our species. Artistic/aesthetic differentiation is a global phenomenon occurring since the dawn of our species. This seminar will explore the articulated aesthetic philosophy of large historic cultures: Western traditions from Plato to Heidegger, including Islam as integral to the Abrahamic traditions along with the vast and rich array of Hindu, Buddhist, and Shinto aesthetics. These broader traditions may be examined along with additional examples from small, isolated or ancient cultures, such as the Hopi or the Aborigines of Australia. Across cultures, we will explore the aesthetics of cardinal cultural “objects” (architecture, painting, sculpture, performance/ritual, dance, film, and other media) through readings and discussions. Each student’s individual definition of the nature of the arts will be constantly measured with and against the ideas of other cultures, all developing an interactive and integrative dialogue. Other issues include: the study and understandings of the roots of the iconoclastic traditions and their constant struggle and interaction between the meanings of the icon and the image; the notion of cultural “otherness”; and how aesthetic problems manifest themselves in our world in immediate and violent ways; and the evolution of the drive for the preservation of cultural memory in light of recent destructive events in Afghanistan and Iraq.
60-375 Art History/Theory: Contemporary Likeness, Identity and Culture
Intermittent: 9 units
The issue of identity in the visual arts emerged in a new light with the shift from a modernist to a postmodernist paradigm since the mid 20th century. When we speak of identity, do we mean? How does cultural identity contribute to the formation of personal/private identity & vice-versa? How is this reflected in an artist's work in this time? This class will examine the evolution of human portrayal from the time of Andy Warhol to the present. Through readings, discussions & presentations the class will focus on how identity & human portrayal has evolved over time & how theory, popular culture, the cult of the ‘glam celebrity’, & technology have played an influential role in re-shaping the concept of human portrait & identity—each challenged the hierarchical pretext regarding the portrait & images of likeness in our culture today. Thanks to photography & cyber-technology no longer is a portrait revered as a unique or rarefied object but a conglomeration of cultural influences. We will look at the works of a diverse range of artists, as well as non-artists, & consider how media affected the evolution of the portrayal of the human face & creation of persona. Images of individuals were once viewed as a primary indicator of national identity, social status, religious belief, as well as a signifier of historical events influenced by particular ideologies. Nowadays images of the self & others, prompt viewers to consider a wide range of psychological, spiritual, & political information beyond visual manifestation. Two basic questions “Who are you?” & “What is art?” often come together in the contemporary portrait. Most portraits are negotiations between identity & representation, between being a subject & portraying a subject. Representations of people represent a mark of contemporary life that personal identities have become fractured, complex, & splintered, and that they are in a state of constant re-definition.

60-376 Large Format Photography: The Antiquarian Avant-Garde
Intermittent: 10 units
This course takes part in the anti-digital movement by exploring the roots of photography. Students will shoot with an array of large format cameras and use 19th and 20th century processes to create “one-of-a-kind” photographic images. Course topics include non-silver printing processes, pinhole photography, and contemporary tin-types. Prerequisites: 60-141/62-141/ equivalent or consent of instructor.

60-377 Picasso and 20th Century Art
Intermittent: 9 units
The greatest artist of the twentieth century, Picasso, invented or participated in most of the major styles of modern art. His artistic genius and visual inventiveness will be explored from 1894 (age 13) to his death in 1973 (age 92), against the background of eight decades of modern art. The focus of the investigation will not be limited to psychological and iconographic factors, but will be discussed in the historical and artistic context of his time.

60-380 Color Photography and Digital Output
Fall and Spring: 10 units
This is a course using digital photography with digital printing methods. Students will gain an understanding of color theory and aesthetics, while better defining their individual voices. By semester's end, students will have a finely printed body of work using Mac OS, RAW file handling, color management and Adobe PhotoShop. Prerequisites: 62-141 or 60-141 or 51-265.

