

from earliest times down to the age of Pericles and the Peloponnesian War.

4 to 5 units, Aut (Pearson) MTWTh 2:15

102. Greek History, II—The end of Athenian supremacy, the rise of Macedon, Alexander the Great, the Hellenistic age.

4 to 5 units, Win (Pearson) MTWTh 2:15

104. Greek History, III — A more specialized course for students with some previous study of Greek history: the Peloponnesian war (413–404 B.C.).

4 to 5 units, Spr (Pearson) MTWTh 2:15

111. Roman History, I—The Roman republic from earliest times to the age of Cicero and Caesar.

4 to 5 units, Aut (Mellor) TWTh 2:15 plus one hour by arrangement, given 1969–70

112. Roman History, II — The Roman empire, from the age of Augustus to the death of Constantine.

4 to 5 units, Win (Mellor) TWTh 2:15 plus one hour by arrangement, given 1969–70

114. Roman History, III — A more specialized course for students with some previous study of Roman History.

4 to 5 units, Spr (Mellor) TWTh 2:15 plus one hour by arrangement, given 1969–70

For more advanced students—especially for majors and graduate students in Classics or History—work will be offered on an individual basis:

201. Individual Work in Greek History.

By arrangement

202. Individual Work in Roman History.

By arrangement

# VI. Courses in Archaeology

#101. Greek mythology in Greek Art. 2 units, Aut (Webster) M 11

#102. Classical Greek Painting and Sculpture.

2 units, Win (Webster) M 11

#103. Hellenistic Painting and Sculpture. 2 units, Spr (Webster) M 11

Additional work in the Museum can be arranged.

#105. Art and Monuments of the Romans. 3 units, Spr (Wigodsky), given 1969-70 See also Art Department.

# VII. GENERAL COURSES

201. Introduction to Classical Scholarship.

3 units, Aut (-----) by arrangement

207, 208. Comparative Grammar of Greek and Latin.

207. 4 units (Devine) by arrangement 208. 4 units (Devine) by arrangement

# COMMUNICATION

Emeritus: Chilton R. Bush (Professor)

Executive Head: Clifford F. Weigle

Director, Institute for Communication Research: Wilbur Schramm

Director, Professional Journalism Fellowship Program: Herbert Brucker. Assistant to the Director: Harry N. Press

Professors: Herbert Brucker, Nathan Maccoby, William L. Rivers (on leave 1968–69), Wilbur Schramm, Clifford F. Weigle.
Visiting: Kenneth N. Stewart. By Courtesy: Eugene J. Webb

Associate Professor: Edwin B. Parker

Assistant Professors: Henry S. Breitrose, David L. Grey, William J. Paisley. Acting: Don H. Coombs, Aimee D. Leifer

Instructor: Janet K. Voelker

Lecturers: Jules Dundes, Lyle M. Nelson, Templeton Peck

The Department of Communication engages in research in communication and offers a curriculum which prepares its students for careers in print and broadcast journalism, documentary film, and communication research.

The main objectives of the professional curriculum are to provide a broad program in the social and humanistic studies; to present courses in the processes and effects of communication, and to equip the student with professional values.

A secondary objective is to provide that amount of training in skills and techniques that will sustain the student's interest in his chosen profession and will assist him in beginning his career.

The technical courses provide not only practice but a content that is an application of some of the principles of the behavioral sciences and humanities. The technical curriculum in this sense is like the curricula of the Schools of Medicine and Engineering which apply the principles of the biological and physical sciences.

#### Admission

Undergraduate students who have been admitted by the University are accepted as majors provisionally for one quarter. Thereafter, the student's record is reviewed quarterly by the Department.

Undergraduate majors must enroll in the Department not later than the start of the second quarter of their junior year; this requirement may be waived for applicants entering the Department not later than the start of the first quarter of their senior year, provided that they have a University gradepoint average of 3.0 or higher.

Students who wish an undergraduate minor in the Department may arrange for a suitable sequence of preprofessional courses.

Prospective undergraduate students should write the Office of Admissions.

