

## Descriptions – Anthropology

### of Courses

- 805. History of Anthropological Theory**  
Fall. 5(5-0) ANP 802, ANP 804 or approval of department.  
A review of the various schools of thought, important personalities, and principal concepts that have contributed to the development of anthropological theory.
- 825. Seminar in Cross-Cultural Relations**  
Winter of odd-numbered years. 4(4-0)  
Approval of department. Interdepartmental with the Department of Sociology.  
Analysis of the relations between superordinate and subordinate societies and between coordinate societies and cross-cultural exchange programs.
- 827. Anthropological Theorists**  
Winter. 4(4-0) May reenroll for credit with approval of department. Approval of department.  
Review of current theoretical problems in social and cultural anthropology.
- 830. Kinship Studies**  
Winter of odd-numbered years. 4(4-0)  
Approval of department.  
The course will raise the question of what kinship is and why it has been such a central topic in anthropology. Various controversies and theoretical trends will be presented and analyzed.
- 831. Linguistic Anthropology**  
Winter. 5(3-2) Approval of department.  
The nature of language; techniques for the description and comparison of languages; linguistics as an anthropological tool; language and culture.
- 833. Anthropological Topics in Prehistory**  
Spring. 4(4-0) May reenroll for a maximum of 12 credits when other problems are offered. Approval of department.  
Relation of archaeology to the other fields of anthropology on both a theoretical and practical level. Archaeological data are used to introduce problems of long-range cultural change and development.
- 835. Human Osteology and Osteometry**  
Spring of even-numbered years. 5(3-4)  
Approval of department.  
Identification of human bones and fragments; aging, sexing and determining the race of skeletal remains; measuring techniques for cranial and postcranial remains; the more common forms of paleopathology.
- IDC. Interdisciplinary Seminar on Africa**  
For course description, see Interdisciplinary Courses.
- 850. Archaeological Methods and Techniques**  
Winter. 4(4-0) Approval of department.  
Seminar outlining archaeological method and the role of technique in the strategy of archaeology. Techniques and problems of information retrieval will be emphasized.
- 856. Methodology of Anthropological Research**  
Winter. 1 to 12 credits. Approval of department.  
Seminar in problems of anthropological investigation considered in the framework of history and philosophy of science. Relevance of various field techniques, methods of data gathering and data handling, and strategies of analysis for various problems are treated.
- 865. Environment, Technology, and Culture**  
Winter of even-numbered years. 4(4-0)  
Approval of department.  
Cultural ecology, study of the relation of man and his physical environment, the role of technology in mediating between the two. Comparative analysis of the interdependence of social organization, technology and environment. Case histories of cultural and social change arising from technological innovations.
- 870. Applied Anthropology**  
Spring of odd-numbered years. 4(4-0)  
Approval of department.  
Theoretical and methodological problems involved in planned social change. Course will focus on field experience in the local community. Designed mainly for graduate students having professional interest in the application of social change.
- 872. Seminar in Special Subject Fields**  
Fall, Winter, Spring, Summer. 2 to 6 credits. May reenroll for a maximum of 24 credits when new fields are offered. Approval of department.  
Special fields of study will include any area of anthropology selected.
- 875. Individual Research Projects**  
Fall, Winter, Spring, Summer. 1 to 12 credits. May reenroll for a maximum of 24 credits with approval of department. Approval of department.
- 880. Individual Readings**  
Fall, Winter, Spring, Summer. 1 to 12 credits. May reenroll for a maximum of 24 credits with approval of department. Approval of department.
- 899. Master's Thesis Research**  
Fall, Winter, Spring, Summer. Variable credit. Approval of department.
- 999. Doctoral Dissertation Research**  
Fall, Winter, Spring, Summer. Variable credit. Approval of department.
- 206. History of Western Art**  
Fall. 4(4-0)  
Painting, sculpture, architecture and decorative art from prehistoric to modern times. Provides acquaintance with the forms of art typical of each period and indicates the aesthetic qualities which give them artistic significance. Work in first term covers Prehistoric, Egyptian, Mesopotamian, Greek, Roman, Early Christian and Byzantine periods.
- 207. History of Western Art**  
Winter. 4(4-0)  
Continuation of H A 206. Early Medieval, Romanesque, Gothic, Renaissance and Mannerist periods.
- 208. History of Western Art**  
Spring. 4(4-0)  
Continuation of H A 207. Baroque, Rococo, Neoclassic and subsequent periods to contemporary art.
- IDC. Introduction to Latin America II**  
For course description, see Interdisciplinary Courses.
- 400H. Honors Work**  
Fall, Winter, Spring, Summer. 1 to 6 credits. Approval of department.
- 404. Greek Art and Archaeology**  
Winter. 4(4-0) H A 206 or approval of department.  
The history of painting, sculpture and architecture of ancient Greece from the Bronze Age through the Hellenistic period. The history of archaeology excavating of selected sites.
- 405. Roman Art and Archaeology**  
Spring. 4(4-0) H A 206 or approval of department.  
The history of painting, sculpture and architecture of Ancient Rome from the Republic through the 4th century. The history of archaeological excavations of selected sites.
- 406. Ancient Painting**  
Spring of odd-numbered years. 4(4-0)  
H A 206 or approval of department.  
Ancient Greek and Roman painting, including Minoan Crete. Special emphasis is placed on Archaic and Classical Greek painting on pottery and on Roman wall painting from Pompeii and elsewhere.
- 407. Ancient Sculpture**  
Fall of odd-numbered years. 4(4-0)  
H A 206 or approval of department.  
The sculpture of Ancient Greece and Rome, from the Bronze Age through Early Christian times.
- 408. Ancient Architecture**  
Winter of even-numbered years. 4(4-0)  
H A 206 or approval of department.  
The architecture of Ancient Greece and Rome, from Mycenaean times to the 6th century A.D., with special emphasis on the religious architecture of Classical Greece and Imperial Rome.
- 410. Early Christian and Byzantine Art**  
Fall. 4(4-0) H A 206 or approval of department.  
Development of Christian art and architecture from the third through eighth centuries in the west, and through the Macedonian Renaissance in the east.