60-381 Museums and other Exhibition Spaces
All Semesters: 9 units
This class provides students with an introduction to the history and function of museum/art spaces and an understanding to the effect of museum exhibitions on our notion of history, arts, culture and society. This course is geared to artists as they prepare to go into the post-graduation enigmatic art world and for students desiring to pursue a career in curating. Focus is on the actual and ideal museum and art galleries, alternative spaces, biennials, art collectives, virtual options as well as a variety of venues to showcase art and culture. It will analyze not so visible skirmishes, hidden economics, and the complex ways artists and curators interact with institutional power. We will concentrate on showcases for art in the Pittsburgh region and visits to museums and exhibitions will be an integral part of this course. Topics to be covered through lectures, discussions and readings include: national galleries, city museums, art centers, artists spaces, museums, as treasures of culture and of cultures, museum architecture, the idea of the canon in art, political correctness in exhibitions, collections and collecting, ethical issues, acquisitions and de-accessions, design and installation, conservation, sculpture gardens, private houses as museums, donor memorials, museum operations, museum shops, and the role of museums in contemporary society. We will examine controversies relating to museum acquisitions and to the looting of cultural goods.

60-382 Theory and Practice of the Art Museum
Intermittent: 9 units
This class is an introduction to and overview of the missions, operations and history of museums, focusing on art-related institutions such as galleries, and non-profit spaces. The course will provide a broad introduction to the field of museum operations. Topics included will be the history and philosophy of museums, the social, economic and political trends that shape museums; the staffing, management and financing of museums; and the multiple functions of museums - collection and care of objects, exhibition design and interpretation, education programs, research activities and public relations. Discussions will also address cultural policy change as society has evolved and new historical and theoretical models have risen over the past two decades. The course will combine lectures, both by the instructor and visiting lecturers; discussion of readings and videos; field trips to museums; and a semester-long group project.

60-398 Social History of Animation
Intermittent: 9 units
Social History of Animation will investigate the history of animation from early experiments with trick film through the development of major studios, to independent and web based work. Social movements and technological innovation will be analyzed and discussed in relation to the effects they had on animators and their work. This class will read related texts and view US and international examples to explore animation as a means for personal expression and as a reflection of the context in which they were made.

60-399 Art History/Theory Independent Study
All Semesters: 9 units
A tutorial course in which an Art student works individually on a self-generated project under the supervision of a School of Art faculty member. Prior to enrolling in Independent Study, the student must complete an "Independent Study Proposal" form (available in the bins on the 3rd floor of CFA) which is signed by the faculty member and the Assistant Head of the School of Art. Prerequisite: Art junior or senior status, or by instructor permission.

60-400 Senior Review
Spring
Students present their work and their ideas about their work to a faculty committee. This review affords graduating students the opportunity to analyze and summarize their work, and to engage a faculty committee in discussion about issues that face an artist preparing to enter a career in art. Although this is a non-credit course, it is required of all Art (BFA, BHA, BSA and BCSA) seniors.

60-401 Senior Studio
Fall: 20 units
Students initiate a comprehensive two-semester project in the first semester to be continued and completed in the second semester of their senior year (60-402). Each student pursues an ambitious and cohesive body of work with guidance by a team of School of Art faculty. Multimedia, multidisciplinary, and collaborative work is encouraged. Studio work is supplemented by group critiques, workshops on writing, professional presentation skills, career preparation, and technical instruction as needed. Attendance at all 5pm School of Art Lecture Series events is required for this class. Open to seniors in the School of Art, or by instructor permission.