Prospective graduate students should write to: Executive Head, Department of Communication, Redwood Hall, Stanford University, Stanford, California 94305.

The Department requires that applicants for graduate admission include verbal and quantitative scores from the Graduate Record Examination (area scores are optional). Applicants who hope to work toward a Ph.D. are also required to submit scores from the Miller Analogies Test. These test requirements may be waived after written petition to the Department only if exceptional circumstances prevent the applicant from taking the tests.

# PROGRAMS OF STUDY

#### BACHELOR OF ARTS

Two Bachelor of Arts degree programs are offered, one in Journalism and one in Broadcasting and Film. Requirements are as follows:

1. Two courses in general or English literature; Psychology 1; Sociology 1 or Anthro-

- pology 1. In addition, Journalism students are required to take Economics 1 and Political Science 1 and 10 or 20. (The student who wishes to take both Political Science 10 and 20 may substitute 15A and 15B.)
- 2. A unified program totaling not less than 20 units of courses numbered 100 or higher shall be arranged, with the approval of the adviser, from one or two other departments such as Anthropology, Art, Economics, English, History, Music, Philosophy, Political Science, Psychology, Sociology, or Speech and Drama.
- 3. Undergraduate majors must have a grade point average of 2.50 or higher in Communication Department courses in order to receive the departmental recommendation for graduation.
- 4A. Broadcasting and Film: Communication 1, 100, 101; 123; 141, 142, and 180.
- 4B. Journalism: Twenty-five to thirty units in communication of which the following courses are required: 1, 50, 51, 107, 108, 140, and 169. In addition, the student preparing for newspaper or press association editorial work will take Communication 175; the student interested primarily in writing for consumer magazines and industrial publications will take Communication 150.

While the Department offers no courses in such subjects as science reporting, technical writing, or public relations, appropriate programs of study can be arranged for interested students. For example, a prospective science writer could be permitted to substitute a unified program of courses in the physical sciences in lieu of requirement "2" above.

Majors in Communication may elect one of the following interdisciplinary honors programs:

Humanities Undergraduate Honors Program

Social Sciences (Honors Program in Social Thought and Institutions)

#### COMMUNICATION HONORS PROGRAM

In addition to the regular undergraduate programs in communication, a Communication Honors Program is designed for those exceptionally able students who wish, in their major, to pursue an intensive and somewhat independent study of communication. This program is directed toward the integra-

tion of a substantial body of theoretical and factual information and the development of both communication skills and creative scholarly skills by independent study, tutorial guidance, small seminars, and research experience. Particular emphasis is placed on the planning of an individual program for the student that will combine his specialized interests with a body of basic knowledge about communication processes. The plan will be aimed at helping the student prepare for a comprehensive examination to be taken in the final quarter of his senior year, over his entire area of communication study. The plan will include arrangements for continuous supervised work in communication skills or in communication research. A report of the work done under this plan will be submitted as an undergraduate thesis at the end of the next to final quarter of the student's senior year. It is possible for a student to elect both the Communication Honors Program and one of the three interdisciplinary honors programs listed above.

#### MASTER OF ARTS

The Master of Arts degree is awarded by the Department in the fields of Journalism, Broadcasting and Film, or Communication Research. Requirements are as follows:

- 1. The candidate must earn 45 units in graduate residence at Stanford; he must be enrolled as a major in the department for at least two quarters; he must earn an average grade of B on his entire program of study. An independent project under the direction of a major professor must be undertaken. Three to six hours of credit in independent study may be applied to this requirement. A report of the project must be made to the professor directing the independent study. A candidate may petition the Department by the end of the second week of the second quarter for permission to submit the report as a thesis.
- 2. A unified program of advanced course work is to be arranged with the approval of the adviser. This includes appropriate grounding in research methodology and communication theory and training in one or more communication media.
- 3. Students in Broadcasting and Film, upon completion of academic work, including the independent project, may be required to pass a comprehensive written ex-

amination, after which they spend a three-month internship with a professional film or broadcasting organization. (No tuition is charged for the internship period.) Academic work will include 100, appropriate 105 and 110 courses, 208, 209, 210, 215 and 220.

