953. Asymptotic Theory
Fall of odd years. 3(3-0) P: STT 872.
Large sample behavior of likelihood function.
Local asymptotic Normality models. Contiguity.
Bahadur and Pitman efficiency of statistical procedures.

954. Semi-Nonparametric Inference
Spring of even years. 3(3-0) P: STT 872.
Small and large sample properties of distribution-
free tests. Adaptive and robust procedures. Non-
parametric ANOVA. Estimation of regression and
density functions.

961. Convergence of Measures and
Stochastic Processes
Fall of even years. 3(3-0) P: STT 882.
Convergence of measures on metric spaces. Pro-
orov’s theorem. Function spaces with the uni-
form and Skorohod metric. Empirical processes.
Applications.

962. Stationary and Second Order
Processes
Spring of odd years. 3(3-0) P: STT 882.
Stationary, second order, and Gaussian proc-
esses. Sample path properties. Linear and
nonlinear prediction and estimation. Applica-
tions.

963. Martingales
Fall of odd years. 3(3-0) P: STT 882.
Discrete and continuous time martingales, con-
vergence theorems, Doob-Meyer decomposition.
Applications.

964. Stochastic Analysis
Spring of even years. 3(3-0) P: STT 882.
Stochastic integrals and semi-martingales, Itô
formula, stochastic differential equations. Appli-
cations.

990. Problems in Statistics and
Probability
Fall, Spring. Summer. 1 to 3 credits. A student
may earn a maximum of 6 credits in all enroll-
ments for this course. P: STT 872. R: Approval of
department.
Individual study on an advanced topic in statist-
tics or probability.

995. Topics in Statistics and
Probability
Fall, Spring. Summer. 1 to 3 credits. A student
may earn a maximum of 24 credits in all enroll-
ments for this course. P: STT 882. R: Approval of
department.
Nonparametric statistics, multivariate analysis,
time series analysis, Bayesian statistics, reliabil-
ity theory, stochastic approximation, design of
experiments, sets of decision problems, stochastic
processes, or sequential analysis.

999. Doctoral Dissertation Research
Fall, Spring. Summer. 1 to 24 credits. A student
may earn a maximum of 48 credits in all enroll-
ments for this course. R: Approval of department.

STUDIO ART—Descriptions of Courses

956. STUDIO ART

Department of Art
College of Arts and Letters

110. Drawing I
Fall, Spring. 3(0-6)
Fundamental concepts of drawing. Emphasis on
observational, descriptive and analytical drawing.
Practice of drawing skills using common drawing media.

111. Drawing II
Fall, Spring. 3(0-6) P: (STA 110)
Development of imagery and expression; abstract
and the use of the human figure as subject matter.

113. Color and Design
Fall, Spring. 3(0-6)
Basic elements of two-dimensional design. Prin-
ciples of organization and the theory and practice
of color as a basis for creative solutions for the
problems of the artist and designer.

114. Three-Dimensional Form
Fall, Spring. 3(0-6)
Formal elements of three-dimensional form. Ap-
lication of the principles of organization as a
means for producing creative solutions for the
artist and designer. Related practical experience
with a variety of materials and processes.

300. Intermediate Drawing
Fall, Spring. 3(0-6) P: (STA 111 and STA 113 and
STA 114)
Observational and imaginative drawing including
the human figure. Non-representational drawing.
Contemporary drawing systems, concepts, and
processes.

320. Painting I
Fall, Spring. 3(0-6) P: (STA 111 and STA 113 and
STA 114)
Representational painting of landscape, figure,
and still life imagery. Painting concepts, materi-
als, and techniques.

325. Painting II
Fall, Spring. 3(0-6) P: (STA 320)
Continuation of representational painting, and
introduction to non-representational painting and
concepts.

340. Ceramics I
Fall, Spring. 3(0-6) P: (STA 111 and STA 113 and
STA 114)
Ceramic processes including handbuilding, glaze
formulation, and kiln firing as a means of cul-
tural expression.

345. Ceramics II
Fall, Spring. 3(0-6) P: (STA 340)
Continued development of ceramic forming and
kiln firing techniques including handbuilding,
glaze formulation, mold making, casting, and
wheel throwing for cultural and artistic expres-
sion.

