

competitive advantage and managing projects. Explores the roles of the internet in creating new business models, including e-commerce, business-to-business computing and enterprise systems. (Prerequisite: Business 241, CIS 140.) Fall.

**343.** Production and Operations Management (3). Quantitative and qualitative dimensions of problem solving and decision making for production and operations managers. Coverage includes planning, organizing and controlling conversion systems in both manufacturing and non-manufacturing industries, and integration of production and operations management tools and techniques with other functional areas of management decision making. (Prerequisites: Business 241, Mathematics 204 or 304, CIS 140.) Fall.

**344.** Human Resource Management (3). Qualitative and quantitative methods of improving productivity and the quality of work life. Topics include government regulations influencing the work environment; human resource planning; recruitment, selection and development of the work force; motivation of individuals and groups; performance appraisal methods; and the nature and development of compensation programs. (Prerequisite: Business 241.) Fall, spring.

**346.** Social and Political Issues in Business (3). Social and Political Issues in Business (3). Topics include the social, legal, moral and ethical pressures exerted on business enterprises by the external environment; the rules and ethical responsibilities of business persons; corporate governance; and the assessment of social and ethical performance. (Prerequisite: Business 241 or instructor's permission.) Spring.

**347.** Management of Multinational Firms (3). The development and functioning of the multinational firm, emphasizing and explaining the differences from the purely domestic enterprise. Topics include global strategic planning; international production, supply, personnel and contract negotiation; firm-host government relations; international trade and foreign investment; and foreign investment in the U.S. (Prerequisite: Business 241.) Fall, alternate years.

**348.** Industrial/Organizational Psychology (3). See Psychology 348 for course description.

**350.** Topics in Business Administration (3). In-depth theoretical and practical coverage of concepts in a specialized area of business administration, using the conceptual knowledge for planning and problem solving. Topics may include but are not limited to new product development, managing information, ethical considerations in decision making and cross-cultural business negotiations. May be repeated with a different topic. (Prerequisite: permission of instructor.) Offered as needed.

**351.** The Entrepreneurial Experience (3). An experiential based course providing opportunities to apply and refine the fundamental skills of entrepreneurship. Cases, interaction with professional, experiential challenges and a major entre-

preneurial project are the primary pedagogical approaches used in this applied course. (Prerequisite: BAD 250.) Fall, spring

**443.** Supply Chain Management (3). Examines the activities necessary for effective supply chain management. Topics include design strategy, forecasting, sourcing strategy, logistics, global issues, performance measurement and Enterprise Resource Planning. (Prerequisites: Business 342 or 343.) Spring.

**449.** Capstone: Business Policy (3). The general management function and related strategic processes from the viewpoint of the chief executive officer. Cases, readings, lectures and simulation exercises help develop analytic skills and the ability to integrate important variables. (Prerequisite: completion of other business core requirements.) Fall, spring.

### ***Special and Advanced Courses***

**199.** Exploratory Internship (1-3).

**255.** Field/Travel Experience (3). Includes a four- to five-day stay in a major metropolitan city in the U.S. or Canada. Students visit a variety of institutions such as security/commodity markets, international financial centers, advertising agencies, government centers and cultural exhibits, with free time also in which to experience the diverse flavors of a major city. Individual academic assignments relate the field/travel experience to the student's specific major. (Prerequisite: junior standing.) Occasional May or summer terms.

**299.** Experimental Course (1-3).

**399.** Professional Internship (1-12).

**451.** Independent Study (1-3). (Prerequisite: written departmental permission.)

**499.** Advanced Experimental Course (1-3).

## **Art and Design**

### ***Mission Statement***

The Department of Art and Design introduces students to media and techniques new to them and to the standards that apply to these. In addition, through active and creative learning in a supportive environment, majors develop conceptual and technical skills and personal content appropriate to a high quality body of work in their medium specialty. Through this and preparation of appropriate career/opportunity search materials, they are equipped to engage in life-long learning and create a life in which visual art plays a significant part.

### ***Studio Art***

The studio program offers a foundation in artistic production and visual thinking. Studio majors are offered a wide range of experience in various media, introduced to the history of art and contemporary theory, and challenged to develop individual expressive languages.

There are three degree options in studio art. The Bachelor of Fine Arts degree is for students who wish to pursue careers in

specialized art fields or graduate study in art. The Bachelor of Arts option provides a general level of experience in art while allowing students to major or minor in another field of study. The Bachelor of Fine Arts with Teacher Certification is for students interested in art education careers.

