Course

measurable and integrable functions; modes of convergence, theorems of Egoroff, Lusin, Riesz-Fischer, Lebesgue; absolute continuity, and the Radon-Nikodym theorem; product measures and Fubini's theorem. Applications to some of the classical theories of integration and summability.

#### 971. Advanced Theory of Statistics I Fall. 4(4-0) 873; 981 or concurrently.

Continuation of 873; more general treatment of topics using measure theory and measure-theoretic probability.

#### 972. Advanced Theory of Statistics II Winter. 4(4-0) 971; 982 or concurrently.

Statistical convergence theorems. Variables and distributions in n-space. Asymptotic and exact sampling distributions. Tests of significance.

# 973. Advanced Theory of Statistics III Spring. 4(4-0) 972.

Continuation of 972.

#### 974. Multivariate Analysis Spring. 3(3-0) 972.

The n-dimensional case in the theories of tests of hypotheses and estimation.

# 981. Advanced Theory of Probability I

Fall. 4(4-0) 863; MTH 927 or approval of department.

Measures on infinite product spaces and Kolmogorov' consistency theorem. Distributions and characteristic functions. Independence. Series of independent random variables.

# 982. Advanced Theory of Probability II

 $Winter. \quad 4(4\text{-}0) \quad 981 \quad or \ approval \ of \\ department.$ 

Central limit problem: the classical limit problem, the bounded variances case, and limit laws for infinitely divisible random variables. Conditional probabilities and expectations. Martingales with discrete time.

## 983. Advanced Theory of Probability III

Spring.  $4(\overline{4}-0)$  982 or approval of department.

Ergodic theory; individual and  $L_p$  ergodic theorems. Second order processes, weakly and strongly stationary processes. Foundations; separability and measurability of processes; properties of sample functions. Continuous time martingales. Processes with independent increments.

# 995. Advanced Topics in Statistics Fall, Winter, Spring. Variable credit.

#### 999. Research

Fall, Winter, Spring, Summer. Variable credit. Approval of department.

### STUDIO ART

See Art.

### SYSTEMS SCIENCE

See Electrical Engineering and Systems Science.

# TELEVISION AND RADIO

TR

### College of Communication Arts

#### 271. Foundations of Broadcasting Fall, Winter, Spring, Summer. 3(3-0)

Sophomores.

Origin, development, nature, and function of radio and television in modern society.

#### 272. Fundamentals of Radio Broadcasting I

Fall, Winter, Spring. 3(2-2) Sophomore Television-Radio majors.

Fundamentals of radio program production. Training in creative use of studio and control room equipment. Construction of programs. Emphasis on local station production practices. Logged broadcasting practice and experience.

#### 273. Fundamentals of Radio Broadcasting II

Fall, Winter, Spring. 3(2-2) 272.

Fundamentals of radio program production. Students responsible for writing, directing, and performing all types of radio formats.

### 280. History of the Motion Picture

Fall, Winter, Summer. 3(2-2) Sophomores.

Development of the motion picture from its beginning to the present, emphasizing social background and cultural values. Screening of significant films from various periods and countries.

## 352. Fundamentals of Television Broadcasting I

Fall, Winter, Spring. 3(1-4) 273.

Basic orientation to the television studio, with laboratory experience in equipment operation and personnel functions.

# 353. Fundamentals of Television Broadcasting II

Fall, Winter, Spring. 3(1-4) 352.

Continuation of 352, with emphasis on controlroom and projection-room practices. Assigned experience in closed-circuit television.

#### 356. Radio and Television Continuity Writing

Fall, Winter, Spring. 3(3-0) 272.

Theory, analysis, and practice in the writing of station and program continuity.

#### 383. Radio and Television Announcing

Fall, Winter, Spring. 3(2-2) Majors: 272 and 352; others: 437.

Emphasis on developing professional speech habits for radio and television. Training in various styles of delivery for microphone and camera.

### 386. Broadcast Promotion

Winter, Spring. 3(3-0) Six credits in television and radio or approval of department. Purpose, creation and production of promotional ideas and material in broadcasting. Introduces the student to the promotional facet of broadcasting, relating it to increasing sales, audience size and improving public relations.

#### 390. Cinema I

Fall. 3(2-2) Approval of department. Survey of the film production process: concepts, techniques, procedures, problems, tools. Emphasis on production as the execution of film design.

### 391. Cinema II

Spring. 3(2-2) 390.