4. Students in the Journalism A.M. program with neither undergraduate journalism instruction nor professional experience are required to take: Communication 50, 51 (not for graduate credit), 107, 108, 140, 169, 150 or 175, 207, 215, 220, two quarters of 225, and 309. Remainder of the program is to be a cohesive group of courses from one or two related fields. Students with undergraduate journalism training or media experience should check with their advisers to determine which of the above departmental courses will be required.

No particular specialization in undergraduate work is expected of a candidate. Special programs of study may be arranged for individual candidates, which will take account of the nature of their previous preparation.

#### DOCTOR OF PHILOSOPHY

The Department offers the Doctor of Philosophy degree in Communication, with programs in Communication Theory and Research, in Developmental Communication and in Public Affairs Communication. All of these degrees are designed primarily for persons interested in teaching and research careers.

In addition to fulfilling the course and residence requirements for the degree, all Ph.D. candidates are required to:

- 1. Complete requirements for a Master's degree in Communication, and complete a research project. Holders of the Master's degree may be excused from this first year research requirement if the faculty feels that the previous research has been sufficient.
- 2. Pass a comprehensive written examination in the subjects required of all candidates and in the area of advanced specialty of the particular candidate.
- 3. Demonstrate reading knowledge of a foreign language. Except by special permission, this language will be Russian, French, or German.
- 4. Pass the University oral examination, which may be either a comprehensive examination covering the same areas as the

written examination or a defense of the dissertation.

- 5. Complete pre-dissertation research project (in addition to the Master's or first-year research requirement) or obtain equivalent research experience sufficient to demonstrate research competence.
- 6. Have at least one year of work experience in the mass media if they are doctoral candidates in Public Affairs Communication, or, if they are doctoral candidates in Communication Research, have at least one year of work experience in the mass media or another communication activity, prior to writing the dissertation.
- 7. Complete a dissertation satisfactory to an advisory committee of three or more members and to the University Committee on the Graduate Division.

The following are examples of standard Ph.D. programs in Communication Theory and Research and in Developmental Communication:

# 1. Communication Theory

Comm. 211. Theory of Communication I Comm. 212. Theory of Communication II Comm. 213. Theory of Communication III

# 2. Methodology

Comm. 217. Communication Research Methods I

Comm. 218. Communication Research Methods II

Comm. 219. Communication Research Methods III

Comm. 275. Communication Research: Content Analysis and Scaling

C.S. 126. Computing in the Social Sciences and Humanities

Comm. 309. First-Year Research Project Comm. 319. Pre-Dissertation Research Project

# 3. Statistics

Psych. 60. Statistical Methods Psych. 151. Statistical Methodology Psych. 152. Analysis of Data

4. Experimental Psychology (at least two of the following: Psych. 103A and Psych. 103E are strongly recommended)

Psych. 103A. Experimental Psychology: Higher Mental Processes

Psych. 103B. Experimental Psychology: Perception

Psych. 103C. Experimental Psychology: Learning

Psych. 103D. Experimental Psychology: Social Processes

Psych. 103E. Experimental Psychology: Social Psychology

5. Psychology (at least two courses in social psychology, at least one in learning theory, and at least one in personality or motivation). Example courses are:

Psych. 210. Advanced Learning

Psych. 212. Advanced Social Psychology

Psych. 213. Advanced Personality

Psych. 220. Human Motivation

Psych. 251. Seminar in Personality Theory and Assessment

Psych. 254. Principles of Personality Change I

Psych. 261. Seminar in Social Psychology

Psych. 262. Seminar in Verbal Behavior

Psych. 264. Seminar in Learning Theory

Psych. 267. Seminar in Person Perception

Sociology (at least two graduate level courses in Sociology)

Example courses are:

