

- 952. Asymptotic Theory**
Spring of even-numbered years. 3(3-0)
STT 873, STT 929.
Possible topics include large sample behavior of likelihood functions; contiguity; Bahadur and Pitman efficiency of statistical procedures.
- 953. Advanced Theory of Linear Statistical Models**
Fall of even-numbered years. 3(3-0)
STT 873; STT 928 or concurrently.
Possible topics include construction and analysis of linear models; regression; ridge regression; optimality criteria, relationships and merits; existence and construction of optimal designs.
- 954. Sequential Analysis**
Spring of odd-numbered years. 3(3-0)
STT 873; STT 929.
Possible topics include sequential estimation, testing and design; optimal stopping.
- 961. Convergence of Measures and Random Variables**
Fall of odd-numbered years. 3(3-0)
STT 873; STT 928, or concurrently.
Topology of vague convergence of measures. Conditions for relative compactness of a set of measures. Relationships between vague, almost sure, and in-measure convergence. Donsker's theorem and its extensions; applications to statistics.
- 962. Martingales**
Winter or even-numbered years. 3(3-0)
STT 873; STT 928.
Convergence, sampling, decomposition and stopping of sub- and super-martingales. Relationship with differentiation of measures. Applications to sequential analysis and boundary crossing probabilities.
- 963. Diffusion and Brownian Motion**
Spring of even-numbered years. 3(3-0)
STT 873; STT 928.
One dimensional diffusion, speed and drift measures, local time, stochastic integral, Ito's theorem.
- 964. Renewal Theory and Random Walk**
Fall of even-numbered years. 3(3-0)
STT 873; STT 928 or concurrently.
Renewal events and processes, random walk, Wiener-Hopf factorization, Tauberian theorem. Renewal-Type Equations. Branching processes, birth and death processes.
- 965. Second Order Processes**
Winter of odd-numbered years. 3(3-0)
STT 873, STT 928.
Stochastic processes studied by the methods of linear spaces. Sample path properties, representatives, estimation, prediction, multiplicity.
- 966. Semi-Groups and Applications**
Spring of odd-numbered years. 3(3-0)
STT 873, STT 928.
Hille-Yosida theorem, processes of independent increments, infinitely divisible processes, Markov processes in several dimensions.
- 990. Problems in Statistics and Probability**
Fall, Winter, Spring, Summer. 1 to 4 credits. May reenroll for a maximum of 10 credits. STT 873.
Seminar or individual study on an advanced topic in statistics.

- 995. Topics in Statistics and Probability**
Fall, Winter, Spring. Variable credit.
Nonparametric statistics, multivariate statistical analysis, statistical time series analysis, Bayesian statistics, reliability theory, stochastic approximation, design of experiments, sets of decision problems, stochastic processes, sequential analysis, other topics.
- 999. Doctoral Dissertation Research**
Fall, Winter, Spring, Summer. Variable credit. Approval of department.

STUDIO ART

See Art.

SURGERY

College of Human Medicine

- 608. Surgery Clerkship**
Fall, Winter, Spring, Summer. 1 to 17 credits. May reenroll 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 reenroll 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 reenroll 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 reenroll 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.
- 613. Orthopedic Clerkship**
Fall, Winter, Spring, Summer. 1 to 17 credits. May reenroll for a maximum of 34 credits. H M 602.
Diagnostic and management information and skills, including emergencies, in common orthopedic problems.

SUR

- 614. Neurosurgery Clerkship**
Fall, Winter, Spring, Summer. 1 to 17 credits. May reenroll 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 reenroll for a maximum of 34 credits. H M 602.
Development of skills and knowledge in ophthalmoscopy, 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 reenroll 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.
- 618. Anesthesiology Clerkship**
Fall, Winter, Spring, Summer. 4 to 16 credits. May reenroll for a maximum of 16 credits. H M 602.
Introduces common anesthetic agents and provides opportunity for performing anesthetic procedures under faculty supervision.
- 619. General Surgery Elective Clerkship**
Fall, Winter, Spring, Summer. 4 to 16 credits. May reenroll for a maximum of 16 credits. H M 602 and SUR 608.
Experiences in clinical general surgery.
- 630. Emergency Medicine Clerkship**
Fall, Winter, Spring, Summer. 4 to 8 credits. May reenroll for a maximum of 8 credits. SUR 608, PHD 608 or MED 608; H M 602. Interdepartmental with and administered by the Department of Medicine.
Pathophysiology and other basic concepts will be used to explain the development of emergent conditions. Clinical diagnosis and treatment of emergencies seen in community emergency departments will be discussed.
- ## SYSTEMS SCIENCE
- See Electrical Engineering and Systems Science.
- ## TELECOMMUNICATION TC
- ### College of Communication Arts and Sciences
- 120. Telecommunication Media and Society**
Fall, Winter, Spring, Summer. 3(3-0)
Nonmajors.
History, economics, public control, programming, social effects and future of telecommunication; primarily radio and television broadcasting and cable communication. Citizen responsibilities in the development of telecommunication systems and services.