60-402 Senior Studio
Spring: 20 units
Students continue a comprehensive two-semester capstone project. Each student pursues an ambitious and cohesive body of work with guidance by a team of School of Art faculty. Multimedia, multidisciplinary, and collaborative work is encouraged. Studio work is supplemented by group critiques, workshops on writing, professional presentation skills, career preparation, and technical instruction as needed. Attendance at all 5pm School of Art Lecture Series events is required for this class. Open to seniors in the School of Art, or by instructor permission.
60-408 Advanced ETB: the Manipulated Moving Image
Intermittent: 10 units
The manipulated moving image has virtually unlimited potential to visually represent events, scenarios and forms that have little or no relation to our experience of the tangible, extant world. In this course you will use digital and analog tools and techniques and your imagination to create movies that do not represent the way the world is, but how you might want it to be and/or what you are afraid it might become (Utopian/Dystopian impulses, Eros and Thanatos). The manipulated moving image is a somewhat awkward but more inclusive word than "animation" for moving image forms that include: animation, motion graphics, compositing and visual effects in various combinations and permutations. In a way, digital tools have allowed moving image-makers to create works that have less to do with film and more to do with music and painting. Some of the techniques we will explore include: object animation, cutout animation, pixilation, collage, rotoscoping, motion tracking, and compositing. There will also be a focus on audio production and post-production with an emphasis on audio-visual relationships. The primary software tools students will be instructed in and use include Adobe After Effects, Photoshop, and Apple Logic Pro. Prerequisite: 60-110.

60-409 Advanced ETB: Video & Performance
10 units
This studio course will concentrate primarily on the historical and ongoing relationship between video and performance. That said, this course will be flexible enough to allow students to create video, performance and video/performance projects. Class time will be spent considering the history of performance and video/performance, viewings of primarily video/performance works to provide background and inspiration, presenting and critiquing student projects and studio time to work on projects. Technical instruction in video editing, compositing and effects, audio recording/editing and mid-applications will be offered on an as needed basis. Prerequisite: 60-210.

60-410 Advanced ETB: Moving Image Magic/Visual Effects, Animation and Motion Graphics
All Semesters: 10 units
Fly like Harry Potter, return to the Land of Oz, journey into the farthest reaches of the universe, or take a head-trip into the inner reaches of your subconscious. It’s all possible in Moving Image Magic! This course serves as an introduction to the creation of personal extraordinary cinematic visions using a variety of analog and digital tools and techniques. These include: stop motion animation, compositing, motion tracking, digital matte painting, miniatures, rotoscoping, text animation and motion graphics. The primary software tools that students will use are Adobe After Effects CS3 Pro and Adobe Photoshop CS3 extended. Prerequisite: 60-210.

60-412 Interactive Art and Computational Design
Intermittent: 10 units
This is an advanced studio course in arts-engineering and new media practice. Topics to be explored in the course will be tailored to student interests, and may include: experimental interface design, information visualization, game design, real-time audiovisuals, locative and mobile media, computational form-generation, image processing and vision-based interactions, augmented reality, simulation, networked crowd-sourcing, dynamic typography, mechatronic and device art, physical computing, and other topics. Through a small number of exploratory assignments and a public capstone project, students will bolster interdisciplinary problem-solving abilities and explore computation as a medium for curiosity-driven experimentation. Enrolling students are expected to have demonstrable programming skills, without exception, beyond the level of an introductory class such as 15-110. Although the course will provide technical overviews of major arts-engineering toolskits (including Processing, Max/MSP/Jitter, openFrameworks, PureData, Cinder, and Arduino), assignments may be executed in the student’s preferred programming environment. Graduate students should register for section 51-682 or 62-726 (12 units), which meets with the undergraduate sections 60-412 and 51-482 (10 units). Students lacking the programming skills for this course are encouraged to take Computing for the Arts with Processing with J. Roberts. Prerequisites: 15-110 or 60-112.

60-413 Advanced ETB: Experimental and Abstract Animation
All Semesters: 10 units
This course will explore experimental and abstract animation from fine arts perspective and emphasize exploratory, formal and cultural/political motivations. Exploratory is the important term here as students will experiment wildly to develop a personal vision and method of creating one’s work. Using a variety of strategies, techniques, and tools students will create experimental and/or abstract animations. Some of the the animation techniques explored will include: 3D stop motion digital photography, copy machines, drawing (analog & digital) painting (analog & digital), cutout, collage, scanners and more. There will also be a strong component on developing audio production and post-production skills with an emphasis on audio-visual relationships. The primary software tools include Adobe After Effects and Photoshop, and Apple Logic Pro. This course is especially suitable for those students who are interested in creating animations using their drawing, painting and object making skills.