- 411. Carolingian, Ottonian, and Romanesque Art**  
Winter. 4(4-0) H A 207 or approval of department.  
The history of architecture, painting, and sculpture in the west from the time of Charlemagne through the Ottonian Empire and the great Romanesque churches of the 11th and 12th centuries.
- 412. Gothic Art**  
Spring. 4(4-0) H A 207 or approval of department.  
Development of the great French cathedrals of the 12th and 13th centuries, including their sculpture, stained glass, and decorations, as well as their influence in other countries.
- 420. Italian Renaissance Architecture**  
Spring. 4(4-0) H A 207 or approval of department.  
Important buildings of the 15th and 16th centuries, architectural theories, and architectural representations in drawings and paintings.
- 421. Italian Renaissance Sculpture**  
Winter. 4(4-0) H A 207 or approval of department.  
Major artists from circa 1250 to 1600.
- 422. Italian Renaissance Painting--Fifteenth Century**  
Fall. 4(4-0) H A 207 or approval of department.  
Developments in Italian painting, especially Florentine, of the 14th and 15th centuries, with emphasis on 15th century masters such as Masaccio, Piero della Francesca and Botticelli.
- 423. Italian Renaissance Painting--Sixteenth Century**  
Spring. 4(4-0) H A 207.  
Emphasis on Leonardo, Michelangelo, Raphael, Titian, Tintoretto, and other important masters of the High and Late Renaissance.
- 427. Northern Renaissance Painting**  
Fall. 4(4-0) H A 207 or approval of department.  
Fifteenth and early 16th century painting of the Netherlands, Germany, and France with emphasis on the works of Robert Campin, Jan Van Eyck, Rogier van der Weijden, Hieronymous Bosch and Albrecht Durer.
- 430. Seventeenth and Eighteenth Century Art in Italy**  
Fall of odd-numbered years. 4(4-0) H A 208 or approval of department.  
Art and architecture of Italy in the 17th and 18th centuries; Caravaggio, the Carracci, Bernini, Borromini, Guarini, Juvarra, Piazzetta, Tiepolo, Piranesi, Guardi.
- 431. Bruegel and Rubens--Sixteenth and Seventeenth Century Flemish Art**  
Fall. 4(4-0) H A 208 or approval of department.  
The paintings of Pieter Bruegel the Elder, Peter Paul Rubens, their major followers, Jan Breughel, Anthony van Dyke and Jacob Jordaens; and others.
- 433. Seventeenth Century Dutch Art**  
Winter of odd-numbered years. Spring of even-numbered years. 4(4-0) H A 208 or approval of department.  
Art and architecture of the Northern Netherlands during 'The Golden Age' with emphasis on paintings of Rembrandt, Vermeer, Hals and genre, still-life and landscape specialists.
- 434. French Art in l'Ancien Regime**  
Spring of odd-numbered years. 4(4-0) H A 208 or approval of department.  
French art and architecture from the reign of Louis XII to the Revolution: Royal patronage at Fontainebleau, Versailles and Paris; the influence of Italy, Flanders and Holland on French artists.
- 435. Eighteenth Century Art in England and France**  
Fall of even-numbered years. 4(4-0) H A 208 and approval of department.  
Art and architecture of England and France during the 18th century: the painting of Watteau, Chardin, Hogarth, Gainsborough and others; the Rococo style in France and stylistic eclecticism in England.
- 440. Modern Architecture**  
Winter. 4(4-0) H A 208 or approval of department.  
Technological, stylistic, and intellectual developments in European and American architectural design since 1850: Eclecticism, the Chicago School, the emergence and influence of the International Style, the New Brutalism, and Space frames.
- 442. Modern Sculpture**  
Fall, Spring. 4(4-0) H A 208 or approval of department.  
European and American sculpture from the late nineteenth century to the present: Rodin and his contemporaries, Expressionism, Cubism, and Vitalism; Constructivism, Surrealism and their influence; Assemblage, Minimalism, and Process Art.
- 445. European Painting: 1760-1848**  
Fall, Summer. 4(4-0) H A 208 or approval of department.  
The revival and development of Classicism in the late 18th and early 19th centuries and the flowering of Romanticism; a study of the rich complexities of painting in Europe.
- 446. European Painting: 1848-1907**  
Winter. 4(4-0) H A 208 or approval of department.  
Realism in conflict with the established traditions; growth and development of Impressionism, Post Impressionism, Symbolism, and Pre-Raphaelitism.
- 447. 1900: The Arts of Europe at the Turn of the Century**  
Winter. 4(4-0) H A 208.  
European painting, sculpture, architecture and the applied arts at the turn of the century; symbolism, historicism and art nouveau and their contribution to the development of fauvism, expressionism and cubism.
- 450. Twentieth Century Painting**  
Fall, Spring. 4(4-0) H A 208 or approval of department.  
Emergence of European abstraction before 1945: Cubism, Expressionism, Surrealism, and the School of Paris. American and European developments since 1945: Abstract Expressionism, Pop Art, Post-Painterly Abstraction, Minimalism, and Super-Realism.
- 451. Post 1945 Art**  
Winter. 4(4-0) H A 208; H A 440, H A 442, or H A 450 recommended.  
Intensive study of American and European art from 1945 to the present with special emphasis on painting and sculpture: the New York School to conceptualism.
- 458. Contemporary Art Critics**  
Spring. 4(4-0) H A 208.  
Contemporary art interpreted by American critics. Influences of earlier European theorists. Formal, historical, moral and social criticism by Rosenberg, Greenberg, Fried, Krauss, Kozloff, Steinberg, Rose, Lippard, Alloway, Burnham.
- 460. Seventeenth and Eighteenth Century American Art**  
Fall. 3(3-0)  
Architecture, painting, and sculpture from colonial times to 1800; the Colonial, Georgian, and Federal styles as evidence of the emerging American pattern.
- 463. Nineteenth Century American Painting**  
Winter of even-numbered years. 3(3-0)  
The American tradition in painting in Cole, Durand, and the landscape painters; the genre and realist works of Mount, Homer, and Eakins; and in the European painterly mode of Sargent and Whistler.
- 464. Nineteenth Century American Architecture and Sculpture**  
Winter of odd-numbered years. 3(3-0)  
The evolution of American architecture from the Neo-classical revivals to the early works of Frank Lloyd Wright; the impact of the Chicago School; changing sculptural patterns from Powers to Saint-Gaudens.
- 465. Twentieth Century American Art**  
Spring. 3(3-0)  
Architecture, painting, and sculpture from 1900 to the present; the Ash Can School, the Armory Show, Regionalism, Abstract Expressionism, and post-Abstract Expressionism as expressive of the changing American pattern.
- 471. Art of China**  
Fall of even-numbered years. 3(3-0)  
The evolution of Chinese art from early Neolithic times to the present; the landscape paintings of the Sung and Yuan; 20th century Chinese art against the background of traditional Chinese art.
- 473. Art of Japan: Pre-Buddhist to the Momoyama Period**  
Winter. 3(3-0)  
Architecture, sculpture, and painting from the Jomon and Yoyoi periods to the renaissance of Chinese traditions in the Muromachi period; the interaction of Chinese and Japanese traditions.
- 474. Art of Japan: Momoyama to the Present**  
Spring. 3(3-0)  
Architecture, sculpture, painting, and prints of the Momoyama and Tokugawa periods; the interaction of Japanese and Western art in Namban art, Meiji, and post-Meiji art.
- 475. Art of India**  
Fall of odd-numbered years. 3(3-0)  
The evolution of Indian art from the Indus Valley culture to the present; Buddhism and Hinduism as major forces in the formation of the Indian tradition.