Students majoring in Studio Art have pursued careers as arts administrators, educators, product designers, museum and gallery curators, graphic designers, art therapists, studio artists, and art directors.

#### **Art and Design Core (10 hours)**

- Art 100 Three-Dimensional Design (3)
- Art 101 Two-Dimensional Design (3)
- Art 103 Drawing from Life (3)
- Art 300 Art and Design Career Seminar (1)

#### Bachelor of Arts in Studio Art

(30 hours of Art and Design and 6-8 hours of cognates)

#### **Art and Design Core (10 hours - see above)**

#### **Three two-course sequences chosen from the following (18 hours):**

- Painting 201, 301
- Printmaking 203, 204
- Ceramics 205, 305
- Fibers 209, 210
- Photo 215, 315
- Electronic Art 218, 318, 319
- Sculpture 220, 320

\*At least one sequence must be in ceramics or sculpture.

#### **Senior exhibition.**

\*At least one hour Advanced Studio (ART 351) in the medium of your exhibition, in each semester of your senior year, is highly recommended.

#### **Sr. Exhibition & Career Preparation (2 hours)**

One hour of ART 401 each semester of the senior year.

#### **Eight hours Art History (AHIS) cognates.**

Bachelor of Fine Arts with Teacher Certification in Studio Art. See the Teacher Education section of the catalog.

#### Bachelor of Fine Arts in Studio Art

(51 hours in Art and Design and 16 hours of cognates)

#### **Art and Design Core (10 hours - see above)**

- ART 250 or 303 (3 hours)

#### **Three two-course sequences chosen from the following (18 hours):**

- Painting: ART 201, 301
- Printmaking: ART 203, 204
- Ceramics: ART 205, 305
- Fibers: ART 209, 210

Photo: ART 215, 315

Electronic Art: ART 218, 318, 319

Sculpture: ART 220, 320

\*At least one sequence must be in ceramics or sculpture.

#### **Advanced Studio (ART 351) in a single medium (6 hours).**

Enroll in at least 1 credit hour each semester of senior year.

#### **Art History cognates (16 hours)**

- AHIS 337
- AHIS 211 or 212

#### **Eight hours AHIS electives**

#### **Career focus classes (12 hours)**

These classes will be selected by the student and the advisor from classes within and/or outside the Art and Design Department, and approved by the Art Department faculty by the end of the junior year.

#### **Sr. Exhibition & Career Preparation (2 hours)**

One hour of the exhibition section ART 401 each semester of the senior year.

All students majoring in studio art must participate in assessment critiques their junior year, first semester of the senior year, and during the senior exhibition in the spring semester. Senior exhibition is required. (ART 100, 101 and 103 must be completed before the junior critique.) Students pursuing the BFA must be accepted into the program via the junior critique and must receive approval of the studio faculty by the end of their junior year.

#### ***Minor and Associate Program Requirements***

Students wishing to minor in art or receive an Associate of Arts degree in art must complete a total of 22 semester hours, including ART 100, 101, 103; nine hours of art electives; and one Art History (AHIS) cognate (4 hours).

#### **Arts Management**

Follow Art course descriptions.

#### ***Pre-Art Therapy***

See Pre-Professional Programs in the Academics section of the catalog.

Art History

See AHIS in the History section of the catalog.

#### ***Studio*** (Listed in the schedule as ART)

**100.** Three-Dimensional Design (ARTS) (3). The principles of organization in a variety of three-dimensional media, with emphasis on problem solving and the fundamentals of design. Fall, spring.

**101.** Two-Dimensional Design (ARTS) (3). Design ele-

ments, principles, processes and media in two dimensions, in a variety of visual concepts in both black and white and color. Fall, spring.

**103.** Drawing from Life (ARTS) (3). Emphasizes developing drawing, design and technical skills in a variety of black and white media by working from real objects and models in the studio. Fall, spring.

**106.** Introduction to Ceramics (ARTS) (3). Basic ceramic methods for the non-art major, including construction techniques and wheel throwing. Consideration will be given to three-dimensional design elements and ideas. Fall, spring.

**201.** Painting (3). Painting as a creative process involving aspects of drawing, design, image, color, and material techniques, in the expressive organization of a two-dimensional surface. Work will involve a variety of media and methods. (Prerequisite: 6 hours from 100, 101, 103.) Fall.

