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AUTHOR Ostman, Ronald E.; Colle, Royal D.
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ABSTRACT

This paper focuses on training people to carry out the communication component of development programs. The paper begins with a description of some of the issues on the communication frontier that affect development programs, and then notes three kinds of communication training that stand out: designing and managing communication interventions; information managers; and research and evaluation specialists. It then discusses short-term workshop training in the United States, noting that the idea of planning and strategy appears frequently in short term communication workshops, and that workshop participants typically are front line practitioners who deal with a variety of subject matter areas and who have a wide variety of motivations for attending the workshops. It then discusses long-term academic training, noting that the era of government funding and fostering of development communication as a formal academic course of study appears to be dying, if not already dead. The paper next describes the academic training in development communication available at Cornell University. It concludes with a comparison of short-term training and long-term education in development communication. An appendix contains a summary of record, a description of requirements for the communication major at Cornell University, a list of the courses of study in communication at Cornell, and a list of graduate student research at Cornell on development communication from 1971 to 1998. Contains 27 references. (RS)

FOUR WEEKS FOR TRAINING OR FOUR YEARS TO A DEGREE;

OPTIONS FOR PUTTING COMMUNICATION INTO DEVELOPMENT[1]

Ronald E. Ostman and Royal D. Colle
Cornell University (USA)

The central theme of this NCA-ICA joint meeting is "organizing for the future." Nothing could be more in line with that theme than the challenges of development that many nations face, for development implies organizing specific programs for helping communities and nations change for the better at some time in the future. Our focus in this paper is on training people to carry out the communication component of those development programs.

A recent letter from Sri Lanka represents many messages we receive. Paraphrasing: "We are interested in short courses and training in extension communication, writing skills and related media programmes for the Department of Agriculture." Within a week of that letter came a personal visit from a young woman from Canada who wanted to do graduate study on new communication technology and development. These represent polar dimensions of what people are looking for in training. Clearly there is a wide-ranging interest in various kinds of communication training.

In their recent book *Communicating for Development*, Fraser and Restrepo-Estrada point out that

> The world is packed with universities and other educational establishments providing training in 'communication' or even in 'social communication'. However, almost without exception, the courses they provide are in journalism, public relations, advertising or various aspects of media production. A survey conducted in Latin America in 1985 by FAO showed that there were more than 400 institutions providing training in 'communication'. Not one of them was providing courses specifically linking communication to social and economic development" (Fraser & Restrepo-Estrada 1998: 214).

Fraser and Restrepo-Estrada note that there has been some progress since then but it is "rare."

But what are the *needs* in communication training? Let's take a quick look at what's happening on the communication frontier that affects development programs and, thus, the kinds of training that we should consider as a priority. Here are some examples of what's happening.

* There is an increased prevalence of communication hardware, even in small towns and villages. Some of it is sophisticated, some not so. There are substantial efforts being considered to

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1. Paper presented at the National Communication Association and International Communication Association joint meeting on Communication: Organizing for the Future, July 15-18, 1998, Rome.

increase the availability of communication hardware ranging from cassettes to computers (Colle 1997; Zijp 1995).

*There is increased availability (but not necessarily access) to information services. One of the most prominent these days is the Internet with its gateway to hundreds of information sources and potential for building specialized and targeted web-sites (Richardson 1997). [2]

* There is a growing commitment to decentralization and privatization of national government operations, including those related to development.

* There is an increased recognition of the desirability of incorporating various forms of community participation in development programs, and the related concerns about people's empowerment and definitions of "whose reality? (Cohen and Uphoff.1980; the World Bank 1994, Chambers 1997).

* There is a growing expansion and complexity of the communication tasks associated with development problems, presenting an increasingly challenge.

Communication goes beyond convincing farmers to plant new seeds, or women to adopt family planning; communication is used for influencing community norms, social mobilization, and shaping policies (Fraser and Restrepo-Estrada 1998:39-63). For example, the typical information, education and communication (IEC) activities associated with adoption of family planning methods have been substantially broadened as "reproductive health" has replaced family planning as the operational goal of population programs (Colle and Ostman 1998; World Health Organization 1997).

Implications for Organizing the Future in Communication Training

Where do we need to place emphasis in communication training for development in the short and long term? Three kinds of training stand out as being especially important:

(1.) Designing and managing communication interventions. In a survey of senior decision-makers in international agencies several years ago, a majority of respondents said there is a major shortage of competent people who could apply strategic communication within development programs. They suggested that there is no shortage of media specialists, "but people with an overall understanding of communication in a development context were difficult to find" (Fraser and Restrepo-Estrada 1998: 254).

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2. Note the efforts by Canada's International Development Research Center (IDRC) to provide access to computer and Internet resources in Asia and Africa through the Pan Asia Networking project and the Acacia project. See the world wide web sites www.PanAsia.org.sg and www.idrc.ca/acacia/; and also a World Bank web site devoted to community-based communication centers www.vita.org/technet/cccarch/cccdisc.htlm

(2.) Information managers. To the extent that regional or local community-based, sustainable and sometimes *self*-sustaining communication institutions become viable, trained entrepreneurial information managers for these enterprise will be essential. The consequences of not building this competence into local institutions have become evident in the failure of the Regional Communications Units to live up to expectations in Mexico's PRODERITH project (Food and Agriculture Organization 1996; Fraser and Restrepo-Estrada 1998: 126). The success of Acacia's proposed telecommunication centers in Africa and Asia will depend on competent information managers.