## Descriptions – Art

### of Courses

- 480. Historic Preservation**  
*Winter. 3(3-0) Seniors, approval of department. Interdepartmental with Urban Planning.*  
History and philosophy of historic preservation; the new attitude towards preservation—historic districts and neighborhoods—adaptive use, documentation and tools for preservation; a project based on field research.
- 481. Historic Preservation Planning**  
*Spring. 3(3-0) Juniors. Interdepartmental with and administered by Urban Planning.*  
Overview and analysis of the role of historic preservation in the urban planning process. Focus upon current and emerging techniques, programs, and approaches needed to create effective preservation efforts.
- 483. Historical Painting Techniques**  
*Spring of even-numbered years. 3(1-4) H A 207, H A 208.*  
Various techniques of drawing and painting from the Middle Ages to the nineteenth century investigated through research and practice.
- 484. History of Prints**  
*Winter. 4(4-0)*  
History and appreciation of engraving, etching, lithography and woodcuts. Durer, Rembrandt, Goya, Daumier and contemporary printmakers. Prints and book illustrations as source material.
- 485. Special Problems**  
*Fall, Winter, Spring. Variable credit. May reenroll for a maximum of 10 credits. Approval of department.*  
Selected problems in history of art for individual study.
- 800. Seminar in Ancient Art**  
*Fall, Winter, Spring. 4 credits.*
- 810. Seminar in Medieval Art**  
*Fall, Winter, Spring. 4 credits.*
- 820. Seminar in Italian Renaissance Art**  
*Fall, Winter, Spring. 4 credits.*
- 830. Seminar in Seventeenth and Eighteenth Century European Art**  
*Fall, Winter, Spring. 4 credits.*
- 840. Seminar in Nineteenth-Century Art**  
*Fall, Winter, Spring. 4 credits.*  
An intensive investigation of a topic in the history of 19th century painting, sculpture or architecture.
- 850. Seminar in Twentieth-Century Art**  
*Spring. 4(4-0) At least one course in twentieth century art history or approval of instructor.*  
An intensive investigation of a topic in the history of 19th century painting, sculpture or architecture.
- 875. Methods and Approaches in Art History**  
*Fall. 4(4-0) Reading knowledge of French or German recommended.*  
Reference books, history of scholarship, and particular techniques and challenges in the various specialties of art history and archaeology.
- 885. Problems in History of Art**  
*Fall, Winter, Spring, Summer. Variable credit. May reenroll for a maximum of 15 credits. Approval of department.*  
Selected graduate problems in history of art for individual study.
- 899. Master's Thesis Research**  
*Fall, Winter, Spring. Variable credit. May reenroll for a maximum of 12 credits. Approval of department.*
- Studio Art** **STA**
- 101. How to Look at Art (A)**  
*Fall, Winter, Spring. 4(3-2)*  
Ways of looking at art of any period, but particularly modern art. Slide lectures, reading and studio exercises showing how artists relate their work to socio-intellectual developments of their time.
- 140. Studio Art Introduction**  
*Fall, Winter, Spring. 3(0-6) Not open to majors.*  
Concepts in the studio arts studied through a broad range of media. The use of line, value, rhythm and other basic elements explored in drawing, color and 2- and 3-dimensional design.
- 141. Drawing**  
*Fall, Winter, Spring, Summer. 4(0-8)*  
Drawing in a variety of forms as an essential discipline, a means of expression, a preparation for and adjunct to the other arts.
- 142. Color**  
*Fall, Winter, Spring, Summer. 4(0-8)*  
Color theories additive and subtractive; pigment and light as applied to the problems of the artist.
- 143. Three-Dimensional Form**  
*Fall, Winter, Spring, Summer. 4(0-8)*  
Experimentations with volume through manipulation of mass, plane and line in a wide range of materials and techniques.
- 200. Photography**  
*Fall, Winter, Spring, Summer. 3(2-2)*  
History of photography and basic technology of photography combined with darkroom experience in black and white processing. Equipment and fundamental problems are investigated. Students are required to furnish cameras and all materials.
- 201. Art for Elementary Teachers**  
*Fall, Winter, Spring, Summer. 4(1-8) ED 200; approval of department. Not open to Freshmen or Art majors.*  
Understanding the creative art experiences of children. Studio work in materials suitable for grade school use. Reading and discussions relating the child's growth and development and his art experience.
- 228. Sculpture**  
*Fall, Winter, Spring, Summer. 4(1-8) STA 143.*  
Preparation for sculpture, involving experience with three dimensional forms. Exploration of the characteristics of sculpture past and present.
- 231. Graphic Design**  
*Fall, Winter, Spring, Summer. 4(0-10)*  
Letterforms leading to the understanding of written and printed letters; the traditional methods by which they are produced and their relation to modern typography.
- 239. Design Communications**  
*(339.) Winter, Spring. 4(0-8) STA 241, EGR 161.*  
Communication of design concepts through visual means. The use of various methods, materials and techniques in current professional use to express the conceptual, developmental and final stages of the design process.
- 240. Ceramics**  
*Fall, Winter, Spring, Summer. 4(0-10) STA 143.*  
An exploration of form mainly from the standpoint of the enclosed volume. The complete process from the preparation of clay bodies to the glazed and fired piece. Limited to earthenware.
- 241. Life Drawing**  
*Fall, Winter, Spring. 4(1-8) May reenroll for a maximum of 8 credits. STA 141.*  
Tools and materials of the artist applied in a variety of ways to the act of representing the human figure.
- 245. Design**  
*Fall. 4(1-8) STA 141.*  
Use of basic design elements in two and three dimensions. Study of the appropriateness of forms to various media. Introduction to applied design procedures and processes.
- 247. Printmaking**  
*Fall, Winter, Spring. 4(1-8) STA 141, STA 142.*  
Study of the art of printmaking and its major techniques. Studio practice in a wide range of printing methods.
- 249. Metalsmithing**  
*Fall, Winter, Spring. 4(1-8) STA 141, STA 142, STA 143.*  
Basic processes of forming, joining, finishing, and embellishing metals to make small objects or jewelry.
- 255. Painting**  
*Fall, Winter, Spring. 4(1-8) STA 141, STA 142.*  
Pictorial expression. Class discussion and studio work in a variety of media.
- 300. Still Photography I**  
*Winter, Spring. 5(0-10) STA 200, approval of department.*  
Control of the photographic medium and production of fine prints with investigations into light as form-giver, modifier and reducer; study of specific subjects as design and as information.
- 301. Applied Photography**  
*Fall. 3(1-4)*  
Photography in the reproduction of such two-dimensional materials as art work and charts; three-dimensional art, products and architecture; methods of presentation with emphasis on slide and book forms.
- 302. Art in Special Education**  
*Fall, Winter, Spring. 4(1-8) ED 200.*  
Art and the teacher as related to special education. Experience with materials and techniques as well as critical examination of the creative/expressive processes for handicapped children.
- 303. Resources and Materials for Art Education I**  
*Fall, Winter, Spring, Summer. 4(1-9) ED 200; 24 credits in studio art.*  
Concepts, processes and materials as they apply to art teaching situations.