60-414 Advanced ETB: Animation Art and Technology
Spring: 12 units
Animation Art and Technology is an interdisciplinary course cross-listed between Art and Computer Science. Faculty and teaching assistants from computer science and art teach the class as a team. It is a project-based course in which the objective is art and design, but the medium is software. Absolutely no previous programming experience is necessary. Rigorous exercises in a Java-based OpenGL graphics environment will develop the basic vocabulary of constructs that govern static, dynamic, and interactive form. Topics include the computational manipulation of: point, line and shape; texture, value and color; time, change and motion; raster, vector and 3D graphics; reactivity, connectivity and feedback. Students will become familiar with basic software algorithms, computational geometry, digital signal filtering, kinematic simulation, and the application of these techniques to aesthetic issues in interaction design. This course can be repeated with the permission of the instructor.

60-415 Advanced ETB: Animation
Fall: 10 units
This studio will introduce students to a variety of 3-D computer and 2-D drawn animation techniques. The class will look at and discuss examples of historic and contemporary animation. The students will explore animation through a variety of short experiments and develop individual projects that use animation as a means of self expression. Prerequisite: 60-110.

60-416 Advanced ETB: Interactive Multimedia
Intermittent: 10 units
Within this class students will engage in a personally directed exploration of the creative, conceptual and technical possibilities of interactive scenarios within their art practice. The term “interactivity” will be used and discussed in its broadest possible context, and students will be given space to explore a wide range of digital and non-digital approaches to user orientated strategies within the art making process. We will also examine and discuss a range of historical and contemporary strategies employed by art makers who have used forums from on-line and virtual spaces to physical and site specific venues to expand and explore the relationship between the art object and the audience. Prerequisites: 60-210 and 60-110.

60-417 Advanced ETB: Video
Intermittent: 10 units
This course offers an in depth exploration of video as a tool for creative expression. Topics for investigation and discussion will include: histories of experimental video, contemporary trends in the field, technological developments, performativity, perception and manipulation of time, and theories of representation. Additionally this course will provide instruction in advanced production and post-production techniques, including lighting, editing, compositing, 2D animation, graphics and sound design.

60-418 ETB Studio: The Interactive Image
Intermittent: 10 units
This studio is an introduction to the use of interactive graphics as an expressive visual tool. It is a “studio art course in computer science,” in which the objective is art and design, but the medium is software. Absolutely no previous programming experience is necessary. Rigorous exercises in a java-based OpenGL graphics environment will develop the basic vocabulary of constructs that govern static, dynamic, and interactive form. Topics include the computational manipulation of: point, line and shape; texture, value and color; time, change and motion; raster, vector and 3D graphics; reactivity, connectivity and feedback. Students will become familiar with basic software algorithms, computational geometry, digital signal filtering, kinematic simulation, and the application of these techniques to aesthetic issues in interaction design. This course can be repeated with the permission of the instructor.
60-421 Computing for Live Performance with Max/MSP/Jitter
Intermittent: 10 units
This hands-on and highly interdisciplinary studio course is an introduction to the use of Max/MSP/Jitter, a visual programming environment for controlling interactive music, audio, video, and many other electronic media. For more than 25 years this software has been used by artists, musicians, and stage designers to create their own custom programs for algorithmic compositions, interactive installations, live environments and real-time performances. The simple visual interface of Max/MSP/Jitter allows non-programmers to create their own software without having to learn or to write traditional “code”. Instead, users connect together pieces from a vast library of functional objects that manipulate and control sound, video, and other effects (such as P5, DMX lighting) in response to sensors like cameras, microphones, game controllers, MIDI devices, and custom electronics. Students will be exposed to the fundamentals of multimedia programming in Max, the basic building blocks of sound and video, and techniques for integrating data from external sources, such as the popular Arduino microcontroller. They will also gain the practical knowledge and problem-solving skills to develop and design their own interactive installations, sculptures, and instruments for performance-based art or experimentation. No previous programming experience is necessary. Prerequisites: familiarity with the Mac OS. Prerequisites: 60-110 and 60-210.