**203.** Non-Acid Intaglio Techniques (3). Non-acid intaglio techniques on Plexiglas and metal etching plates, manipulation of point and criblé textures and vocabulary of nontraditional techniques. Creation of images using collage-based collagraph plates. (Prerequisite: 6 hours from 100, 101, 103.)

**204.** Relief Printing (3). Work in basic woodcut and linoleum printing. (Prerequisite: 6 hours from 100, 101, 103.) Spring.

**205.** Ceramics (3). The construction processes, materials, glazing and firing of ceramic works (low and high fire, including gas, salt/soda, and wood fire). Emphasis is on hand-building and wheel techniques in sculptural and functional forms. (Prerequisite: 6 hours from 100, 101, 103.) Fall.

**208.** Metals (ARTS) (3). The execution of objects in sterling silver and other metals, involving forming, cutting, soldering, stone setting, polishing and other processes. Emphasis is on application of design to the fabrication of jewelry and other decorative objects. (Open to freshmen.) Spring.

**209.** Weaving and Fiber Construction (ARTS) (3). The basic techniques of four-harness loom weaving and various methods of designing and constructing forms with fibers, including tapestry. Alternates with Art 210. (Open to freshmen.) Fall.

**210.** Textile Design (ARTS) (3). The decoration of fabric surfaces by means of dye and pigment, with special emphasis on design in the shibori, batik and screen-printing methods. Alternates with Art 209. (Open to freshmen.) Fall.

**215.** Basic Photography (ARTS) (3). Study of black/white processes with emphasis on acquiring technical skill and developing aesthetic sensitivity and appreciation of the graphic communication potential of the medium. Fall.

**218.** Digital Imaging (ARTS) (3). An introduction to us-

ing the computer to make images. Students learn industry-standard design software such as Adobe Illustrator and Photoshop to create images and to apply design solutions to visual problems. These tools also will be used to explore the unique challenges and advantages of making art with a computer, as well as ways that it can be used as a technique and process for personal expression. Fall, spring.

**220.** Sculpture I (3). A continuation of the media presented in Art 100. New techniques and media presented may include aluminum casting, woodcarving, earthwork, ice carving, glass casting, welding, or paper sculpture. The class will culminate in a significant independent project. (Prerequisite: ART 100) Fall.

**250.** Drawing and Illustration (3). Continued exploration of perceptual and expressive drawing, utilizing a variety of technical means and media, including color drawing media, animation/video, and illustration projects. (Prerequisite: Art 103.) Spring.

**300.** Art and Design Career Seminar (1). This class will involve field trips or speakers, research and self-evaluation. With a variety of artists, discuss the issues of being an art and design professional. Documentation of art work, portfolio and resume preparation, gallery and exhibition experiences appropriate to the students' possible career directions will be identified and initiated. Fall.

**301.** Painting II (3). Continuing study of painting as a creative process involving aspects of drawing, design, image, color and material techniques, in the expressive organization of a two-dimensional surface. Increasing focus on the development of the student's unique personal aesthetic. (Prerequisite: Art 201.) Spring.

**303.** Figure Studies (3). Students draw and model in clay from figure and costume models and complete additional work in medium of choice (drawing, painting, sculpture). Course content includes both problems proposed by the instructor and those initiated by the student. (Prerequisites: Art 100 and 103.) Spring.

**305.** Ceramics II (3). Emphasis on the wheel and advanced hand building techniques. Multi-temperature low fire surfaces, glaze testing and kiln firing will be stressed. Historical perspectives of ceramics will be explored along with the development of the student's unique personal aesthetic. (Prerequisite: Art 106 or 205.) Spring.

**315.** Intermediate Photography (3). Further study of photographic process, including black and white, digital and color, culminating in a significant body of photographs based around a theme or idea. (Prerequisite: Art 215, instructor's permission.) Spring.

**318.** Graphic Design (3). An introduction to the basics of print design and the use of industry-standard software such as QuarkExpress and Adobe In Design. Topics may include page layout, creation of logos, use and manipulation of text

and graphics, product label design, copyright ethics, post layout processing, and basics of printing. Through design projects students will explore own solutions to common graphic design problems. (Prerequisite: ART 218.) Fall.