Sociol. 104. Interpersonal Behavior

Sociol. 131. Advanced Social Psychology

Sociol. 217. Problems in Theoretical Analysis

Sociol. 250. Basic Problems in

Sociological Theory

Sociol. 253. Theory Construction

Social. 264. Seminar in Socialization and Social Control

Sociol. 268. Concepts and Operations in Sociological Analysis

Sociol. 279. Problems in Study of Social Influence

Social. 285. Problems in the Analysis of Social Stratification

Candidates in Developmental Communication will complete a dissertation in the area of how people, as they mature, learn to use and, in turn, are influenced by the mass media. They need not take courses in social psychology, but, in addition to the courses suggested in the above program they are required to take:

# 7. Developmental Communication

Comm. 231. Developmental Communication I Comm. 232. Developmental Communication II

Comm. 233. Developmental Communica-

# 8. Developmental Psychology

Psych. 211. Advanced Developmental Psychology

Psych. 246. Methods in Developmental Research

# 9. Psychology

Psych. 146. Language and Thought Psych. 213. Advanced Personality Psych. 220. Human Motivation

Preparation for examinations and for the dissertation for students in the above two programs should include selected courses from among the following:

Comm. 220. Mass Communications in Society

Comm. 255. International Communica-

Comm. 256. Communication in Economic and Social Development

Psych. 209. Advanced Perception Bus. 475, 476. Small Groups I, II

Psych. 253. Psychopathology

C.S. 224. Computer Simulation of Cognitive Processes

C.S. 225. Artificial Intelligence

C.S. 248. Computational Linguistics

Phil. 157A,B. Logic

Phil. 164. Philosophy of Science

Stat. 206, 207. Mathematical Models in **Behavioral Sciences** 

Anthro. 167. Language and Culture Anthro. 158. Culture and Personality

Pol. Sci. 281A,B. Seminar in Political Behavior: Empirical Political Theory

Pol. Sci. 312. Research Seminar on Comparative Politics

Pol. Sci. 383A,B. Seminar in Political Behavior: Modes of Empirical Analysis

Other courses and special advanced reading courses may be selected in conference with the adviser.

The following is an example of the Ph.D. program required in Public Affairs Communication:

#### 1. Communication Theory

Comm. 211, 212. Sequence in Communication Theory

2. Structure and Function of the Mass Media Comm. 220. Mass Communications in Society

Comm. 225. Problems of the Mass Media (at least two quarters)

Comm. 230. Mass Media and Govern-

And at least two among the following:

Comm. 240. Seminar in Mass Media History

Comm. 245. Economics of the Mass Media

Comm. 255. International Communica-

Comm. 256. Communication in Economic and Social Development

#### 3. Methodology

Comm. 217, 218. Sequence in Research Methods

Comm. 227. Analysis of Documentary Evidence

Comm. 309. First-Year Research Project Comm. 319. Pre-dissertation Research Project

#### 4. Statistics

Psych. 60. Statistical Methods, or Stat. 50. Elementary Statistics One other statistics course

#### 5. Law

Law 104. Law in Society

6. Political Science, History, Economics — a unified program of five courses in one of these fields and two courses in one or both of the others. Examples of subject areas and courses:

#### Political Behavior and Politics:

Pol.Sci. 181. Attitude Formation and Voting Behavior

Pol.Sci. 184. Legislative Behavior

Pol.Sci. 185. Political Parties

Pol.Sci. 281A,B. Seminar in Political Behavior: Empirical Political Theory

Pol.Sci. 382A,B. Research Seminar in American Politics

Pol.Sci. 383A,B. Seminar in Political Behavior: Modes of Empirical Analysis Political Theory:

Pol.Sci. 152. Modern Political Thought Pol.Sci. 158. Theoretical Foundations of Political Sociology Public Law:

Pol.Sci. 170 (270). The Supreme Court and the Constitution

Pol.Sci. 173 (273). Civil Liberties in the U.S.