60-422 Advanced ETB: Robotic Art Studio
Intermittent: 10 units
Advanced ETB: Robotic Art Studio (Fabian Winkler). The Robotic Art Studio is an experimental, interdisciplinary studio aimed at exploring technical workshops exploring basic electronics, the presentation and discussion of key texts relevant to robotic art and the creation of individual art works. In the technical workshops students will explore the functionality of basic electronic components, work with sensors, actuators and alternative power sources such as solar energy. In the discussion of assigned readings, we investigate some of the cultural, social and technological issues inherent to the field of robotics. These discussions will be complemented and extended by presentations of relevant historic and contemporary artworks. Students will also work on a variety of different project assignments, some of them exploring the networking of individual work to a system. A course material fee is required. Students can expect to purchase some individual items outside of those provided if they are unique to their project design.

60-423 ETB Studio: Audio Visual Systems and Machines
10 units
The idea of a synaesthetic bonding of sound and image is a recurring motif in art, design and cinema; new technologies provide powerful new tools with which to explore that idea. Major topics in this studio course will include: static and dynamic visualizations, visual notation and scoring systems, information sonification, sound for film and animation, and interactive systems for audiovisual play and performance. We will also give attention to psychoacoustics, computer graphics, sound synthesis and analysis techniques, abstract film, and other related fields. The first half of the semester will focus on weekly assignments aimed at exploring creative mappings between the auditory and visual domains. The second half of the course will develop individual projects, culminating in an evening of public installations, screenings and performances. This course is cross-listed between the Schools of Art, Design and Music.

60-425 Advanced ETB: Live Video
Intermittent: 10 units
Advanced ETB: Live Video - Using analog and digital tools, software and hardware, students will create independent and collaborative live video performances and events. Additionally we will engage in study and discussion around issues of liveness, mediation, representation and embodied experience.

60-428 ETB Studio: Information Visualization
10 units
Traditionally the tool of the statistician and engineer, information visualization has increasingly become a powerful new tool for artists and designers as well, allowing them to present, search, browse, filter, and compare rich information spaces in order to reveal thought-provoking but otherwise hidden narratives. Like many visualization courses, this class will examine computational techniques for displaying temporal, spatial, hierarchical, and textual data. The class will also focus on visualization strategies from the “designer’s perspective,” exploring how to decipher and represent data in ways that make it meaningful for others, and on critical and conceptual applications of visualization from the “artist’s perspective.” Emphasis will be placed on the origin of data, as well as what information is worth visualizing and why. This course is heavily project-oriented; students should have programming skills or an interest in learning how to apply computation to their work.

60-430 Advanced SIS: Open Sculpture
Intermittent: 10 units
Sculpture is perhaps the broadest field among the contemporary visual arts. Through its privileged relationship to the physical world and the viewer’s body, sculpture is the glue that connects the intermedia practices of object, installation, interactive art and performance. In this class we build on skills and concepts learned in 3D media 1 and 2 to develop students’ individual approach. Students define independent responses to topics proposed through discussions of contemporary sculpture. Emphasis is placed on individual development. Students are encouraged to explore interdisciplinary approaches.

60-431 Advanced SIS: Installation
Intermittent: 10 units
This course explores a broad range of sculptural issues concerning the practice of Installation Art. Studio focus on relatively large scale works which often involve an ensemble of objects or phenomena in a particular space. Both temporary and permanent works are addressed. Emphasis on research about “place” and the proposal process for a specific context. Various strategies, methods and materials investigated through projects, readings, presentations, discussions and field trips. Exercises and projects assigned initially, but students expected to establish their own projects later in the semester.