**319.** Web Design (3). Students will use industry-standard design software such as Macromedia Flash or Dreamweaver to create and design functional web sites. These tools will be used to explore important web design issues such as information architecture, interactivity, animation and navigation systems. Spring.

**320.** Sculpture II (3). Students develop a personal direction selected from experience with previous media and techniques and based on personal imagery and theoretical research. A series of works demonstrating a unique personal vision will be student produced. (Prerequisite: Art 220.) Fall.

**325.** Foundations of Art Therapy (2). Introduces foundational theories and traditional approaches of art therapy practice, emphasizing the psychodynamic roots of the field. Overview of history of the profession and examines contributions of key pioneers. Clinical applications are explored through case studies and studio experience. (Prerequisite: PSYC 100; PSYC 205 recommended.)

**326.** Approaches in Art Therapy (2). Explores alternative theories and techniques in the field of art therapy. Topics also include group and family art therapy practice. Applications are explored through case studies and studio experience. (Prerequisite: PSYC 100; ART 325 and PSYC 205 recommended.) Spring (alternates with ART 325).

**351.** Advanced Studio (1-15). Advanced study in drawing, painting, ceramics, illustration, graphic design, fibers, photography, or sculpture. Repeatable up to 15 semester hours. (Prerequisite: instructor's permission.) Fall, spring.

**401.** Sr. Exhibition & Career Preparation (1). Majors graduating in April, or December of the next year, prepare exhibitions, install them in Gallery, write press releases, design announcement. They write resumes, artist statements, and letters of application, using these materials to apply for an exhibition, graduate program, job, or other opportunity. Repeatable up to 2 credits. (Prerequisite: instructor's permission.) Fall, spring.

### ***Visual Arts Education (Listed in the schedule as ART)***

**105.** Art for Elementary Teachers (3). The development of familiarity with various materials and techniques for use in the elementary classroom, working in paper-maché, mosaic, crayon, chalk, paint, basic printing processes and clay. (Open only to students pursuing the planned minor in elementary education or the early childhood minor.) Fall, May term.

**200.** Classroom Experience (1-2). Classroom experience observing and assisting an art teacher. Students must enroll

concurrently in T ED 204 Educational Psychology. Students are required to maintain journals of their experience.

**330.** Clinical Experience (1). Art classroom experiences parallel to the course T ED 330 Teaching-Learning Processes (secondary). Must be taken concurrently with T ED 330. Fall.

**360.** Methods for Elementary Art Teachers (3). Teaching art at the elementary and middle school levels, including advocacy, art education theory and interdisciplinary education models. Teaching and organizational challenges of art education and the problems of creating an age sensitive curriculum. (Co requisite: Art 361. Prerequisites: acceptance in teacher education program, art major with junior standing.) Spring.

**361.** Elementary Art Practicum (1). Field experience teaching art to elementary students. (Co requisite: Art 360. With respect to teacher certification requirements, this substitutes for one hour of T ED 300.)

**460.** Methods for Secondary Art Educators (3). Art education theory, resources and classroom management related to secondary teaching. Development of lesson plans into whole units of study culminating in the creation of an entire curriculum and a written personal philosophy about the teaching of art. Additional field experience required. (Prerequisites: 360. Co requisite: Art 461) Fall.

**461.** Secondary Art Practicum (1). Field experience teaching art to secondary students. (Co requisite: 460 With respect to teacher certification requirements, this substitutes for one hour of T ED 300.)

**489.** Senior Research in Art Education (2). Classroom discussions about the practices of teaching art. Research and reflective writings will prepare the pre-associate teacher by focusing on teaching diverse learners in diverse contexts, issues of curriculum and pedagogy, and school culture and art teaching (Enroll concurrently with ART 360, ART 460, or T ED 400 Associate Teaching.)

### ***Special and Advanced Courses***

**199.** Exploratory Internship (1-3).

**299.** Experimental Course (1-3).

**399.** Professional Internship (1-12).

**451.** Independent Study (1-3). Open only to art and design majors with a special need to study content beyond that offered in the normal course sequence. (Prerequisite: department chairperson's written permission.)

**499.** Advanced Experimental Course (1-3).

### ***Arts Management***

The Arts Management program is designed to develop not only creative abilities and awareness in the fine arts areas but

also business management skills to allow students to pursue careers in performance and institution management. Some of these careers may include operating art galleries and museums, managing groups and concert halls, and managing theatrical companies. This program leads to the Bachelor of Arts degree.