**305. Serigraphy**  
*Fall, Winter, Spring, Summer. 3(0-6)*  
*Junior majors, STA 241, STA 247.*  
 Silk screen as a fine print medium. Basic techniques as a means toward expressive development.

**306. Lithography**  
*Fall, Winter, Spring. 3(0-6) STA 247, STA 340.*  
 Techniques of the medium, preparing the stone, etching, printing, the use of tusche, wash, rubbing, etc.

**307. Etching**  
*Fall, Winter, Spring, Summer. 5(1-8)*  
*Junior majors, STA 241, STA 247.*  
 Techniques of straight etching, soft ground and aquatint.

**308. Relief Prints**  
*Fall, Summer. 5(2-6) Junior majors, STA 247.*  
 Printing from a raised surface as a contemporary medium. Review of traditional techniques and materials as the basis for individual experimentation and expression.

**311. Film Art II**  
*Winter, Summer. 5(0-10)*  
 Emphasis on the animated film.

**320. Resources and Materials of Art in Education II**  
*Fall, Winter, Spring, Summer. 4(0-8)*  
 STA 303.  
 Art teaching. Learning experiences with children and youth.

**324. Graphic Design**  
*Fall, Winter, Spring, Summer. 5(0-10)*  
*May reenroll for a maximum of 15 credits. STA 231.*  
 Visual communication involving the complete range of specialized materials, methods and processes leading to an understanding of the unique limitations of graphic design.

**328. Sculpture**  
*Fall, Winter, Spring, Summer. 5(1-8)*  
*Junior majors, STA 228, STA 241.*  
 Exploration of the physical characteristics and possibilities of clay within the limitation of figurative representation. Plaster casting, wax modeling, etc.

**340. Intermediate Drawing**  
*Fall, Winter, Spring, Summer. 5(1-8)*  
*Junior majors, STA 241.*  
 Problems in drawing as an end in itself, stressing experimentations with form and materials with emphasis on the human figure.

**341. Ceramics**  
*Fall, Winter, Spring, Summer. 5(0-10)*  
*Junior majors, STA 240, STA 241, approval of department.*  
 Creating and executing designs in clay for pottery and other compositions. Making glazes, stacking and firing a kiln.

**345A. Product Design I**  
*Fall. 3(0-6) STA 231, STA 239, STA 245.*  
 Product Design from the functional and aesthetic point of view. Design projects are based on personal use and anthropometric measurement. Solutions will be based on simple tools, processes and materials. Sketches, study mock-ups and models.

**345B. Product Design II**  
*Winter. 3(0-6) STA 345A.*  
 Product design based on general user behavior and average anthropometric measurements. Solutions will be based on basic manufacturing processes using stock components. Sketches, mock-ups, and models.

**345C. Product Design III**  
*Spring. 3(0-6) STA 345B.*  
 Product design based on product function, anthropometric analysis and the psychological aspects of user behavior. Solutions based on mass production techniques and materials. Reports, sketches, mock-ups and models.

**349. Metalsmithing**  
*Winter, Spring. 3(0-6) STA 249.*  
 Problems in casting of metals, cutting, polishing and setting of stones.

**353. Composition and Painting**  
*Summer. 3 to 6 credits. Approval of department. 24 or 36 hours per week in class; additional hours arranged. Course given at Leelanau Summer Art School, Leland, Michigan.*  
 Composition practice, analysis and painting technique. Still life, figure, and landscape.

**355. Painting**  
*Fall, Winter, Spring, Summer. 5(1-8)*  
*Junior majors, STA 241, STA 255.*  
 Survey of accepted working procedures in all phases of oil painting, exploration of wide range of problems of expression based on still life and the human figure.

**400H. Honors Work**  
*Fall, Winter, Spring, Summer. 1 to 6 credits. May reenroll for a maximum of 6 credits. Member of Honors College, approval of department.*  
 Advanced work developed from special interest areas.

**401. Still Photography Workshop**  
*Fall, Winter, Spring, Summer. 3 to 5 credits. May reenroll for a maximum of 30 credits. STA 300, approval of department.*  
 The formation of technically controlled personal statements. Current trends and problems in photography. Advanced traditional and non-silver techniques.

**405. Advanced Serigraphy**  
*Fall, Winter, Spring, Summer. 1 to 6 credits. May reenroll for a maximum of 18 credits. STA 305, approval of department.*  
 Continuation of STA 305 for superior students with a demonstrated potential for advanced independent study.

**406. Advanced Lithography**  
*Fall, Winter, Spring, Summer. 1 to 6 credits. May reenroll for a maximum of 18 credits. STA 307, approval of department.*  
 Continuation of STA 306 for superior students with a demonstrated potential for advanced independent study.

**407. Advanced Etching**  
*Fall, Winter, Spring, Summer. 1 to 6 credits. May reenroll for a maximum of 18 credits. STA 307, approval of department.*  
 Continuation of STA 307 for superior students with a demonstrated potential for advanced independent study.

**408. Advanced Relief Prints**  
*Fall, Winter, Spring, Summer. 1 to 6 credits. May reenroll for a maximum of 18 credits. STA 308 or approval of department.*  
 Continuation of STA 308 for students interested in a deeper exploitation of the various block printing media.

**410. Film Workshop**  
*Fall, Winter, Spring, Summer. 5 to 10 credits. May reenroll for a maximum of 30 credits. STA 311, approval of department.*  
 Film workshop with emphasis on independent study. Live film assignments.