(3.) Research and evaluation specialists. Obtaining information for conducting interventions (whether they are health, agriculture, or other communication interventions) is a vital part of planning. In communication, research specialists play a role in situational analysis, articulating objectives, pilot testing, monitoring, and assessing outcomes (summative evaluation) at various stages throughout a project's life.

Training for Development in the United States or Outside the U.S. by American Faculty

Short-term workshop training

The idea of planning and strategy appears frequently in communication workshops in the United States. Almost 20 years ago, we initiated what was perhaps the longest sustained workshop series that emphasized communication planning and strategy. Although the Cornell series ended in 1995, a similar short course program, but focused predominantly on communication and reproductive health, is run annually by the Center for Communication Programs at Johns Hopkins University in Baltimore, Maryland. In fact, last month the Center completed its 12th "Baltimore Advances in Family Health Communication." In September, the Center will hold its second annual (four week) training program on Strategic Communication and Advocacy for Adolescent Reproductive Health. The core of these programs includes communication and advocacy strategies, and the use of planning tools such as the "P-Process" and SCOPE (Piotrow et al. 1997). The workshops are designed especially for high-level decision-makers, administrators, and managers of health programs.

Several workshop programs have been offered in recent years on social marketing and these have been aimed especially toward those at the level of project administrator. What seems to be emerging is a pattern in which U.S. communication training programs designed for developing nations people are concentrating more on the planning and strategy aspects of communication, with training in such things as media production skills taking place in regions or in individual countries. There are various possible explanations for this but among them are the cost of sending people to the States, and the increased emphasis of donors on providing in-country training.

The following description of short-term training in development communication is based on our experience, gained at our summer workshops at Cornell, and more recently in workshops held in developing nations. We cannot guarantee that our experiences can be generalized to other

workshop providers and participants, but we suspect that what we have observed is not atypical.

Workshop participants typically are front line practitioners who deal with a variety of subject matter areas and come from a mixture of organizations. In the case of the Cornell workshops, they came from approximately 60 countries from all over the world and the resulting professional mix varied enormously. Much communication in those workshops was devoted to discovery concerning a wide range of topics and problems, coupled with an exploration of failed and successful campaigns around the world, and an inevitable comparison/contrast analysis which featured differences and similarities of countries and regions of the world. On several occasions, we departed from this "come one, come all" approach by announcing workshop themes, such as womens' empowerment, or by recruiting participants from on a particular country (e.g., Egypt) which brought a more homogeneous group to Cornell. In our workshops abroad, we have focused more on intact professional groups made up of individuals who have a common understanding of the local organizational culture, their group's mission and objectives, routine operations, and societal mores. For example, recent workshops have targeted human reproduction health professionals, mass media journalists, and population program professionals.

We have found a wide variety of participant motivations for attending our workshops. At Cornell, some came in order to experience foreign travel, to see a different culture, to shop, and/or to see family and friends. Others came because they were drawn by the institution's prestige. Still others wanted access to the wonderful library. A few came because of the staff and the workshop's reputation. Others wanted to experience the academic environment as a precursor to re-entering academia for a graduate degree. Many had no formal training in communication and wanted better insight into the discipline. Some were simply in senior positions and were in rotation for "their" trip abroad as a job perk. Still others were "between" jobs or had recently been promoted within their organizations. Almost all, however, were serious in their approach to the workshop and were willing to invest time and energy into a thorough study of a fairly compressed and circumscribed curriculum.

The workshop leaders were academics who combined teaching, research, and service activities in their normal job descriptions. The core faculty were from communication. However, subject matter specialists (usually other academics) were available for practical skills training (video, photography, graphic arts, and computer-related programs were most popular), or for advanced expertise in such topics as environmental risk communication, population issues, womens' topics and programs, agricultural extension, nutrition, maternal and children's health, and so on.

Essentially, the Cornell workshops were not for profit and involved a holistic approach to education and training, including informal activities such as sightseeing, host dinners and picnics, recreation (jogging and tennis were most popular), dish-to-pass dinners, etc. The formal curriculum focused on communication planning and strategy, communication skill acquisition, educational field trips, and evaluation research, all in the context of case studies and the world of practical problems and addressing those problems with planned programs meant to provide

solutions. The formal portion of the summer workshop was conducted such that mornings were filled with intensive classroom work and afternoons were devoted to individual and group activities and projects. "Real world" (i.e., related to their jobs back home) plans and strategies were emphasized. We operated the formal portion of the workshop Monday through Friday over the three- or four-week period, reserving weekends for informal activities. Frequently, participants would be asked to articulate their goals and objectives, to gather information about problems, to formulate systematic strategies and programmatic activities designed to help them achieve their objectives, and so on. Teaching and learning activities used a wide repertoire of approaches, including lectures enhanced by audiovisual technologies, group discussions, group activities (such as planning, conducting, and analyzing focus groups), role playing, video viewing followed by discussions, oral reports, debates, panel presentations, reading, writing short papers, interviewing subject matter specialists, and the like. Each day, the faculty would make available a selection of relevant reading material, such as recent books, pamphlets, journal articles, and so on, usually grouped by topic. We often helped participants order materials from publishers, especially when the materials would be unavailable or hard to procure once they were back home. Participants also were informed of the availability and how to access ongoing materials, such as newsletters, periodicals, promotional materials, etc. As mentioned previously, a good deal of learning occurred in informal and relaxed settings, when participants interacted and compared notes or when participants and faculty were able to engage in one-on-one discourse. Usually, grades were not assigned. However, a few participants arranged for academic credit, which required completion of a formal paper at the end of the workshop. Everyone who participated fully in the workshop was awarded a certificate of accomplishment and completion.