60-432 Advanced CP/SIS Site-Work Braddock
Intermittent: 10 units
Then: 20,879 residents. A booming steel industry. Carnegie’s first free library. Trolley cars. Schools, Department Stores, Movie theaters. Now: 2,917 residents. 250 homes left in ruin. Abandoned churches, storefronts and commercial buildings. One progressive-thinking mayor. In this course, we will unpack and explore the city of Braddock, PA. We’ll delve into the various facets of the community to create a picture of this city that encompasses its rich history and future potential. We’ll conduct ethnographic interviews by visiting community groups, civil servants, residents (long-time and new), and individual community members. We’ll collect histories: oral, written and visual. We’ll use ethnographic methods to study and understand the multi-layered scope of this city. Once we’ve worked together to create a picture of Braddock, students will develop and propose a final project. This class meets on campus (Mondays) and in the city of Braddock (Wednesdays). We will carpool or take buses together. Students should plan on leaving campus at 1pm, and should schedule their classes accordingly. The course will culminate with an exposition of the students’ project in Braddock with support from the Mayor.

60-433 Advanced SIS: Clay Sculpture
Intermittent: 10 units
Studio focus on ceramic materials and processes as applied to sculptural issues. Fabrication, glazing, and kiln-firing are addressed. Material fee required. Prerequisite: 60-130.

60-434 Advanced SIS: Foundry
Intermittent: 10 units
Studio focus on metal casting processes. Objects are created in clay, wax and plaster and cast into bronze or aluminum. Fabrication and welding techniques are presented. Materials fee required.

60-435 SIS: Metals
Intermittent: 10 units
Studio focus on fabrication using light metalworking techniques including forming, joining, and finishing. Metalsmithing and jewelry techniques will be explored in the context of sculptural issues. Metal stretching, forging, brazing, texturing, small scale casting and coloring are also presented. Slides looking at small scale metalwork, as well contemporary sculpture using metal techniques will be presented periodically. Metals provided include copper, brass, and bronze sheet and wire. Materials fee will also cover silver solder and other expendables.

60-436 Advanced SIS/ETB: Digital Fabrication for the Arts
Intermittent: 10 units
This is a class about making physical objects for sculpture, installations, and other art practices using computers and digital fabrication machinery. The tools will be object modeling software packages, rapid prototyping technologies, and computer numeric controlled (CNC) machining technologies. The facility of such tools in the making of multiples, mechanisms for kinetic work, morphology, and other art practices using computers and digital fabrication machinery. This course is cross-listed between the Schools of Art, Design and Music.
60-437 Advanced CP/SIS: Environmental Sculpture
Intermittent: 10 units
Studio focus on sculpting with the environment. Includes object making, installations and site work with an emphasis on ecological materials, growing systems, environmental impact and related issues. Students required to explore and develop proposal-making skills in order to acquire permission for sites in which to implement projects. Both individual and collaborative projects are possible.

60-438 Advanced SIS: Intimate Objects
Intermittent: 10 units
Advanced Sculpture Special Topics: The intimate object - exploring the issues of small scale sculpture. This class will deal with the creation of objects that require a one on one interaction with the viewer. Unlike much heroically scaled sculpture, there is a distinctly personal and intimate connection that these objects engender. The class will look at historical examples, as well as 20th century works starting with the dada and surrealists. Problems of small scale sculpture will include topics such as the miniature versus actual size, the nature of materials, the issues of craftsmanship, the problem of preciousness. This class is open to advanced sculpture students working in any media.

60-449 Advanced CP: Experimental Talk Show Lab
All Semesters: 10 units
Students in this class will be working with local community members to push the boundaries of live broadcast performance. The class will use the interactive dynamics of The Waffle Shop, a neighborhood restaurant that produces and broadcasts a live-streaming performance show with its customers and community members as an experimental platform and lab. Students will work in collaboration with community members to conceptualize, script, produce, direct, make sets, and sometimes perform. Students will have a selection of community partners they can work with including a comedian, a geek game show, a hip-hop youth program, an experimental chef, a hairdresser, a political action group, and more. This is a truly interdisciplinary class and students from throughout the university, in addition to the School of Art and the School of Drama, are encouraged to enroll.
Course Website: http://www.waffleshop.org

60-450 Advanced DP3: Drawing
Intermittent: 10 units
Studio focus on drawing experiences designed to develop observational, compositional, technical, expressive, and conceptual skills. Emphasis on independent work, and on the integration of drawing with work in other media.
Prerequisites: 60-150 and (60-151 or 60-160).