**421. Art for Classroom Teachers**  
*Summer. 3(1-3) Certified classroom teachers.*  
 Reading and discussion relating the child's art experience to his growth and development. Outside assignments required.

**422. Art for Classroom Teachers**  
*Summer. 3(1-3) STA 201 or STA 421.*  
 Continuation of STA 421.

**423. Art in Special Education**  
*Summer. 3(2-2) Junior and Senior Special Education majors and approval of department.*  
 Art and the art teacher in relation to the exceptional child. Development of an understanding of the creative processes of handicapped children.

**424A. Advanced Graphic Design**  
*Fall. 5 to 10 credits. May reenroll for credit. Seniors; STA 324; approval of department.*  
 Design and production of a book. Advanced group problems.

**424B. Advanced Graphic Design**  
*Winter. 5 to 10 credits. STA 424A.*  
 Advanced problem solving involving existing media of graphic expression. Study of graphic equivalents of literal images and ideas in the creation of posters, trademarks and magazine and book covers.

**424C. Advanced Graphic Design**  
*Spring. 5(0-10) to 10(0-20) STA 424B.*  
 Senior thesis based on design research required as a special project. Will use all studio facilities; campus resources.

**428. Advanced Sculpture**  
*Fall, Winter, Spring, Summer. 5 to 10 credits. May reenroll for a maximum of 35 credits. STA 328.*  
 Continuation of STA 328. Problems in carving, modeling, casting in wax, clay, plaster, direct metal, etc.

**430. Advanced Drawing**  
*Fall, Winter, Spring, Summer. 1 to 5 credits. May reenroll for a maximum of 30 credits. STA 340.*  
 Experimental approaches to drawing employing the widest range of materials, techniques and concepts. Functions of drawing going beyond descriptive analysis will be viewed in the context of visual, nonvisual and conceptual phenomena.

**431. Advanced Ceramics**  
*Fall, Winter, Spring, Summer. 5 to 10 credits. May reenroll for a maximum of 35 credits. STA 341.*  
 Continuation of STA 341 with increased opportunity for supervised individual study.