It is fair to say that the participants' major motivation was some combination of wanting to learn in order to be more successful in their jobs, to qualify for promotion and advancement, to gain prestige in the eyes of peers, and to maximize the possibility of seeing positive results in their future work. For the most part, the participants were individuals who had achieved a good deal of success in their careers before coming to Cornell. They lived in a world that had specific realities and expectations and they wanted their workshop education to be concrete, applied, and participatory. Their orientation was to solve problems. An advantage to having them on campus, away from their job sites, was to permit them to rethink their situations in a more global sense, rather than having to deal with one immediate crisis or difficulty after another, which was typical of their everyday work routine. The three- or four-week workshop offered some "down time," which they could use to refresh their intellectual approach to their jobs, free of family and job pressures (although a few brought family and/or specific job tasks with them). On the other hand, in our recent international workshops in developing countries, which run three or four days, we typically conduct our curriculum in a setting which is at the confluence of job and family, although we try to remove the participants from the immediate job site. We have been much less successful in attracting fully committed learners. Job and family emergencies and pressures often result in their missing hours or even days of workshop experiences. Homogenous groups who attend workshops on their home turf also bring with them some undesirable "baggage," such as status and power differentials, personality antagonisms, and blame shifting. Additionally, there usually is an individual or two who are the local experts who may resent "outsiders" being brought in for

the workshops. These individuals sometimes enjoy the role of critic and can subtly undermine the efforts of the faculty and sabotage the learning experiences of the participants. In general, we have tried to identify the local experts and to engage their assistance, rather than adopt the stance that "we know best, please stand aside while the dream team goes to work." This points out a real disadvantage in doing "on site" workshops — much of the faculty's time must be spent in speed learning concerning the local situation, organizational structures, cultures, assessing existing knowledge, attitudes, values, behaviors, etc., because clearly the curriculum must adapt in order to be relevant and successful. And while there is opportunity for advance study prior to traveling from the U.S., it usually is of only general issues and themes. The resulting total emersion on site is often complicated by jet lag, tummy upset, a bewildering array of new faces, confusing names, language difficulties, discovery of inadequate teaching facilities and equipment, and unclear relationships. Occasionally, there are issues concerning the workshop which create trouble due to no fault of the faculty, such as a looming participant strike over per diem payment and housing arrangements which we recently witnessed in an African country. In the "on site" workshops, we also come to realize that attendance is not always a matter of choice or preference, but that some participants are more or less forced to attend due to a superior's mandate. In this case, they tend to come into the workshop somewhat hostile. Another problematic workshop participant is the chronic workshop attendee, who wrangles an invitation to every and all workshops available. This type of participant tends to be a bit jaundiced, having "been there, done that, got the t-shirt." One recent participant of this type spent quite a bit of time during our workshop making travel and logistics plans for another workshop which was to follow directly after our own! However, on balance, we have found that workshop participants come in good faith with a genuine eagerness to develop new insights, experience different perspectives, and to learn something which will do them and their stakeholders some good.

Long-term academic training

The glory days of development communication instruction in the U.S. appear to be over. The U.S. always has been somewhat isolationist vis-a-vis the rest of the world, which is ironic, given that the U.S. emerged from World War II as a leading world superpower (Jones, 1975). This is not to say that there haven't been good globally-oriented programs in U.S. higher education academic institutions, because there have been and continue to be. But, the era of government funding and fostering of development communication as a formal academic course of study (e.g., the USAID in the 1980s) appears to be dying, if not dead. Aside from our own undergraduate and graduate programs in Communication at Cornell, strong programs historically have been offered at Stanford University and Ohio University. Presently, the University of New Mexico is an attractive institution for many development communication students, principally due to the presence of Dean Everett M. Rogers, a scholar/researcher of vast experience and international respect and reputation due to his widespread international work on the diffusion of innovations (e.g., Rogers & Shoemaker, 1971). A review of hundreds of academic programs listed in the *1998-99 National Communication Association Directory* (National Communication Association, 1998) shows no academic programs with the word "development" in the title. However, there may be specializations in development communication which are subsumed under