Modern European History:

Hist. 32. Twentieth Century Europe Hist. 122A,B. Russian Foreign Relations

Hist. 210 to 225. Graduate seminars in European History

United States History:

Hist. 166, 167. American Intellectual History

Hist. 168, 169. American Social History Hist. 250 to 260. Graduate Seminars in U.S. History

Economics—History, International and Comparative, Industrial:

Econ. 116. Economic History of the United States

Econ. 118. Underdeveloped Economics Econ. 120. Comparative Economic

Systems

Econ. 158. Organization and Social Control of Industry

Econ. 165. International Economics Econ. 200. Topics in the History of Economic Thought

Among other relevant possible areas of concentration are: Comparative Politics, International Relations, Public Administration; East Asian, Middle Eastern and Latin American History; Core Theory of Economics. (Students specializing in any area of economics will need to have the equivalent of at least Econ. 1, 105A and 110A for most advanced courses in that department.)

7. At least two courses from the above or other departments chosen in consultation with an adviser, in preparation for the degree examinations and the dissertation. This requirement is designed especially for students who have not concentrated in the social sciences as undergraduates or as graduate students in other programs.

Ph.D. candidacy expires five years after admission to candidacy by the University Committee on the Graduate Division. Reapplication will require reexamination.

Other programs leading toward the Ph.D. and involving communication may be pursued in the Graduate Division Special Programs. Such programs are individually planned for unusually well-qualified students.

One example would be an Information Science program involving communication

and computer science. Applicants for such special programs must first be admitted to a Stanford department. Inquiries about programs involving communication should be directed to the Communication Department.

Minor for the Degree of Doctor of Philosophy—Candidates for the degree of Doctor of Philosophy in other departments who elect a minor in Communication will be required to complete a minimum of 15 units of graduate courses in the Communication Department, including one research methods course and either Communication 211 or Communication 212. The Communication 217 requirement may be waived when comparable research methodology courses have been taken in some other department. The remainder of the course program will be adapted to the particular needs of each candidate.

# THE INSTITUTE FOR COMMUNICATION RESEARCH

The Institute for Communication Research operates as an office of project research for the faculties of the Department of Communication and other departments, on grants from foundations, communication media, and other agencies, on government contracts, and on its own funds. A few research assistantships are available to qualified graduate students. Among the qualifications which will be highly valued in applicants are high scholarship, training in the behavioral sciences (preferably psychology and sociology, including training in statistics and research methodology), and training for or experience with the mass media. For further information about the Institute write to the Director.

# Courses Open to Undergraduates and Graduates

#### I. GENERAL

#1. Mass Communication and Society — An introductory survey of the structure, functions, philosophy, process, and effects of mass and interpersonal communication in modern society. Taught from a behavioral science perspective. Open to non-majors.

5 units, Win (Maccoby) MTW 10 and section

70. Introduction to Survey Research — An introductory course in survey research methods. Formulation of problems, study design, sampling, interviewing, data processing and analysis, and writing of reports of public opinion surveys. Designed primarily for undergraduate non-majors. Prerequisite: Psychology 60 or equivalent.

3 units, Spr (Maccoby)

190. Comparative Communication Systems — Foreign press, broadcasting, and film: their control and support; their relations to economic and social development, political systems, and cultural patterns; and their roles in public opinion and national policy.

4 units, Spr (——) by arrangement, given 1969–70

199. Individual Work—Major students with high academic standing are permitted to undertake individual work.

1 to 4 units, any quarter (Staff) by arrangement

# II. JOURNALISM

50. Editorial Techniques I — Theory and techniques of news communication for newspapers and radio-TV; analysis of journalist's audience; representative media; journalistic vocations. To be taken concurrently with Communication 51. Open to non-majors.

3 units, Aut (Stewart) TWTh 11 Spr (Grey) MWF 9

51. Editorial Techniques I Laboratory — Practice in news writing. Weekly conferences, laboratory, outside assignments. To be taken concurrently with Communication 50. Open to non-majors. Prerequisite: typing skill of 35 words per minute.

1 unit, Aut (Stewart) by arrangement Spr (Grey) by arrangement

107. Editorial Techniques II — Copy editing, headline writing, news display, illustration, typography, printing processes. To be taken concurrently with Communication 108. Prerequisites: 50 and 51.