**Descriptions – Art  
of  
Courses**

- 433. Advanced Composition and Painting**  
Summer. 3 to 6 credits. May reenroll for credit. STA 353, STA 355 or approval of department.  
Continuation of STA 353 or STA 355 with increased opportunity for supervised independent development.
- 435. Advanced Painting**  
Fall, Winter, Spring, Summer. 1 to 5 credits. May reenroll for a maximum of 30 credits. STA 340, STA 355.  
Continuation of STA 355 with increased opportunity for supervised independent development.
- 440. Special Problems**  
Fall, Winter, Spring, Summer. 2 to 5 credits. May reenroll for a maximum of 5 credits. Approval of department.  
Advanced work developed from special interest areas.
- 445A. Advanced Product Design I**  
Fall. 3(0-6) STA 345C.  
Product design research, analysis and development using systematic design methods. Advanced problems requiring sophisticated product solutions. Reports, sketches, mock-ups and models.
- 445B. Advanced Product Design II**  
Winter. 3(0-6) STA 445A.  
Concepts of product systems research, planning and analysis. Students will identify, develop and research individual thesis project involving systems concepts. Reports and sketches.
- 445C. Advanced Product Design III**  
Spring. 5(1-8) STA 445B.  
Product design thesis. Design and development of a product system using data developed in STA 444B. Design solution will be presented in the form of a one-person exhibition.
- 446. Product Design Workshop**  
Fall, Winter, Spring. 2(0-4) May reenroll for a maximum of 12 credits if different topic is taken. STA 231, STA 239, STA 245. A Product Design or an Advanced Product Design course concurrently.  
Intense investigation of one product or product type such as furniture design, toy design, and package design. Workshop subject will change every term and will be announced prior to early registration. Students will investigate design principles, user behavior, materials, processes and trends of the workshop subject.
- 449. Advanced Metalsmithing**  
Fall, Winter, Spring. 2 to 6 credits. May reenroll for a maximum of 35 credits. STA 249, STA 349 or approval of department.  
Hollow form emphasized. Smithing including raising, forging, and Masonite die. Additional specialized techniques such as resins, enamels, electro forming, and tool making. Individual development emphasized.
- 450W. Art Workshop**  
Summer. 1 to 6 credits. May reenroll for a maximum of 15 credits. Approval of department.  
Specific sessions of short duration (one to three weeks) permitting a concentrated experience in one area of interest within the general studio spectrum.
- 800. Studio Problems**  
Fall, Winter, Spring, Summer. 1 to 12 credits. May reenroll for a maximum of 24 credits.  
Studio problems in drawing, painting, printmaking, graphic design, industrial design, interior design, advertising design, sculpture-carving, sculpture-direct metal, ceramics.
- 801. Painting**  
Fall, Winter, Spring, Summer. 3 to 12 credits.  
Advanced work in a variety of painting media with strong emphasis on independent development.
- 802. Drawing**  
Fall, Winter, Spring, Summer. 3 to 12 credits.  
Advanced work in drawing employing a variety of media and calculated to contribute to development in related areas of art practice.
- 803. Sculpture**  
Fall, Winter, Spring, Summer. 3 to 12 credits.  
Advanced work in a variety of three dimensional media with strong emphasis on individual development.
- 804. Ceramics**  
Fall, Winter, Spring, Summer. 3 to 12 credits.  
Advanced work in pottery involving a variety of experiences and leading to independent development.
- 805. Serigraphy**  
Fall, Winter, Spring, Summer. 3 to 12 credits.  
Work in silk screen printmaking techniques leading to independent expressive development.
- 806. Graphic Design**  
Fall, Winter, Spring, Summer. 3 to 12 credits.  
Advanced work in all phases of the area of graphic design leading to independent development.
- 807. Industrial Design**  
Fall, Winter, Spring, Summer. 3 to 12 credits.  
Advanced study in the areas of design analysis and product development with emphasis on continued independent development.
- 808. Jewelry and Metal**  
Fall, Winter, Spring, Summer. 3 to 12 credits.  
Advanced work in jewelry and metal, and other related areas leading to continued independent development.
- 809. Etching**  
Fall, Winter, Spring, Summer. 3 to 12 credits.  
Work in etching leading to expressive independent development.
- 810. Lithography**  