All students in the program complete a core of courses that offers a broad overview of the various business functional areas, public relations, two-dimensional design, and an internship in fine arts management. Additionally, students will emphasize one area of the fine arts from art, music, or theatre; or the student may choose to emphasize two of the fine arts areas. Students should know that if they decide to emphasize two of the fine arts areas, careful planning of course schedules is necessary in order to meet graduation requirements in a timely fashion.

Candidates for the Bachelor of Arts degree will complete 30 hours of core courses and an additional 33 hours of art, music, or theatre courses if one fine arts area emphasis is chosen. If the student chooses to emphasize two fine arts areas, in addition to the 30 hours of core courses, the student will take 39-43 hours depending on the combination of fine arts areas chosen.

Requirements for Bachelor of Arts in Arts Management:

#### **Arts Management Core**

- ACCT 203 Principles of Accounting I (3)
- ACCT 305 Business Law (3)
- B AD 230 Marketing (3)
- B AD 241 Management (3)
- B AD 242 Business and Professional Communication (3)
- ART 101 Two-Dimensional Design (3)
- COMM 205 Public Relations I (3)
- COMM 238 Journalism I (3)
- Professional Internship (399) (6)

In addition, students are required to complete a major area of emphasis or two minor areas of emphasis, one of which must be Music or Theatre.

#### **Requirements for major areas of emphasis are:**

##### Art

(1) ART 100, 103, 218, 300. (2) One course in three different media, chosen from painting, printmaking, ceramics, fibers, photography, and sculpture (ART 201, 203, 205, 208, 209, 215, 220). One class must be from a three-dimensional medium (ceramics, fibers, sculpture). (3) A second class plus three hours of Advanced Studio (ART 351) in one of the four media (including electronic) you have taken. (ART 301, 204, 305, 210, 315, 318, 319, 320). (4) Eight hours of Art History (AHIS). (5) Two additional hours of Advanced Studio (ART 351), either in studio or senior exhibition preparation. Participation in senior exhibition is required.

##### Music

101, 102, 103, 104, 341, 6 hours of music history (316, 318, 319), 4 semesters of applied music, 6 hours of electives in music, 8 semesters of ensemble or 6 semesters of ensemble and 2 hours of music activities.

##### Theatre

100 (2 credits), 108, 207, 300 (1 credit) 304, 312 or 313 (3 credits from either course), 315, 316, 419, 421, 9 hours of electives in theatre.

#### **Requirements for minor areas of emphasis are:**

##### Art

ART 100, 103; 9 hours of electives in Art; and AHIS 211, 212.

##### Art History

20 hours of AHIS.

##### Music

101, 102, 103, 104, 107, 341; 4 hours of applied music; 4 semesters of ensemble or 2 semesters of ensemble and 2 hours of music activities.

##### Theatre

100 (2 credits), 108, 207, 300 (1 credit), 304 and 9 hours of electives in Theatre.

## **Biology**

The biology department is noted for its environmental and evolutionary programs, cellular and molecular biology studies, prehealth science preparation and taxonomic research. Facilities include a 48-acre natural science study area with forest and aquatic habitats; two 10-acre wildlife preserves; a biochemical genetics laboratory for DNA, protein and evolutionary research; an animal behavior and communication center utilizing radio telemetry, sonographic and video procedures; a tissue culture facility permitting the in vitro cultivation of animal and plant cells and related research; and reference collections of taxonomically important species. The department has prepared students for careers with the Department of Natural Resources, National Park Service, U.S. Interior Department, the U.S. Department of Agriculture and many academic, industrial and research institutions. Many other biology alumni are dentists, medical technologists, nurses, optometrists, physicians, podiatrists and teachers in elementary and secondary schools, colleges and universities.

Students majoring in biology earn a Bachelor of Arts degree. The department also offers the Associate of Arts degree and a minor in biology. Students are encouraged to acquire strong backgrounds in the supporting sciences, particularly chemistry, mathematics and physics. Those interested in careers requiring further education in professional or graduate schools may obtain specific program information from the Career Planning Office.

### **Major Program Requirements**

#### Bachelor of Arts in Biology

(30 hours of Biology and 12 hours of cognates)

#### **Biology core (20 hours)**

- BIOL 103 Plant Biology (4)
- BIOL 104 Animal Biology (4)