more general titles like "School of Communication." The same reference lists the officers of several Divisions of NCA and suggests where there may be strength, as determined by where the officers are employed. The International and Intercultural Communication Division lists Northern Illinois University, the University of Utah, and Portland State University (OR), while the Latina/Latino Communication Studies Division lists San Francisco State. The Training and Development Commission notes officers' institutions as the University of Nebraska and Monmouth University (West Long Branch, NJ). The *International & Intercultural Communication Annual* is edited by individuals from Bowling Green State University (OH), California State University (San Bernardino), and the University of Denver. Former editors of the *Annual* are affiliated with Arizona State University, California State University (Fullerton), California State University (Sacramento), Marquette University (Milwaukee), Pepperdine University (Malibu, CA), Rutgers University, and the University of Oklahoma (Norman) (National Communication Association, 1998). The *Journalism & Mass Communication Directory 1996-1997* (Association for Education in Journalism and Mass Communication, 1996) contains more exhaustive lists of academic specializations, but a cursory skimming of offerings suggests a dearth of formal educational programs which specialize in development communication. The *1998 Membership Directory* (International Communication Association, 1998) is a very good source for locating academics who have an interest in the subject matter, listing some 519 individuals who hold membership in ICA's Intercultural/Development Communication Division. Since the *Directory* also lists institutional affiliations of those persons, an expanded list of places where one would expect instruction in development communication can be compiled.

However, our discussion of formal academic training in development communication is limited to our experiences, which we hope are not atypical of other programs.[3]

We have never offered a development communication program per se; that is, one labeled as such. The Cornell system is such that students have a considerable degree of flexibility in course selection. A motivated student who benefits from good faculty advising can put together an individualized curriculum which prepares him or her to enter a career with focus on developing social change in nations or groups.

Such a curriculum will include, at the undergraduate level, a solid foundation of physical science, biological science, social science, humanities, and communication skills, all mandated by the College of Agriculture and Life Sciences, of which the Department of Communication is a unit. These "distribution" courses add up to 39 of 120 academic credit hours required for graduation as follows: nine in physical sciences (chemistry, physics, geology, for example, with mandatory competence demonstrated in mathematics); nine in biological sciences (which might

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3. We apologize to programs and institutions which we have overlooked and omitted. We'd appreciate hearing more about development communication programs in the U.S. Please contact the authors at the Department of Communication, Kennedy Hall, Cornell University, Ithaca, New York, 14853-4203. Our e-mail addresses are reo2@cornell.edu and rdc4@cornell.edu.

include animal science, entomology, nutritional sciences, plant breeding or plant pathology); six in social sciences (including a long list of disciplinary offerings, such as archeology, anthropology, economics, government, sociology, human development and family studies, and psychology); six in humanities (again, a long list, including Africana studies, Asian American studies, Asian and Near Eastern studies, and classics, as well as comparative, French, German, Italian, Russian, and Spanish literature, history of art, music, theater, religious studies, and philosophy), and nine in written and oral expression. Communication courses are found in the latter group, as well as in the social science group (see "Summary of Record," Appendix A for more detail).

The communication major was revised in 1996 and requires students to take a 24 credit core of communication courses, a focus area introductory course (three credits) and a set of courses (15 credits) in one of four focus areas or a personally designed focus area. The core gives students a solid foundation in communication theory (both interpersonal and mass), research methods, writing, oral communication, visual communication, and information gathering. The four focus areas are: communication in the life sciences, communication systems and technology, communication planning and evaluation, and communication as a social science. All focus areas are pertinent to development communication, depending upon the students' goals and objectives. The communication planning and evaluation focus area is especially relevant (see "The Communication Major" in Appendix A). Additionally, the student must take 12 credits as an "outside concentration" in a noncommunication subject matter (these need not be from the same department as long as they are intellectually coherent). For a development communication student, for example, this might consist of courses which focus on a particular region or country, or a foreign language.

Thus far, the course requirements discussed account for 93 of 120 credits needed to graduate. That leaves 27 more credits (or courses to account for approximately one academic year) which can be selected for increased breadth or depth. Some students choose to take more coursework in communication (a complete list of current communication course offerings is found in "Courses of Study 1997-1998," Appendix A), while others focus on special interests and topics. All courses are taken in consultation with a faculty member acting as a permanent adviser to the student.

Students who want practical experience can sign up for internships with nongovernment organizations (NGOs), government and international agencies, and other organizations which stress development communication. Another option which is more research oriented is an independent research course. In this course, the student works one-on-one with a faculty supervisor to plan, conduct, analyze, and report information about a developing country problem. For example, one enterprising undergraduate, Ms. Magdelena Cerda, traveled to Honduras as part of an on-going research team to work with rural families, an experience which led to an honors thesis (Cerda, 1997) and a conference paper (Karriker, Cerda, Colle, and Parra, 1997). Ms. Cerda presently is studying public health at Yale University.

There isn't a big demand for development communication at the undergraduate level at

Cornell. Of approximately 100 graduates yearly, perhaps five to 10 intend to work in a relevant development communication career.

At the graduate level, however, the story is quite different. The typical graduate student who specializes in development/international communication at Cornell is either an international student, or a U.S. student with some development/international experience, such as Peace Corps or NGO employment.