Fall, Winter, Spring, Summer. 3 to 12 credits.  
Work in lithographic techniques leading to expressive independent development.
- 811. Criticism in Contemporary Art**  
Fall, Winter, Spring. 4(4-0) Approval of department.  
Principles of evaluation in the visual arts today and their uses in the studio work of the contemporary artist.
- 816. Issues in Contemporary Art**  
Fall. 3(3-0) Graduate students or approval of instructor.  
Impact of technology, new media, exploitation and exhaustion of current styles, new sources of patronage, political control; implications of art systems replacing object art explored in seminars with staff.
- 820. Problems in Art Education**  
Fall, Winter, Spring, Summer. 1 to 5 credits. May reenroll for a maximum of 10 credits. STA 421 or STA 422 or a bachelor's degree in art from an accredited institution.
- 821. Art Instructional Media Laboratory I--Multi-Media**  
Fall, Winter, Spring, Summer. 4(1-9) May reenroll for a maximum of 8 credits. Approval of department.  
Investigation of multi-media techniques as media of artistic expression and communication for application to art education or related fields.
- 822. Art Instructional Media Laboratory II--Television**  
Fall, Winter, Spring, Summer. 4(1-9) May reenroll for a maximum of 8 credits. Approval of department. Interdepartmental and jointly administered with the Department of Telecommunication.  
Analysis of teaching video tapes and television programs in art. Utilization of television as a medium of artistic expression and communication for application to art education or related fields.
- 825. Seminar in Art Education**  
Fall, Winter, Spring, Summer. 2 to 4 credits. May reenroll for a maximum of 8 credits. Approval of department.  
Examination and discussion of contemporary thought in the field of art education. Current problems examined within an interdisciplinary framework.
- 826. Critical Theory and Aesthetic Experience in Art Education**  
Fall, Winter, Spring, Summer. 3(3-0) Approval of department.  
Theories of art criticism and aesthetic experience. Organization of these concepts for application to art education programs or related fields.
- 827. Curriculum Design for Art Education**  
Fall, Winter, Spring, Summer. 3(3-0) Approval of department.  
Factors affecting art curriculum; analysis, preparation and evaluation.
- 828. Research Methods for Art Education**  
Fall, Winter, Spring, Summer. 3(3-0) Approval of department.  
Orientation to research; designs and methodologies applicable to the study of problems in art education.
- 840. Teaching Seminar--Art Practice**  
Fall, Winter, Spring, Summer. 1 to 3 credits. May reenroll for a maximum of 6 credits. Approval of department.  
Supervised teaching of college classes in art practice.

**899. Master's Thesis Research**  
Fall, Winter, Spring. Variable credit.  
May reenroll for a maximum of 12 credits. Approval of department.

## ARTS AND LETTERS A L

### College of Arts and Letters

**390H. Perspectives in Literature**  
Fall. 4(3-0) Juniors, approval of Honors College.

Attention will be focused on several major literary works. Students will employ various types of literary analysis, considering theme, idea, structure, etc., and examining some major trends in contemporary literary criticism.

**391H. Perspectives in Philosophy**  
Winter. 4(3-0) Juniors, approval of Honors College.

The two primary areas of concern will be ethics and aesthetics, the emphasis on one or the other to be determined by the professor. The course will include reading of major works, discussion of major figures in the fields, and the preparation of a substantial paper.

**392H. Perspectives in History**  
Spring. 4(3-0) Juniors, approval of Honors College.

The focus will be on the nature of international diplomacy in the 20th century, the development of nationalism, the balance of power system, the influence of new ideologies, and the developments of the power structure since 1945.

**393H. Perspectives in 20th Century Arts: 1900-1920**  
Fall. 3(3-0) Juniors, approval of Honors College.

Reaction to Naturalism across the arts traced in Symbolism and Expressionism as interrelated phenomena in response to the crisis of confidence in European institutions.

**394H. Perspectives in 20th Century Arts: 1920-1945**  
Winter. 3(3-0) Juniors, approval of Honors College.

Formalist analysis of art elements examined across the arts in Cubism, Surrealism and new musical structures as positive response to war, depression and dictatorship.