60-453 Advanced DP3: Painting
Fall and Spring: 10 units
In this course you will be encouraged to expand your skills and develop a personal vision, while maintaining a spirit of investigation into the developmental process, the magic, the illusion and the physical reality of painting. The professor will act as critic and advisor as students work independently developing self-generated ideas and setting personal goals. We will meet as a class for group critiques, discussions, presentations on the practical aspects of the profession, and slide lectures on contemporary artists.
Prerequisite: 60-250.

60-455 Advanced DP3: Intaglio
Intermittent: 10 units
Advanced intaglio studio focuses on the development of additional techniques such as lift and soft grounds, photographic processes, color and multiple plate printing, and viscosity printing. Emphasis will be placed on artistic/image development in relationship to the print as a democratic multiple. In addition cross disciplinary work will be encouraged within other printmaking studios to expand the visual vocabulary and image development.
Prerequisite: 60-251.

60-456 Advanced DP3: Lithography
Intermittent: 10 units
Studio focus on the processes and issues of lithographic printmaking. Includes both traditional stone and aluminum plate processes along with photographic techniques.

60-458 Advanced DP3: Serigraphy
Intermittent: 10 units

60-462 Advanced DP3: Rethinking Mixed Media & What’s Flat
Intermittent: 10 units
This course focuses on your ability to generate ideas and execute a strong and significant body of work in 2D mixed media. As an advanced student you are expected to reach some conclusion about the direction of your work and want to produce and develop your work. Research and experimentation in medium and process is expected along with developing ideas and exploring content and expression. Periodic writing will be required to support your creative research. There is a long history of 2D artists mixing materials and generating more than meets the eye. Materials, process and content will be discussed with emphasis on mixing and integrating orthodox and unorthodox mediums as a way to develop image making that goes beyond the ordinary. Medium process will be discussed but instruction in learning a medium (techniques) will generally not be covered. A variety of critique formats will be maintained weekly along with periodic slide lectures and discussions on artists and critical articles. Where does 2-D end and 3-D begin and have you heard of the talking 2-D work or the 2-D performance, or the flat tube? This course is about engaging in the mixing/combining of 2-D work, including installation, site consideration and other potential mediums.
Prerequisites: 60-250 and 60-150.

60-463 Advanced DP3: Print/Draw
Intermittent: 10 units
This course will focus on the development of technical and conceptual strategies in drawing AND/OR print media. With students working in either or both areas, the class the function as a studio workshop in which students set personal goals and strive to produce a significant body of work. Students will be expected to experiment and to create their own problems/limitations, while investigating a range of materials and considering the relationship between form and content. Individual and group critiques will help guide students; presentations on artists, readings, and field trips will contextualize the group’s work.

60-467 Advanced CP/DP3: Printstallation
Intermittent: 10 units
This course offers an inclusive approach to print media informed by the ever-expanding definition of image making. It will examine the role of print media in and as installation, addressing the medium in context, and as a multiple. Individual student work will play a fundamental role in class projects, however collaboration will also be encouraged. Course content may involve, but is not limited to: digital, silkscreen, lithography, and intaglio. Experimental methods of print production are also welcome. Course content may involve, but is not limited to: digital, silkscreen, lithography, and intaglio. Experimental methods of print production are also welcome. Course dialogue will address issues of audience, accessibility and context as related to the construction of meaning. One-on-one meetings and group critiques will be routine. There will be power point presentations on contemporary artists as well as assigned readings.
Prerequisite: 60-251.

60-471 Advanced DP3 Drawing: The Figure, Anatomy and Expression
Intermittent: 10 units
For thousands of years artists have seen the human body as an object of beauty, and as a powerful metaphor for documenting the passion and the pathos of human experience. This course will focus on that complex and compelling subject. In class, students will work from the model, studying the figure as a means to heighten sensitivity, expand visual perception, and refine drawing skills. An introduction to the landmarks of anatomical bone and muscle structure will be included. Outside class, students will be encouraged to seek meaning in the humanity of the figure as a vessel for expression, be it personal, social, political, spiritual, narrative or emotional.

