

**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.

**981. Advanced Theory of Probability I**

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

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

**982. Advanced Theory of Probability II**

Winter. 4(4-0) 981 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(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.

## SURGERY\*

SUR

### College of Human Medicine

**608. Surgery Clerkship**

Fall, Winter, Spring, Summer. 1 to 17 credits. May re-enroll for a maximum of 43 credits. H M 602.

An introduction to the surgical patient, stressing surgical diagnosis, pre-operative evaluation and post-operative care. Objectives are designed to help the student attain acceptable levels of surgical competence for physicians.

**609. Otolaryngology Clerkship**

Fall, Winter, Spring, Summer. 1 to 17 credits. May re-enroll for a maximum of 34 credits. H M 602.

Common otolaryngologic disorders, emergencies, including diagnosis and treatment, and judgments concerning proper management by primary physicians.

**610. Plastic Clerkship**

Fall, Winter, Spring, Summer. 1 to 17 credits. May re-enroll for a maximum of 34 credits. H M 602.

Principles of wound healing and tissue repair. Indications and applications of plastic procedures.

**611. Urology Clerkship**

Fall, Winter, Spring, Summer. 1 to 17 credits. May re-enroll for a maximum of 34 credits. H M 602.

Demonstration of clinical manifestations of genito-urinary disease, investigative methods and techniques of diagnosis and management, familiarity with urologic emergencies and performance of basic urologic skills.

**612. Rectal Surgery**

Fall, Winter, Spring, Summer. 1 to 17 credits. May re-enroll for a maximum of 34 credits. H M 602.

Data collection, physical examination, and problem formulation relating to colon and rectal disease. Involvement in special techniques, examinations, and surgical procedures is an important aspect of the experience.

**613. Orthopedic Clerkship**

Fall, Winter, Spring, Summer. 1 to 17 credits. May re-enroll for a maximum of 34 credits. H M 602.

Diagnostic and management information and skills, including emergencies, in common orthopedic problems.

**614. Neurosurgery Clerkship**

Fall, Winter, Spring, Summer. 1 to 17 credits. May re-enroll for a maximum of 34 credits. H M 602.

A hospital-based experience to provide the student with familiarity with the field and understanding of the contribution of neurosurgery in medicine generally.

**615. Ophthalmology Clerkship**

Fall, Winter, Spring, Summer. 1 to 17 credits. May re-enroll for a maximum of 34 credits. H M 602.

Development of skills and knowledge in ophthalmology, neuro-ophthalmology, visual function, and management of problems such as glaucoma, the red eye, and trauma.

**616. Thoracic Surgery Clerkship**

Fall, Winter, Spring, Summer. 1 to 17 credits. May re-enroll for a maximum of 34 credits. H M 602.

Problem-solving in thoracic medicine and surgery, also stressing pulmonary physiology, use of diagnostic tools and tests, and indications for surgical procedures.

**617. Emergency Medicine Clerkship**

Fall, Winter, Spring, Summer. 1 to 17 credits. May re-enroll for a maximum of 34 credits. H M 602.

Exposure to acute problems of wide variety is provided by this experience. Evaluation, management and disposition of patients is seen in the framework of the continuing patient care system.

## SYSTEMS SCIENCE

See Electrical Engineering and Systems Science.

## TELEVISION AND RADIO

T R

### College of Communication Arts

**100. Foundations of Broadcasting**

(271.) Fall, Spring, Summer. 3(3-0)

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

**201. Fundamentals of Radio Broadcasting**

(272.) Fall, Winter, Spring, Summer. 4(2-4) 100. Sophomore television-radio majors.

Basic orientation to the radio studio, with laboratory experiences in production, writing, and performance.

**202. Fundamentals of Television Broadcasting**

(352.) Fall, Winter, Spring. 4(2-4) 201.

Basic orientation to the television studio, with laboratory experiences in production, writing, and performance.

**280. History of the Motion Picture**

Fall, Winter. 4(2-4) 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.

**333. Television Directing**

(433.) Fall, Winter, Spring, Summer. 4(2-4) 202 and approval of department.

Television producing and directing methods with assigned experiences in the television studios.

**335. Television and Radio Audience Studies**

Winter, Summer. 3(3-0) Juniors.

Analysis and evaluation of broadcast audience measurement services and other feedback systems. Broadcast audience characteristics, attitudes and behavior.

**350. Advanced Radio Production**

(450.) Spring. 4(2-4) 201 and approval of department.

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

**351. Television Studio Production**

Fall, Spring. 4(2-4) Junior majors, 202 and approval of department.

Advanced television crew operations. Writing and production of programs directed by students in 451.

**386. Broadcast Promotion**

Winter, Spring. 4(4-0) 202 and Juniors.

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(3-0) 280 or approval of department.

Survey of the film production process: concepts, techniques, procedures, problems, tools. Emphasis on production as the execution of film design.

**401. Television and Radio Station Management**

(485.) Fall, Spring. 4(4-0) Seniors and 15 credits in television and radio courses.

Problems of station management in budgeting, programming, sales, government regulation and community relations.

**402. Television and Radio Station Programming**

(486.) Winter, Spring. 4(4-0) Seniors and 15 credits in television and radio courses.

Objectives and methods of planning television and radio programs. Evaluation of individual program formats and their relation to various types of audiences and markets. Laws and regulations affecting programming.