Cornell offers three graduate degrees: the masters of professional studies (M.P. S.) begun in 1969, the master of science (M.S.) begun in 1989, and the doctor of philosophy (Ph.D.) begun in 1993. The M.P.S. is an applied problem-solving oriented degree which stresses the utility of communication theory and research in communication planning and strategy, program development and implementation, and assessment of impact. The M.S. and Ph.D. degrees focus on communication theory and research methods from a somewhat more abstract and general orientation. The curricular requirements obviously vary from degree to degree; however, one constant of the Cornell situation is that the student and his or her special committee has wide-ranging latitude to select courses to fit the student's needs and goals. Nearly all students will demonstrate competency in communication theory and research methods, either quantitative or qualitative or both. At least one statistics course is required for all degree aspirants. Examination of Cornell special projects (the M.P.S. equivalent to a thesis) in the Field of Communication reveals that 85 of 288 (29.5%) dealt with development or international (or both) topics. An early example is Ronny Adhikarya's "The Intensification of the Communication Strategies in Family Planning Programs in Rural Java: With an Emphasis on the Use of Traditional Communication Networks" (1972). More recently, David Michael Booker researched "Profiles of Participatory Programs: Visual Motion Media in Indian Development" (1997). Twenty-two of 53 M.S. theses (41.5%) had development communication/international topics. The earliest example is Demissew Bekele Mulugeta's "Views of Policy Makers and Potential Adopters on Existing Educational Media and New Communication Technologies in the Ethiopian Educational System" (1991) and a recent example is Trina Latice Gallop's "Global Africans: A Content Analysis of Pan-African Issues as Reported in Contemporary African American and Ghanian Newspapers" (1997). Of three doctoral dissertations, one dealt with a development theme (Gomez, 1997). Altogether, therefore, 31.4% (108 of 344) of graduate special projects, theses, and dissertations produced by students graduating from the Field of Communication at Cornell University have focused on development/international communication themes. These academic efforts have been spaced regularly over the period from 1971 to the present.

Students generally take two years to complete the M.P.S. and M.S. programs, while the Ph.D. takes four or more. Unfortunately, because many graduate students do not go on for academic positions or careers, they often are not motivated to publish their graduate research, thus depriving the academic community of convenient access to their theories and findings. Copies of Cornell communication students' special projects, theses, and dissertations are available, however, through regular interlibrary loans. A list is included in Appendix A ("Cornell University Development Communication Graduate Student Research, 1971-1998").

Comparing short-term training and long-term education

To summarize the differences between short-term training and long-term education, we note that short-term training typically: (a) aims at experienced practitioners who are asked to work in cooperative groups with teachers who often are strangers or casual acquaintances with little expectation of a continued relationship, (b) deals with specific and concrete job solutions and problem-solving, (c) uses a limited palate of teaching and learning methods (lectures, handouts, videos and films), (d) is conducted during quasi "down times," usually with outside pressures impinging and therefore can be seen as interfering and interrupting the "real job," (e) sometimes takes place at the job site or a nearby retreat, and (f) can be perceived in a wide variety of ways (for example, as a "perk," as irrelevant, as a fresh perspective, as mandated, as necessary, etc.). The rewards for completion are nearly immediate if the training has been relevant, well designed, and effective. Long-term education, on the other hand, usually: (a) is aimed at younger individuals in a formative stage, (b) features abstract theory and broad overviews of situations, issues, processes, outcomes, etc., (c) features a wide range of teaching and learning methods (e.g., lectures, simulations, role playing, oral reports, debates, written reports, discussions, films, videos and other audiovisual aids, homework, problem sets, case study analyses, etc.), (d) is conducted more leisurely and asks the learner to work out personal syntheses of large amounts of information and opinion, (d) is conducted at the teacher's site rather than the learner's site, (e) permits the learner to learn in an environment free of job stresses and pressures, and (f) tends to focus on the importance of learning to the individual learner rather than for the social group or other stakeholders. Intimate interpersonal relations can develop between teacher and learner. Rewards often are deferred. Progress is formally evaluated and preserved permanently in the learner's transcript. Learning often involves competition with peers and is related vaguely to career and job aspirations. Clearly, we are generalizing with the above summary. Exceptions can be cited for nearly every "truism" mentioned.

The possibility of distance learning is of particular importance to development communication. New communication technology, when made available and reliably operative in developing countries, will solve many problems associated with traditional distance learning (Ostman, Wagner, & Barrowclough, 1988). In many respects, future distance education will combine the advantages of short-term and long-term teaching and learning. Perhaps the panel discussion associated with this session of the NCA-ICA meetings in Rome can explore the pros and cons as well as the feasibility of future distance education relative to our topic.

In general, we do not argue that either short-term training or long-term education is more or less important or useful than the other. Each has its place in the education of development communication personnel. For example, short-term training usually serves individuals who already hold at least a basic higher education degree in addition to career experience, while long-term education serves students who are still acquiring their foundation in intellectual development. Short-term training usually serves an in-service function, with narrowly defined, specific curricular content. Long-term training urges broader understandings and ultimately attempts to shape the whole human perspective, ranging from basic values through highly specialized skills and

knowledge. Clearly, professional adults in today's and tomorrow's worlds will need to participate in on-going training and education. Knowledge and practice are not static. Social change is inevitable. Human understanding will permit some type of managed change, evolutionary rather than revolutionary. Improved ability to describe, predict, understand and explain our worlds will serve our enhanced abilities to control our worlds. A mechanistic and resigned deterministic perspective will give way, increasingly, to approaches which assume dynamic, systematic, and systemic principles in human conduct and relations. Development communicators will abandon helpless resignation and acceptance of the status quo in favor of an optimistic activism. Training, education, and communication technologies will fuel the new development communicator. Leaders of institutions will understand the importance of continuing reflection, thought, and sharing of information and gladly will free up personnel time and resources for these activities, either in face-to-face or virtual communities.