3 units, Win (Weigle) MWF 9

108. Editorial Techniques II Laboratory—Work includes editing daily teleprinter report of Associated Press or United Press International. To be taken concurrently with Communication 107.

2 units, Win (Grey) by arrangement

140. History of Anglo-American JournalismOpen to non-majors.

3 units, Aut (Weigle) TTh 9

150. Forms of Journalistic Writing — Practice in writing magazine articles, with emphasis on marketing manuscripts. Conferences. Prerequisites: 50 and 51.

3 units, Win (Stewart) TTh 1:15

152. Magazine Editorial Techniques—Planning, writing, production studied with local magazine editors, correspondents; industrial editing. Prerequisite: 150.

3 units, Spr (Rivers) Th 4:15-6:05, given 1969-70

169. Legal Aspects of Journalism — Libel, contempt, constitutional guaranties, privacy, copyright, inspection of public records. Open to non-majors.

3 units, Spr (Grey) MW 11

175. Reporting of Public Affairs — Local, state, federal courts; municipal, state, federal administration in the local community. Open only to major students with senior or graduate standing.

4 units, Win (Grey) MWF 10

#### Practice Courses

121. Advanced Practice — Practice work in executive positions on editorial or business staff of *The Stanford Daily*, *Quad*, and *Chaparral*; weekly conferences. Open to undergraduate Communication majors who qualify by election or appointment; not open to graduate students. Students limited to total of 7 units credit. Credit may not be offered in fulfillment of Communication unit requirements for degrees in Communication.

1 to 2 units, each quarter (Weigle) by arrangement

183. San Francisco Newspaper Practice — Majors who have made a high record in their entire program, and especially in 175, are permitted to work in San Francisco in the senior or graduate year, by arrangement with San Francisco newspapers. Work is under supervision of San Francisco newspapermen and faculty of the Department.

5 units, Spr (Weigle) by arrangement

#### III. BROADCASTING AND FILM

100. Visual and Aural Communication Techniques—An investigation of the techniques of film, television, and sound from the standpoint of the communication of ideas. Students will produce short still picture, film, television and sound assignments. No previous knowledge of the media is required. This course is a prerequisite for all further production work in film and television. (Open only to graduate students in Autumn Quarter.)

5 units, Aut, Win (Breitrose, ——) MW 1:15-3:05

101. Film Aesthetics—A systematic examination of the nature of the film medium, and of attempts to construct theories of film. Attention is given to the problems of aesthetics and communication from the viewpoints of practitioner, critic, and audience.

4 units, Aut (Breitrose) MWF 9

105B. Television Production I—Production and direction of documentary television programs. Prerequisites: 100, 123.

4 units, Win (graduate students only) (-----) MW 1:15-3:05 Spr (open to undergraduates) (------) MW 1:15-3:05

105C. Film Production I — A beginning course in which students produce their own short films. Prerequisites: #100 and consent of instructor.

4 units, Win (----) TTh 10-12

110B. Television Production II—Prerequisite: 105B.

3 units, given 1969-70

110C. Film Production II — Primarily for graduate students producing film projects for a degree. Admission by recommendation of instructor only. Prerequisite: 105C.

4 units, Spr (-----) Th 1:15-4:05

111. Film and Television Directing—Theory and technique of directing actors and non-actors for film and television. Prerequisites: 100, 105B, 105C, 123.

3 units, Spr (-----) by arrangement

123. Writing for Broadcasting and Film I—Techniques of research and writing for the visual media.

3 units, Aut (Voelker) TTh 10-12

124. Writing for Broadcasting and Film II—Structure and style in the construction of factual film and television scripts. Prerequisite: 123.

3 units, Win (Voelker) MW 1:15-3:05

125. Writing for Broadcasting and Film III
—Seminar in dramatized documentary and fictional forms of film and television scripts.
Prerequisite: consent of instructor.

3 units, Spr (Voelker) TTh 10-12

141. History of Film—Studies in the development of the motion picture as an art form and a means of communication. Lab.: Screenings of films announced in class.