350. Figure Modeling
Fall, Spring. 3(0-6) P: (STA 111 and STA 113 and
STA 114)
Modeling human and natural forms. The figure
as a means of artistic and cultural expression.

351. Mixed Media and Installation
Fall, Spring. 3(0-6) P: (STA 111 and STA 113 and
STA 114)
Exploration of artistic expression using mixed
media and assemblage techniques. Installation
techniques.

354. Casting
Fall, Spring. 3(0-6) P: (STA 111 and STA 113 and
STA 114)
Casting concepts and techniques as a means of
artistic and cultural expression.

355. Construction and Fabrication
Fall, Spring. 3(0-6) P: (STA 111 and STA 113 and
STA 114)
Sculptural concepts using methods of construc-
tion and fabrication as an approach to artistic
and cultural expression.

360. Graphic Design
Fall, Spring. 3(0-6) P: (STA 111 and STA 113 and
STA 114)
Graphic signs and symbols used in visual com-
munication. Application of design principles to
experimental and practical problem solving.

370. Photography
Fall, Spring. 3(0-6) P: (STA 111 and STA 113 and
STA 114)
History and basic technology of black and white
photography, integrative camerawork, and dark-
room processing. Issues in photographic aesthet-
ics. Students furnish camera and all materials.

400. Advanced Drawing
Fall, Spring. 4(0-8) P: (STA 300)
Drawing with an emphasis on a wide range of
current drawing concepts, materials, and tech-
niques. Advanced non-representational drawing.
Application to individual thematic development.

420. Painting
Fall, Spring. 4(0-8) A student may earn a maxi-
num of 20 credits in all enrollments for this
course. P: (STA 325)
Advanced applications of painting concepts, styles
and techniques. Consideration of the language of
contemporary painting.

430. Relief Printing
Fall, Spring. 4(0-8) A student may earn a maxi-
num of 20 credits in all enrollments for this
course. P: (STA 300 or STA 320)
Theory and practice of relief prints including
additive methods, linocut and woodcut for artistic
and cultural expression.

431. Screen Printing
Fall, Spring. 4(0-8) A student may earn a maxi-
num of 20 credits in all enrollments for this
course. P: (STA 300 or STA 320)
Screen printing as a fine art print medium. The-
ory and techniques as a means to creative and
expressive imagery.

432. Lithography
Fall, Spring. 4(0-8) A student may earn a maxi-
num of 20 credits in all enrollments for this
course. P: (STA 300 or STA 320)
Lithographic process as an artistic medium.
Techniques of the medium. Preparing the plate or
stone, printing, and using tusche, wash and rub-
bing as a means to creative imagery.

A-217
Descriptions—Studio Art of Courses

433. Intaglio
Fall, Spring. 4(0-8) A student may earn a maximum of 20 credits in all enrollments for this course. P: (STA 300 or STA 320)
Aesthetic principles and techniques such as line etching, soft ground, aquatint, dry point, wax resist, collograph, and monoprints.

435. Handmade Paper
Spring of odd years. 4(0-8) A student may earn a maximum of 20 credits in all enrollments for this course. P: (STA 300 or STA 320)
Handmade paper as an art form. Basic techniques including lamination, layering, folding and vacuum forming.

440. Ceramics
Fall, Spring. 4(0-8) A student may earn a maximum of 20 credits in all enrollments for this course. P: (STA 345)
Development of aesthetic and technical skills with particular focus on contemporary issues of content and concept. Includes opportunity for supervised individual study.

450. Advanced Sculpture
Fall, Spring. 4(0-8) A student may earn a maximum of 20 credits in all enrollments for this course. P: (STA 350 or STA 351 or STA 354 or STA 355) and one other 300-level sculpture course
Advanced applications of sculpture concepts, styles and techniques. Consideration of the language of contemporary sculpture, with emphasis on individual direction.

460. Graphic Communication
Fall, Spring. 4(0-8) P: (STA 462 or STA 463 or STA 464 or STA 465 or STA 466 or STA 467 or STA 468) and one other 400-level graphic design course
Graphic design for visual communication based on typographic problem solving. Selected experimental and practical projects.