Such is the optimistic vision, at any rate. As educators, practitioners, administrators, policy makers and so on, it is our responsibility to prize and champion the process of thinking and the products of "man's unconquerable mind" and "the joys of teaching and learning," phrases made famous by the late Gilbert Highet (1954, 1976), because ignorance, superstition, rumor, lies, distortions and so on remain as real a threat to survival of the species as the more touted fears of wars and other apocalyptic horsemen. We need to enunciate and defend the observation that "If you think knowledge is expensive, try ignorance!"

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Appendix A

1. Summary of Record

2. The Communication Major (Cornell University)

3. Communication; Courses of Study 1997-1998 (Cornell University)

4. Cornell University Development Communication Graduate Student Research, 1971-1998

SUMMARY OF RECORD

College of Agriculture and Life Sciences

CORNELL UNIVERSITY

It is the responsibility of the student, not of the advisor or the Registrar's Office, to make certain that all requirements for graduation are being met as intended.

NAME _____ DATE _____

ADVISOR

MAJOR

This summary is the only official statement of the way courses have been credited toward your requirements for graduation. You should keep it and refer to it as you check on your progress toward meeting degree requirements. Arrange for all corrections at once in 140 Roberts Hall.

	Required	Completed
Residence (terms)		
Hours of "S" Credit Maximum 20 Hrs.	Hours of Independent Study Maximum 15 Hrs.	

Mathematics Requirement

PPExam date: _____

Group I *Not held for Math at Cornell.*

Group II *Must take at least one Math course at Cornell. Courses which fulfull requirement are:* Math (any, except 101 & 109) Educ 115 Biometry 101 (was Biometry 102 through end of Sp '96)

Group III *Must complete Educ 005 AND Math at Cornell as listed above.*

Math at Cornell also fulfills Group A Physical Sciences.

Physical Education

Required	Completed
2	

Swim test completed? ☐ Yes ☐ No

Cumulative Average:

AP/Transfer Credit:

Notes:

DISTRIBUTION REQUIREMENT—39 HOURS

Credits received for independent study, field, teaching, or work experience, and internships cannot be used to fulfill the distribution requirement.

Group A Physical Sciences

9 credits of 100 or 200 level courses in at least two disciplines including at least one course in chemistry or physics — Completed

Chemistry

Physics

ARME 210

Astronomy

Biometry

Education 115

Geology

ILR 210

Mathematics*

SCAS 131

*See CALS requirements for graduation

Total Group A

Group B Biological Sciences

9 hours, to include 6 hours of introductory Biological Sciences

Division of Biological Sciences (any course EXCEPT 152, 160, 200, 208, 209, 367)

Animal Science 100, 221, 300, 301

Entomology 212

Nutritional Science 262

Plant Breeding 201, 225

Plant Pathology 309, 401

Total Group B

Group C Social Sciences and Humanities

SOCIAL SCIENCES — Completed

6 credits of 100-400 level courses in the following depts. (excluding freshman seminars)

Archaeology

ARME 100, 416

Anthropology

CEH 110 (May not receive credit for Econ 101 and this course. Last offered Fall, 1995.)

CEH 111 (May not receive credit for Econ 102 and this course. Last offered Spring, 1996.)

Communication 116, 120, 410, 418, 420, 422

Economics (except ARME)

Education 271, 311, 317, 370, 378

Government

HDFS 150 (may not receive credit for Sociology 243 and this course)

LA/CRP 261, 360, 363

Psychology

Sociology (Includes RSoc EXCEPT RSoc 100, 175, 318, 442)

Science & Technology Studies 324, 350, 390, 391, 400, 401, 402, 406, 407, 412, 425, 427, 431, 442, 467, 483

Total Social Sciences

HUMANITIES — Completed

6 credits of 100-400 level courses in the following depts. (excluding freshman seminars)

Africana Studies (literature and history)

Asian American Studies

Asian and Near Eastern Studies (literature and history)

Classics

Comparative Literature

English (literature courses only)

French, German, Italian, Russian and Spanish (literature only)

LA 282

History

History of Art/History of Arch.

Music and Theatre Arts (theory, literature, and history only)

Natural Resources 407, 411

Religious Studies

Science & Technology Studies 205, 206, 233, 250, 281, 288, 286, 292, 358, 360, 381, 384, 389, 433, 444, 447, 472, 481, 490

Philosophy

Rural Sociology 100, 175, 318, 442

Women's Studies 444

Total Humatatties

Group D Written or Oral Expression

9 hours of which at least 6 must be in Written Expression — Completed

Written Expression

Freshman Seminars

Communication 117, 260*, 263*, 350, 352,365 (* 360 and 363 if taken before Fall, 1997)

English 280, 281, 288, 289, 382-385, 388, 389

Oral Expression

Comm. 201

Total Group D

CORNELL ENDOWED CREDITS (Limit 55 Hours) _____

OTHER ENDOWED AP/TRANSFER CREDITS _____

AGRICULTURE CREDITS (CALS & Transfer) (minimum 55 Hours) _____

OTHER STATUTORY CREDITS TOTAL _____

ROTC CREDITS TOTAL _____

TOTAL COMPLETED _____

TOTAL REQUIRED _____

Other Agriculture College Credits

55 hours in the College of Agriculture (include Agriculture hours used in groups A, B, C & D) — Completed