60-472 Advanced DP3/Mutable Landscape
Intermittent: 10 units
With camera in hand, students will explore, document and invent a sense of place in Pittsburgh. Informed by photographic history and landscape studies, students will develop their own portfolios of digital prints. As a CPA interdisciplinary photography course, students will be encouraged to consider their photographs in the medium of their home department, and in some cases as a starting point for projects in other materials. No prerequisites.
Prerequisites: 60-141 or 62-141.
60-475 Advanced CP/DP3: Print Media
Intermittent: 10 units
This course offers an inclusive definition of print media that recognizes historical and contemporary tools, techniques and practice. Reproductive image making will be addressed within the context of traditional print media equipment, digital arts output and experimental methods. Essays and lectures on contemporary artists will aid student knowledge of current dialogue and strategies for addressing the printed impression. This course expands upon the theoretical and conceptual themes introduced in Print Media I with emphasis on student-conceived projects led by faculty advising. Prerequisite: 60-251.

60-486 The Art and Science of Color
Intermittent: 10 units
This interdisciplinary course will consist of a combination of chemistry lecture & labs with studio art & art history. The focus of the course will be on the intersection of painting practice with chemistry, particularly in the study of pigments of mineral & inorganic origin. This is a project course open to majors in chemistry & art. The course & its projects are designed to expand the expertise of students in each discipline, while exposing them to the methods, demands, & aims of the other. Historically, the craft of painting was closely linked to the practice of pigment manufacture, with painters procuring their materials in raw form directly from the chemist/apothecary, & often performing themselves the final purification & grinding of the minerals into pigments. Color has been used by both artists & alchemists as a benchmark for tracking changes while creating new materials based on minerals found in nature. With the advent of mass-produced & marketed art materials in the nineteenth century, the distance between chemist & artist increased until the two worlds have little to do with one another. This class aims to reconnect the two disciplines for a study of their common ground. Students will learn about the origin of the color of minerals with primary focus on colors that originate from electronic transitions & will work collaboratively on hands-on laboratory research projects that involve the synthesis, characterization, & use of inorganic pigments. In the studio, they will make their own egg-tempera paints, & use them in painting projects designed to increase color skills as they learn about the history of pigment use. Students will collaboratively design & carry out final projects which combine research, experimentation & creative work. A series of researchers who work at the boundary between art & chemistry will give guest lectures, & the class will make field trips to local research labs & museums.

60-499 Studio Independent Study
All Semesters
A tutorial studio in which an Art student works individually on a self-generated project under the supervision of a School of Art faculty member. Prior to enrolling in Independent Study, the student must complete an "Independent Study Proposal" form (available in the bins on the 3rd floor of CFA) which is signed by the faculty member and the Assistant Head of the School of Art. Prerequisite: Art Junior/Senior status and by instructor permission.

60-540 The Artist as Entrepreneur
Fall: 3 units
This course is designed for senior (BFA, BHA, BSA and BCSA) and graduate Art students who wish to continue making, showing, and selling work after completing their studies. The focus of this course is on helping students develop the skills and knowledge necessary to establish themselves as working professional artists. Topics include: marketing and promotions, galleries and other exhibition opportunities, pricing work, contracts, taxes and related matters, dealers, grants and other fundraising, other income sources, finding health insurance, and finding and connecting with a community of artists. Students will create professional materials including a resume, business card, promotional post card and mailing list - and will be graded on these materials. There will also be required readings, class speakers and graded journals in response to these activities.

60-590 Internship
Fall and Spring
Art Internships are open to all BFA, BHA, BSA and BCSA Art students. Internships may take place with appropriate individuals or organizations within or outside of Carnegie Mellon University. The requirements for an internship are in the School of Art "Undergraduate Handbook" (available at the School of Art website). Prior to being enrolled for an internship, students must complete an Internship Proposal Form, which defines the goals of the internship. This form must be signed by their site supervisor and approved by the Assistant Head of the School of Art. Forms are available in the bins on the 3rd floor of CFA. Junior and Senior Art majors only.