462. Three-Dimensional Design
Spring. 4(0-8) P: (STA 360)
Development and application of visual communication elements for three-dimensional structures and compound surfaces within a broad range of scale.

463. Book Design
Fall. 4(0-8) P: (STA 360)
Principles of typography and graphic design as applied to the book form.

464. Design Process and Concepts
Fall. 4(0-8) P: (STA 360)
Problem solving methods, strategies, and procedures. Exploration of problem definition, analysis, concept development, and evaluation.

465. The Poster
Spring. 4(0-8) P: (STA 360)
Poster design as a combined verbal and non-verbal communication device. Visual elements used to persuade and inform.

466. Corporate Imagery
Fall. 4(0-8) P: (STA 360)
Design development, hierarchical unification, and application strategies for the graphic identification of organizations and sub-units of organizations.

467. Motion Graphics and Electronic Media
Fall. 4(0-8) P: (STA 360)
Non-print methods of visual communication. Computer- and video-based two-dimensional animation design.

468. Computer Graphics
Spring. 4(0-8) P: (STA 360)
The computer as a medium for visual communication design. Experimentation with drawing, painting and solid modeling applications.

470. Still Photography
Fall, Spring. 4(2-4) P: (STA 370)
Control of black and white photographic materials through advanced camera and darkroom techniques. View camera principles and use. Print hand-coloring and archival processing. Contemporary form and content issues.

472. Color Photography
Spring. 4(2-4) P: (STA 470)

473. Landscape Photography
Fall, Spring. 4(2-4) P: (STA 470)
Principles of landscape photography ranging from response to the rural and pastoral to urban and human altered. Historical and contemporary aesthetic trends. Film formats ranging from 35 mm to 4 x 5”. Controlled black and white print-making and zone system.

475. Photography Workshop
Spring. 4(1-6) P: (STA 470)

481. Art Experiences with Children and Youth: Elementary
Fall, Spring. 5(1-8) P: Completion of Tier I writing requirement. R: Open only to juniors or seniors in the Department of Art with a teacher certification option.

490. Independent Study
Fall, Spring. 1 to 3 credits. A student may earn a maximum of credits in all enrollments for this course. R: Approval of department.
Special projects arranged by an individual student and a faculty member in areas supplementing regular course offerings.

491A. Selected Topics - Painting
Fall, Spring. 2 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. P: (STA 320) R: Approval of department.
Issues of technique, style, and content in painting.

491B. Selected Topics - Printmaking
Fall, Spring. 2 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. P: (STA 430 or STA 431 or STA 432 or STA 433 or STA 435) R: Approval of department.
Issues of technique, style, and content in printmaking.

491C. Selected Topics - Ceramics
Fall, Spring. 2 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. P: (STA 345) R:
Issues of technique, style, and content in ceramics.

491D. Selected Topics - Sculpture
Fall, Spring. 2 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. P: (STA 350 or STA 351 or STA 354 or STA 355) R: Approval of department.
Issues of technique, style, and content in sculpture.

491E. Selected Topics - Graphic Design
Fall, Spring. 2 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. P: (STA 360) R: Approval of department.
Issues of technique, style, and content in graphic design.

491F. Selected Topics - Photography
Fall of odd years. 2 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. P: (STA 370) R: Approval of department.
Issues of technique, style, and content in photography.

492. Senior Seminar and Professional Practice (W)
Fall, Spring. 2(2-0) P: Completion of Tier I writing requirement. R: Open only to seniors in the Studio Art major. C: STA 492A concurrently.
Capstone course for artists and designers. Writing as a mode of issue delineation and definition.

492A. Exhibition Practicum
Fall, Spring. 1(1-1) P: Completion of Tier I writing requirement. C: STA 492 concurrently.

493. Design Internship
Fall, Spring. 1 to 4 credits. A student may earn a maximum of 4 credits in all enrollments for this course. P: (STA 460 or STA 462 or STA 463 or STA 464 or STA 465 or STA 466 or STA 467 or STA 468) and one other 400-level graphic design course. R: Approval of department, contract required prior to registration.
Field experience in a working design environment under supervision of a design professional: art director, graphic designer, or photographer.
820. Painting
Fall, Spring. 2 to 8 credits. A student may earn a maximum of 40 credits in all enrollments for this course. R: Open only to Master of Fine Arts students in Studio Art. Approval of department. Advanced study in a variety of painting media to foster independent development.