Agricultural & Biological Engineering

Agricultural Economics

ALS courses

Animal Sciences

Biological Science

Biometry

Communication

Education (except Educ 005)

Entomology

Food Science

Freehand Drawing

Horticulture Science

International Ag

Landscape Architecture

Natural Resources

Nutritional Science

Plant Breeding

Plant Pathology

Rural Sociology

SCAS

Total

Other Statutory College Electives

Human Ecology

Industrial & Labor Relations

Veterinary Medicine

Total

Other Endowed Credits (Optional)

Maximum of 55 hours (including LSC hours, Math 109 hours, and Endowed hours from A, B, C, & D) Excess hour charge is made for additional endowed hours.

Maximum of 55	Passed	Failed
Electives		
Subtotal		
ROTC		

Courses that increase total hours req. for graduation (see total required)

LSC

Educ 005

Math 109

Subtotal

Total

16

2.6

17

The Communication Major

Cornell University

1996

The Communication Major

In designing the Communication major, the faculty of the department has kept in mind the necessity for students to understand contemporary research-based knowledge about communication as well as their need to be competent communicators in the work place and within society at large. Both are critical to successful careers and enlightened citizenship in the 21st century.

Courses and Academic Opportunities

As a communication major you will learn about communication processes, such as

- how communication influences attitudes, opinions and behaviors
- how communication systems work in our society and in others
- how to apply this understanding of communication to solving real-world problems in government, industry and education.

The communication program introduces majors to a strong core of contemporary communication knowledge, theory and practice. Core courses are taken in the freshman and sophomore years (eight courses) and are followed by courses in one or more of the four focus areas of the department. The series of freshman-required courses include:

- Contemporary Mass Communication
- Communication in Social Relationships
- Writing about Communication
- Investigating Communication

This series of courses will provide you with a basic understanding of communication and communication processes. These courses also provide a unique opportunity to link practical application (such as writing and critical thinking) with up-to-date research and knowledge about communication.

During the sophomore year Communication majors will take:

- Oral Communication
- Visual Communication
- Information Gathering and Writing
- Applying Communication Knowledge and Methods

After completion of the eight courses, you can choose to concentrate your study in one of four focus areas:

- Communication in the Life Sciences. (Studies the impact of communication on environmental, health, science and agricultural issues as well as public perceptions of risk.)
- Communication Systems and Technology. (Principles of how we use communication technologies and how we are influenced by these technologies.)
- Communication Planning and Evaluation. (Development of communication plans to solve problems for individuals or for organizations and learning how to evaluate the success of these plans.)
- Communication as a Social Science. (Study of communication research and methods with emphasis on communication as a social science discipline.)

The Department requires that all majors take a three-credit course in one of the focus areas and an additional 15 credits within the Department (see insert).

Students also will take a concentration of at least 12 hours in one other department or 12 hours across departments in the University related to the student's communication interests. These courses may be career-related, subject-matter oriented, or related in any other way agreed by the students and advisor.

The Communication Major

Core (24 credits)	Comm 116: Communication in Social Relations Comm 117: Writing About Communication Comm 120: Contemporary Mass Communication Comm 121: Investigating Communication Comm 201: Oral Communication Comm 230: Visual Communication Comm 253: Information Gathering and Writing Comm 282: Communication Research Methods
Focus area course (3 credits)	*All students take <u>at least one</u> of the following:* Communication in the Life Sciences Communication Systems and Technology Communication Planning: Theory and Process Advanced Communication Research Methods
Additional courses (15 credits; see insert)	Students select a "focus area" by the end of their sophomore year—additional Communication courses that together form a coherent exploration of the field. The department has identified four common focus areas: • Communication in the Life Sciences • Communication Planning and Evaluation • Communication as a Social Science • Communication Systems and Technology The department faculty have prepared guidelines to help students select appropriate courses in these focus areas (see separate charts on the following pages). Students who prefer to design their own focus area in consultation with a faculty advisor must submit their curriculum plan for approval to the department's Undergraduate Program Committee.
Outside Concentration (12 credits)	Students must complete a set of courses outside the Department of Communication that complements the major requirements. The outside concentration will often be linked to the focus area chosen by the student.

Focus area: Communication in the Life Sciences

Students focusing on Communication in the Life Sciences (CILS) are expected to:

* Understand the nature of science, health, and environmental communication
* Learn specific skills for communicating in the life sciences
* Explore conceptual and theoretical issues in communication in the life sciences

After taking the introductory course, Comm 285: Communication in the Life Sciences, students should choose courses from those listed below. Students in this focus area should use their "outside concentration" to develop scientific expertise; several possible approaches are indicated in the chart. Students who take at least one course in each column, and two additional courses in a single column, will earn certificates attesting to their expertise in communication in the life sciences.