\*Established February, 1971.

**403. Current Issues in Broadcasting**  
(497.) Spring. 4(4-0) Seniors and 15 credits in television and radio courses.

Critical examination of contemporary problems and issues in broadcasting. Resident and outside speakers. Preparation of significant research paper.

**437. Television Program Development**  
Winter, Summer. 3(3-0) Senior non-majors.

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

**451. Advanced Television Directing**  
Fall, Spring. 3(2-2) Senior majors, 333 and approval of department.

Assigned experiences in television directing, assistant directing and technical directing of programs written and produced by students in 351.

**489. Television and Radio in Education**

Fall, Summer. 4(4-0) Seniors; Juniors with approval 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.

**490. Cinema II**

(391.) Spring. 4(1-6) 390 and approval of department.

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

**498. International Broadcasting**

(398.) Fall, Summer. 4(4-0) Seniors; Juniors with approval of department.

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

**499. Individual Projects**

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

**801. Trends and Issues in Broadcasting**

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

Salient issues and prevailing trends in broadcasting. Consideration of inter-dependencies and relationships within and between broadcasting organizations and society.

**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. The Television Producer**

Fall, Winter. 4(4-0) 333 or approval of department.

Producer's functions in planning and supervising the execution of television programs, with emphasis on content, organization and use of pro-

duction techniques to secure the intended audience response.

**831. Research Methods in Broadcasting**

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

**840. News and Public Affairs Programming**

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

Analysis of broadcast journalism functions in relation to program design. Writing practice in analytic and editorial forms. Programming responsibilities, legal and ethical restraints.

**841. News and Public Affairs Producing**

Spring. 4(2-4) Approval of department.

Researching, writing and producing extended news and public affairs reports.

**850. Broadcast Management: Sales and Promotion**

Winter. 4(4-0) 401 or approval of department.

Direction and supervision of station sales and promotion personnel in securing and servicing national, regional and local accounts.

**851. Broadcast Management: Profit and Personnel**

Spring. 4(4-0) 401 or approval of department.

The management of station finances and the motivation of station personnel.

**880. Public Broadcasting**

Winter. 4(4-0) 439 or approval of department.

Investigation of the role, organization, and problems of non-profit broadcasting by television and radio, especially since its recognition by federal legislation as an alternate program service to commercial broadcasting in the United States.

**885. Teaching of Broadcasting**

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

Philosophy and objectives of instruction in broadcasting. The undergraduate and graduate curricula. The content of radio and television courses and methods of teaching.

**890. Special Problems**

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

**899. Research**

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

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

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

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

**990. Global Broadcasting: Foreign Domestic Systems**

(995.) Winter. 4(4-0) 498 or approval of department.

Organization, financing, and programming as related to historic and cultural determinants. Special emphasis on the role of broadcasting in developing nations.

**991. Global Broadcasting: International Systems**

(995.) Spring. 4(4-0) 498 or approval of department.

Propaganda and information services. Interna-

tional coordinating organizations such as ITV, UNESCO, Eurovision, and Intervention. Developments in satellite communication.

**THEATRE**

**THR**

**College of Arts and Letters†**

**101. Theatre Foundations: Elements**

Fall, Winter, Spring, Summer. 3(3-0) Majors.

An introduction to theatre production with primary emphasis on play script analysis. Plot, character, theme, and language are considered as they function in actual modern play production.

**102. Theatre Foundations: Acting**

Fall, Winter, Spring, Summer. 3(0-4) Majors.

Exploration of self and individual creativity as a tool of artistic expression through progressive exercises in improvisation, mime, dance, speech and play-making.

**103. Theatre Foundations: Stagecraft**

Fall, Winter, Spring, Summer. 3(0-6) Majors.

Materials utilized in theatre and necessary fabrication skills. Emphasis on structural qualities, color theory and design fundamentals. Instruction in techniques of shaping and altering provided.

**121. Theatre Appreciation**

(142.) Fall, Winter, Spring, Summer. 3(3-0) Non-majors only.

Theatre arts as a recreational, cultural, and social force in modern living.

**201. Sophomore Theatre Practicum I**

Fall. 4(0-15) 101, 102, 103, or approval of department.

A highly intensified theatrical apprenticeship in which students act, design, construct and manage a variety of plays during the course of the term under the guidance of theatre senior staff members.

**202. Sophomore Theatre Practicum II**

Winter. 4(0-15) 201 or approval of department.

Continuation of 201.

**203. Sophomore Theatre Practicum III**

Spring. 4(0-15) 201, 202.

Continuation of 201, 202.

**211. Sophomore Acting Practicum I**

Fall. 4(0-10) 101, 102, 103 and approval of department.

Intensive preparation of actor's physical and mental instrument through movement study and improvisation.

**212. Sophomore Acting Practicum II**

Winter. 4(0-10) 211 or approval of department.

Continuation of 211.

**213. Sophomore Acting Practicum III**

Spring. 4(0-10) 211, 212 or approval of department.

Continuation of 212.

**221. Introduction to Technical Theatre**

(240A.) Fall, Winter, Spring, Summer. 4(2-2) Non-majors only.

To acquaint the student with fundamental practice of stage appreciation and discipline with an opportunity to practice basic technical theatre skills.

†Effective January 1, 1971. Formerly in College of Communication Arts.