Theory and practice in film production: script, scheduling, shooting, editing, sound. Elaboration and implementation of Cinema I concepts.

### 398. International Broadcasting

(498.) Spring. 3(3-0) Juniors; Sophomores with approval of department.

Important national and international systems of broadcasting, their history, programming patterns and control.

#### 433. Television Directing

Fall, Winter, Spring. 3(2-2) 353; approval of department.

Televison directing methods with assigned experiences in the directing of studio productions.

#### 437. Television Program Development Fall, Winter, Spring, Summer. 3(2-2) Senior non-majors.

Television production planning and practices. Laboratory experience in television studio. Designed for non-majors who desire a working knowledge of the medium for application in other fields

#### 450. Radio Production

Winter, Spring. 3(2-2) 273.

Planning, coordinating and producing the radio program. Emphasis on documentary and studio productions utilizing original ideas and methods.

#### 485. Radio and Television Station Management

Fall. 3(3-0) Fifteen credits in television and radio or approval of department.

Problems of station management and methods for their solution. Projects involving case studies in the management of budget, programming, facilities, sales, and community relations.

# 486. Radio and Television Station Programming

Fall, Spring. 3(3-0) Fifteen credits in television and radio.

Objectives and methods of planning of program schedules. Individual program formats and their relation to various types of audiences and markets.

# 489. Radio and Television in Education

Fall, Winter, Summer. 3(3-0) Ap proval of department.

Uses of broadcast media for instructional purposes, both on-the-air and in the classroom. Current usages by institutions of higher learning and public schools, including both broadcasting and closed-circuit television. Survey of research studies of the effects of educational broadcasting. Types of educational programs are evaluated. Specialists in educational radio and television participate as guest lecturers.

### 495. Television Staging Design

Spring. 3(2-2) 433 or approval of department.

Communicative effect of various shot compositions, camera movements, performer movements and shot sequences. Various styles of staging appropriate to different program formats. Study and execution of graphic presentations for television.

# 496. Broadcasting and Government Fall, Winter. 3(3-0) Juniors.

Radio, television and film in a social context with emphasis on the legal and regulatory aspects of the media.

#### 497. Responsibilities of Broadcasters

Winter, Spring, Summer. 3(3-0) Fifteen credits in television and radio or approval of department.

Requirements and responsibilities of the broadcaster as the administrator of a public trust.

#### 499. Individual Projects

Fall, Winter, Spring, Summer. Variable credit. Approval of department.

#### 822. Art Instructional Media Laboratory II—Television

Fall, Winter, Spring, Summer. 4(1-9) May re-enroll for a maximum of 8 credits. 437 or experience in the television field. Interdepartmental and administered jointly with the Art Department.

Review and analysis of teaching video tapes and television programs in art. Students may write television scripts, design sets and props, and teach in a taped or live closed-circuit or open channel program.

#### 830. Television Producer

Fall, Spring. 3(3-0) May re-enroll for a maximum of 6 credits. 353 or approval of department.

Producer's functions in planning and supervising the execution of television programs, with emphasis on content, organization and use of production techniques to secure the intended audience response.

### 831. Research in Broadcasting and Film

Fall, Summer. 3(3-0) Approval of department.

#### 835. Television and Radio Audience Studies

Winter, Summer. 4(4-0) Approval of department.

Television and radio audience attitudes and behavior. Studies of effects of various types of broadcast formats, presentations and systems on individuals and groups.

#### 840. News and Public Affairs Programming

Winter, Spring, Summer. 4(4-0) May re-enroll for a maximum of 12 credits. Approval of department.

Winter: Organization and management of the radio and television news and public affairs department,

Spring: Research and experimentation in program design and writing.

Summer: News program problems and policies.

#### 850. Seminar in Broadcast Management

Fall, Winter, Spring. 4(4-0) May reenroll for a maximum of 12 credits. Approval of denortment

Fall: Administrative problems in radio and television station management.

Winter: The broadcaster's responsibilities to his public.

Spring: Case studies in station management.

# 885. Seminar in Educational Broadcasting

Winter, Spring, Summer. 4(4-0) May re-enroll for a maximum of 12 credits. Approval of department.

Winter: Instructional television and radio program planning.

Spring: Utilization of broadcast media by the classroom teacher.

Summer: Teaching of broadcasting at the college and university level.

### 890. Special Problems

Fall, Winter, Spring, Summer. Variable credit. Approval of department.

#### 899. Research

ment.

Fall, Winter, Spring, Summer. Variable credit. Approval of department.