**395H. Perspectives in Contemporary Arts: Postwar Period**  
Spring. 3(3-0) Juniors, approval of Honors College.

The function of avant-garde arts after World War II to the present studied in the new dimensions of an environment created by new technology and the mass media explosion.

**450. Arts Management**  
Fall, Winter, Spring. 3 to 5 credits.  
May reenroll for a maximum of 9 credits. Seniors or Graduate Students or approval of department.

Administration of arts organizations, management of facilities, understanding operational methods and procedures of performing companies, financial structure and funding of arts centers, study of audience development, contemporary trends in arts management field.

**491H. Perspectives in the Social Sciences and Humanities**  
Fall, Winter, Spring. 2 to 6 credits.  
May reenroll for a maximum of 12 credits if different topic is taken. Juniors, approval of Honors College, or approval of instructor. Interdepartmental with the College of Social Science and Justin Morrill College.

An integration of subject matter and methodologies of several disciplines as they are relevant to particular topic areas.

**999. Doctoral Dissertation Research**  
Fall, Winter, Spring, Summer. Variable credit. May reenroll for a maximum of 36 credits. Approval of college.

## ASTRONOMY AND ASTROPHYSICS AST

### College of Natural Science

**109. Astronomical Fiction**  
Winter. 1(1-0) AST 119 concurrently.  
Concurrent readings of works of science fiction to assist the visualization of the concepts presented in AST 119.

**115. Exploring Cosmology**  
Spring. 2(2-0) Not open to engineering or physical science majors.  
Nonmathematical view of the origin, history, and overall structure of the universe, based on the Big Bang model of cosmology.

**117. Introductory Observing**  
Fall, Spring. 2(1-2) AST 119, or AST 217, or AST 229 or concurrently and approval of department.  
Observations of celestial objects, constellation identification, and occasional planetarium exercises.

**119. General Astronomy (N)**  
Fall, Winter, Spring, Summer. 4(4-0)  
Not open to engineering or physical science majors. Students may not receive credit in more than one of the following: AST 119, AST 217, AST 229.  
A qualitative presentation of man's current view of the universe including birth and death of stars, cosmology, comparisons of planets, and life in the universe.

**120. Topics in Astronomy**  
Winter, Spring. 4(4-0) AST 119.  
Detailed qualitative discussion of currently interesting topics in astronomy. May include such topics as quasars, pulsars, black holes, planetary exploration, cosmology, concepts of relativity.

**217. General Astronomy (N)**  
Fall, Winter. 4(4-0) MTH 102 or MTH 109 or MTH 111. Students may not receive credit in more than one of the following: AST 119, AST 217, AST 229.  
Intended primarily for physical science majors. A semiquantitative presentation of man's current view of the universe including birth and death of stars, cosmology, comparisons of planets, and life in the universe.

**229. General Astronomy**  
Fall. 4(4-0) PHY 287 or PHY 291H or concurrently; MTH 113. Students may not receive credit in more than one of the following: AST 119, AST 217, AST 229.

Fundamental observations in astronomy and their interpretation through physical laws. Intended for physical science majors and recommended for astrophysics majors. Quantitative discussion of orbital motion, time, telescopes, solar system, stars, galaxies, and cosmology. Limited opportunity for astronomical observations.

**327. Practical Astronomy**  
Winter. 3(3-0) AST 217 or AST 229, MTH 113.

Celestial coordinate systems. Time conversion and sidereal time. Atmospheric refraction, parallax, proper motion, aberration, and precession. Star catalogs and ephemerides. Finding charts and setting of equatorial telescopes.

**378. Contemporary Astronomy**  
Winter. 3(3-0) AST 217 or AST 229.

A continuation of General Astronomy with particular emphasis on modern developments. May include such topics as planetary exploration, interstellar matter, star formation, stellar evolution through final stages, supernovae, pulsars, neutron stars, black holes, galaxies, and cosmology.

**437. Observatory Practice**  
Spring. 3(1-4) AST 327 and approval of department.

Stellar photography. Photographic photometry. Photoelectric photometry and corrections for atmospheric extinction. Multicolor photometric systems. Astronomical spectroscopy and radial velocity determinations.

**458. Astrophysics**  
Winter. 3(3-0) AST 217 or AST 229, PHY 289, PHY 395, or approval of department.  
Application of physical principles to the atmospheres and interiors of stars to deduce their physical properties. Discussion of radiation, spectra and gas properties.

**459. Solar System Physics**  
Spring. 3(3-0) PHY 289 or approval of department.

Physical properties of the sun, interplanetary space, planets, and satellites as deduced from terrestrial observations and from space probes. Recent results of the NASA space program will be emphasized.

**490. Special Problems**  
Fall, Winter, Spring, Summer. 1 to 5 credits. May reenroll for a maximum of 10 credits. Approval of department.

Individual study or project under the direction of a faculty member. An oral report on the work may be required in department seminar.

**800. Research Methods**  
Fall, Winter, Spring, Summer. 2(0-6)  
May reenroll for a maximum of 6 credits. Beginning graduate students. Interdepartmental with and administered by the Department of Physics.

Problems and techniques of current research by taking part in the design and setup of experiments, data taking and reduction; study and practice of theoretical methods. Areas of study: solid state and molecular structure, nuclear, elementary particles, astronomy, astrophysics.