830. Relief Printing
Fall, Spring. 2 to 8 credits. A student may earn a maximum of 40 credits in all enrollments for this course. R: Open only to Master of Fine Arts students in Studio Art. Approval of department. Theory and practice of relief printing as a means to create expressive imagery.

831. Screen Printing
Fall, Spring. 2 to 8 credits. A student may earn a maximum of 40 credits in all enrollments for this course. R: Open only to Master of Fine Arts students in Studio Art. Approval of department. Theory and practice of screen printing as a means to create expressive imagery.

832. Lithography
Fall, Spring. 2 to 8 credits. A student may earn a maximum of 40 credits in all enrollments for this course. R: Open only to Master of Fine Arts students in Studio Art. Approval of department. Theory and practice of lithography as a means to create expressive imagery.

833. Intaglio Printing
Fall, Spring. 2 to 8 credits. A student may earn a maximum of 40 credits in all enrollments for this course. R: Open only to Master of Fine Arts students in Studio Art. Approval of department. Advanced study in intaglio printing as a means to create expressive imagery.

840. Ceramics
Fall, Spring. 2 to 8 credits. A student may earn a maximum of 40 credits in all enrollments for this course. R: Open only to Master of Fine Arts students in Studio Art. Approval of department. Advanced study in ceramics to foster individual development.

850. Sculpture
Fall, Spring. 2 to 8 credits. A student may earn a maximum of 40 credits in all enrollments for this course. R: Open only to Master of Fine Arts students in Studio Art. Approval of department. Advanced study in a variety of three-dimensional media to foster individual development.

860. Graphic Design
Fall, Spring. 2 to 8 credits. A student may earn a maximum of 40 credits in all enrollments for this course. R: Open only to graduate students in Studio Art. Approval of department. Planning and conceptualizing ideas for visual communication problems that are to be expressed in words and/or pictures. Design of research that will expose mastery of visual aesthetics and concepts in information design.

882. Seminar in Art Education
Fall of even years. 3(0-0) R: Approval of department. Contemporary thought in art education. Current problems examined within an interdisciplinary framework.

891. Special Topics in Art Education
Fall, Spring. 1 to 3 credits. A student may earn a maximum of 3 credits in all enrollments for this course. R: Approval of department. Special topics supplementing regular course offerings proposed by faculty on a group study basis for graduate students.

892. Master of Fine Arts Seminar
Fall. 3(0-0) A student may earn a maximum of 12 credits in all enrollments for this course. R: Open only to Master of Fine Arts students in Studio Art. Approval of department. Contemporary intellectual issues related to practice in the visual arts. Group critiques of individual scholarly and applied research.

898. Master of Fine Arts Research
Fall, Spring. 1 to 8 credits. A student may earn a maximum of 16 credits in all enrollments for this course. R: Open only to Master of Fine Arts students in Studio Art. Individual research project in the student's studio art discipline directed by major professor.

608. Basic Surgery Clerkship
Fall, Spring, Summer. 6 to 12 credits. A student may earn a maximum of 18 credits in all enrollments for this course. P: FMP 602. R: Open only to graduate-professional students in College of Human Medicine. The surgical patient, surgical diagnosis, pre-operative evaluation and post-operative care.

609. Otolaryngology Clerkship
Fall, Spring, Summer. 6 credits. A student may earn a maximum of 18 credits in all enrollments for this course. P: SUR 608. R: Open only to graduate-professional students in College of Human Medicine. Common otolaryngologic disorders, emergencies, diagnosis and treatment. Primary physician's judgments about management.

610. Plastic Surgery Clerkship
Fall, Spring, Summer. 6 credits. A student may earn a maximum of 18 credits in all enrollments for this course. P: SUR 608. R: Open only to graduate-professional students in College of Human Medicine. Principles of wound healing and tissue repair. Indications and applications of plastic surgery procedures.