4 units, Win (Breitrose) MWF 9; lab. by arrangement

142. Broadcast Communication — The development of American broadcasting and its contemporary problems.

3 units, Win (Voelker) TTh 9

180. Broadcasting and Film Criticism — The techniques and role of criticism based upon the objectives and potential of these media. For advanced students. Prerequisite: 141 or 142 and consent of instructor.

3 units, Spr (Breitrose) MWF 11

Summer Broadcasting and Film Institute (See Summer Session Bulletin for 1969.)

# Courses for Graduates

203. Process and Effects of Communication

— Theory of communication process for
A.M. candidates in communication research.

3 units, Aut (-----) W 2:15-4:05

204. Communication Theory — Readings and conferences. By permission of the instructor.

3 units, Aut, Win, Spr (Schramm, Staff) by arrangement

207. Survey of Communication Research Methods—Research designs, sampling, data collection, and data analysis. For Journalism A.M. students.

4 units, Win (----) MW 4:15-6:05

208. Seminar in Broadcasting and Film. 2 units, Aut (Staff) by arrangement

209. Seminar in Broadcasting and Film. 2 units, Win (Staff) by arrangement

210. Seminar in Broadcasting and Film. 2 units, Spr (Staff) by arrangement

211. Theory of Communication I—Seminar and tutorial meetings, extensive readings and papers. For doctoral candidates planning to continue with the sequence on theory.

4 units, Aut (Schramm) W 2:15-4:05

212. Theory of Communication II—Theory of the communication process. Analysis of the experimental literature in attitude change. Prerequisite: consent of instructor.

4 units, Win (Maccoby) MW 2:15-4:05 and additional meetings by arrangement

213. Theory of Communication III — Theory of communication in groups and communication networks. The theory of information and meaning. Analysis of the literature. Prerequisite: consent of instructor.

4 units, Spr (——) M 2:15–4:05 and additional meetings by arrangement

215. Behavioral Science and the Mass Media—Theory of communication process for professional A.M. students.

4 units, Aut (Maccoby, Breitrose) Th 7–10 p.m.

216. The Broadcast Editorial—Analyses of radio and television editorials. Students will research, write, deliver and direct their own editorials.

3 units, Win (Dundes) T 7:30-10:00 p.m.

217. Communication Research Methods I—Methods of research in mass, group, and interpersonal communication. Application of scientific method to communication research. Design of communication studies for laboratory and field experiments and sample surveys. Conceptualization of variables, sampling, data collection, interview techniques, data processing and data analysis. Report preparation. Prerequisite: previous or concurrent registration in elementary statistics.

4 units, Aut (----) TTh 2:15-4:05

218. Communication Research Methods II —Continuation of 217.

4 units, Win (Paisley) TTh 2:15-4:05

219. Communication Research Methods III
—Continuation of 218.

4 units, Spr (-----) TTh 2:15-4:05

220. Mass Communications in Society — The nature and social responsibilities of the media, the structure of the industry, problems of regulation, management, educational and commercial interests. For first-year graduate students.

4 units, Spr (Stewart) T 4:15–6:05 Sum (Staff) by arrangement **222.** Documentary Film — Analysis of the techniques and strategies of films designed to effect attitudinal and behavioral change. Prerequisite: consent of instructor.

4 units, Spr (Breitrose) by arrangement

225. Problems of the Mass Media—Visiting lecturer series for A.M. and Public Affairs Communication Ph.D. candidates.

1 unit, Aut, Win, Spr (Staff) by arrangement

227. Analysis of Documentary Evidence—Research methods — especially historiography and "qualitative" content analysis—primarily for doctoral students in Public Affairs Communication.

4 units, Aut (Grey) by arrangement

230. Mass Media and Government—Study of the interaction between the government and the press. Role of the press in the governmental process as a disseminator, opinionmaker and adversary. For A.M. and Ph.D. candidates.

5 units, Win (Staff) by arrangement

231. Developmental Communication I — Changes with age in how people use the mass media, what information they obtain from the media, and how they are influenced by the media.