#### 941. Evaluation and Criticism in Broadcasting and Film

Winter. 3(3-0) Approval of depart-

Formulation and application of standards for objective appraisal of the social, ethical and artistic aspects of radio, television and film programs.

### 995. Seminar in Global Broadcasting

Fall, Winter, Spring. 4(4-0) May reenroll for a maximum of 12 credits. Approval of department.

Fall: The American system of broadcasting in a historical and social context with emphasis on social controls.

Winter: Foreign domestic systems of broadcasting.

Spring: International systems of broadcasting; including Voice of America, Radio Moscow, Radio Peking, Radio Free Europe, and satellite communications.

# TEXTILES, CLOTHING AND RELATED ARTS TRA

### College of Home Economics

# 140. Matrix: Design for Living Fall, Winter, Spring. 3(3-0)

Intellectual development including value identification and judgment through the study of design, a vital part of the matrix of living. Design components and principles as they relate to the function and ideas in the various phases of man's environment and daily life.

#### 141. Design I

Fall, Winter, Spring. 3(0-6) 140, STA 132.

Application of design elements and principles in creative problems and media.

#### 142. Design in Clothing

Fall, Winter, Spring. 3(2-2) 140.

Design elements and principles as applied to clothing.

#### 152. Principles of Clothing Construction I

Fall, Winter, Spring. 3(2-2)

Introduction of principles of clothing construction with relationship to fit, fabric and garment assembling.

### 170. Textiles I

(270.) Fall, Winter, Spring. 3(3-0)

Evaluation of general textile information by means of consumer-oriented concepts of durability, comfort, care and aesthetics that contribute to produce serviceability and satisfaction.

# 201. Introduction to Textiles and Clothing Production, Distribution and Consumption

Winter, Spring. 3(3-0)

Survey of the production of textiles, apparel and apparel accessories and channels of distribution from the manufacturer to the consumer. Study of fashion influence on consumer buying and the retailer's role as liaison between consumer and manufacturer. Opportunities for careers in all phases of the industry investigated.

# 252. Principles of Clothing Construction II

Fall, Winter. 3(2-2) 152 or approval of department.

Application of principles with emphasis on fitting and advanced construction techniques.

### 276. Apparel and Home Furnishing Accessories

Winter, Spring. 3(3-0) Majors: 140. Essential information for the buying or selling of nontextile apparel and home furnishing accessories. Quality differences due to material, manufacturing processes, resources and markets.

#### 293. Interior Design I

Fall, Winter, Spring. 4(2-4) 141.

Basic interior design principles as they relate to physical site, interior planning, functional requirements, materials and construction, color, texture and enrichment.

# 301. Clothing and Textiles Merchandising I

Spring. 4(2-6) Majors: 276, 372A, MTA 351; others: 170; MTA 351.

Functional relationships between the various divisions of a medium to large retail store selling fashion merchandise. Classes supplemented by guest lectures from local stores. Store facilities used for supervised laboratory experience.

# 302. Clothing Production and Distribution

(402.) Fall, Winter. 3(3-0) Juniors. Historical development of the foreign and domestic apparel industries. Present organization of the apparel industry in major foreign markets and primary and regional markets in the United States.

#### 355. Principles of Pattern Making

Spring. 3(1-4) 142, 252 or approval of department.

Flat pattern design, pattern alterations and fitting. Problems include designing from a master block, pattern cutting, and garment construction.

#### 365. Textiles Design

Fall, Winter, Spring. 3(0-6) 140.

Two and three dimensional design as applied specifically to textiles already existent.

#### 372A. Textiles II

(372.) Fall, Winter, Spring. 3(3-0) 170; Juniors.

Recent developments in fibers and textile products. Chemical and physical properties of fibers, yarns, fabric structures and finishes related to fabric performance.

#### 372B. Textiles Laboratory

Fall, Winter, Spring. 1(0-2) 170; 372A or concurrently; Juniors.

Laboratory experience in textile analysis and evaluation.

#### 373. Weaving

Fall, Winter, Spring. 3(0-6) Approval of department.

Execution of original designs in the different weaving techniques. Warping of looms and the interpretation and use of drafts for pattern weaving are included.

### 380. Design II

Fall, Winter, Spring. 3(0-6) 141.

Laboratory problems in color, form, pattern and texture to develop understanding of good design.

### 382A. Crafts

Fall, Winter, Spring. 3(0-6) 140.

Development of creative design and craft techniques for vocational teaching in home economics.