4 units, Aut (Leifer) by arrangement

232. Developmental Communication II — Continuation of 231.

4 units, Win (Leifer) by arrangement

233. Developmental Communication III—Continuation of 232.

4 units, Spr (Leifer) by arrangement

240. Seminar in Mass Media History—Review of the literature and research papers in the historical development of newspapers, magazines, broadcasting and film.

4 units (Staff) by arrangement

245. Economics of the Mass Media—Analysis of the literature in mass media economics and intensive research projects. Primarily for doctoral students in Public Affairs Communication.

4 units (Staff) by arrangement, given 1969–70

255. International Communication — Chief patterns of mass communications throughout the world; philosophies behind them; economic, social, political reasons why a

given kind of pattern develops where it does; channels by which nations, cultures communicate with each other; kinds of barrier which intervene in those channels; manipulative communication between nations which is characteristic of the "cold war."

4 units, Spr (-----) M 2:15-4:05

256. Communication in Economic and Social Development — Seminar on the communication problems of economic and social development, and on the uses of the mass media for national integration, social change, and education in the developing countries. Special uses and difficulties of communication research in these countries. Case studies and planning exercises.

3 to 5 units, Spr (Schramm) T 4:15-6:05

270. Advanced Communication Theory and Method Seminar I — May be repeated for credit. Topic and instructor change each year. Prerequisites: 213 and 219.

3 units, Aut (Staff) by arrangement

271. Advanced Communication Theory and Method Seminar II—May be repeated for credit. Topic and instructor change each year. Prerequisites: 213 and 219.

3 units, Win (Staff) by arrangement

272. Advanced Communication Theory and Method Seminar III—May be repeated for credit. Topic and instructor change each year. Prerequisites: 213 and 219.

3 units, Spr (Staff) by arrangement

275. Communication Research: Content Analysis and Scaling — Techniques of reducing and ordering data. Manual and computerized content analysis. Scaling procedures of Thurstone, Likert, Guttman, Lazarsfeld, Shepard, and others. Prerequisites: 2 quarters of statistics, Comm. 219 or equivalent background in methodology, and consent of the instructor.

4 units, Aut (Paisley) TTh 2:15-4:05

299. Advanced Individual Work—Graduate majors may supplement certain courses with individual projects of distinctly advanced order.

1 to 8 units, any quarter (Staff) by arrangement

300. Thesis.

6 to 10 units, (Staff) by arrangement

309. First-Year Research Project—Individual research, in lieu of Master's thesis.

3 to 6 units (Staff) by arrangement

319. Pre-Dissertation Research Project — Advanced research for Ph.D. candidates.

(Staff) by arrangement

# COMPUTER SCIENCE

Executive Head: George E. Forsythe
Associate Executive Head: John G. Herriot
Professors: George B. Dantzig, George E.
Forsythe, John G. Herriot, John McCarthy (on leave 1968-69), Edward J. McCluskey, William F. Miller

Associate Professors: Edward A. Feigenbaum, Gene H. Golub

Assistant Professors: Jerome A. Feldman, David J. Gries, D. Rajagopal Reddy, Niklaus E. Wirth

Lecturers: Kenneth M. Colby, John R. Ehrman, Bertram Raphael, Arthur L. Samuel, Giovanni Wiederhold

Research Associates: Bruce G. Buchanan, Lester D. Earnest, Manfred H. Hueckel Affiliated Faculty:

Professors: Rudolf E. Kalman (Electrical Engineering and Operations Research), Robert V. Oakford (Industrial Engineering), Dana S. Scott (Logic and Mathematics; on leave 1968–69)

Assistant Professor: Anthony C. Hearn (Physics)

# OFFERINGS AND FACILITIES

The Department aims to acquaint a variety of students with the technological and intellectual roles of automatic digital computers, and to educate research workers in computer science. In spite of the diversity of the applications, the methods of attacking problems with computers show a considerable unity, and computer science is concerned with the underlying principles. The field is still young, and the student will find many more questions than answers.

Of the numerous areas of computer science, the Department has competence in numerical analysis, operations research, artificial intelligence, programming systems and languages, logical design of computer sys-