CILS introductory course	Comm 285: Communication in the Life Sciences		
	Practical	**Conceptual**	**Topical**
CILS-specific courses	Comm 352: Science Writing for Mass Media	Comm 486: Risk Communication	Comm 315: Health Communication
	Comm 360: Science Writing for Public Information	Comm 466: Public Communication of Science and Technology	Comm 421: Communication and the Environment
Future offerings	*Comm 3XX: Professional Issues for Science Communicators*	*Comm 4XX: Social Movements and Science Communication*	
		Comm 4XX: Personal Behavior and Science Issues	
Other relevant department courses	Comm 376: Communication Planning	Comm 418: Communication of Persuasion	Comm 380: Honors Research
	Comm 496: Internship	Comm 426: Communication Ethics	

Science expertise [Students will use the "outside concentration" for these courses]	OPTION 1: Follow a curriculum in a specific life science beyond the introductory level, selected in consultation with advisor. Normally requires four science courses *beyond* introductory level required by CALS distribution requirements
	OPTION 2: Follow a curriculum in several life sciences, selected in consultation with advisor, providing a survey of contemporary scientific achievement and practice. Normally requires four science courses *apart from* introductory level required by CALS distribution requirements
	OPTION 3: Follow a curriculum in history, philosophy, and sociology of science beyond the introductory level. Typical courses might include: S&TS 205: Ethical Issues in Health and Medicine S&TS 206: Ethics and the Environment S&TS 233: Agriculture, History, and Society: From Squanto to Biotechnology S&TS/HIST 281: Science in Western Civilization (Greeks to Newton) S&TS/HIST 282: Science in Western Civilization (Newton to present) S&TS/PHIL 286: Science and Human Nature S&TS/EE 292: The Electrical and Electronic Revolutions S&TS/PHIL 381: Philosophy of Science: Knowledge and Objectivity S&TS/PHIL 384: Philosophy of Physics S&TS 401: Social Construction of Life S&TS 406: Biotechnology and Law S&TS 407: Law, Science, and Public Values S&TS 433: Comparative History of Science S&TS 442: Sociology of Science SOC 340: Health, Behavior, and Policy
	OPTION 4: Follow a curriculum in science policy beyond the introductory level. Typical courses might include: GOVT 302: Social Movements S&TS 390: Science in the American Polity, 1800-1960 S&TS 391: Science in the American Polity, 1960-present S&TS 425: Global and Domestic Dimensions of Science and Technology Policy S&TS 427: Politics of Environmental Protection in America S&TS 431: Introduction to Science and Technology Policy S&TS 469: Food, Agriculture, and Society S&TS 490: Integrity of Scientific Practice

Focus area: Communication Planning and Evaluation

Students focusing on Communication Planning and Evaluation (CPE) will develop skills in identifying appropriate audiences, assessing their communication needs, and preparing and implementing communication programs to meet those needs. This focus area stresses the proactive use of communication and the positive, ethical, and effective intervention of communication into human affairs.

After taking the introductory course, Comm 376: Communication Planning: Theory and Process, students should take at least one senior level CPE practicum course and at least two additional CPE courses.

CPE introductory course	**Comm 376: Communication Planning: Theory and Process**	
	Communication Planning and Evaluation	**Senior Practicum**
CPE-specific courses	[Students should take at least two of these courses]	[Students should take at least one of these courses]
	Comm 410: Organizational Behavior and Communication	Comm 475: Program and Campaign Planning Practicum [2 credits]
	Comm 411: Leadership Communication	Comm 476: Communication Fellows Program [2 credits]
	Comm 418: Communication and Persuasion	
	Comm 421: Public Opinion and Social Processes	
Future offerings	*Comm 3XX: Communication Effects*	
Other relevant department courses		Comm 250: Newswriting
		Comm 301: Business and Professional Speaking
		Comm 363: Organizational Writing
		Comm 496: Internship

	Communication Planning and Evaluation	Senior Practicum
Courses in other departments	Concentrations can be constructed from courses in: CALS: ARME, Biometry and Statistics, Education, International Agriculture, Rural Sociology ILR: Economic and Social Statistics, Organizational Behavior, Human Resource Studies Human Ecology: HDFS, HSS, Policy Analysis Arts & Sciences: Anthropology, Government, Economics, History, Psychology, Sociology Art, Architecture, and Planning: City and Regional Planning Hotel: Human Resource Management, Communication	Cornell in Washington Program Albany Internship Program

Focus area: Communication as a Social Science

Students focusing on Communication as a Social Science (CaSS) will develop extensive knowledge of communication theory and research methods, ranging broadly through social psychology, sociology, and social influence processes. They will develop skills in:

* Identifying and specifying hypotheses and research questions
* Accumulating and evaluating pertinent information, and evaluating theoretical constructs including the use of appropriate procedures and research methods
* Relating general theoretical descriptions to specific communication events.

Students in this focus area are likely to pursue careers in commercial or applied research, or in academic teaching and research.

After taking the introductory course, Comm 382: Advanced Research Methods, students should take at least nine additional CaSS elective credits. They should also plan to do a senior research thesis (either through independent study or as part of the honors program, if appropriate).

CaSS introductory course	**Comm 382: Advanced Communication Research Methods**		
Senior Thesis	Comm 380: Honors Research Comm 498: Independent Study		
	Social Psychology of Communication	**Sociology of Communication**	**Social Influence Processes**
Keywords:	*Interpersonal communication, mass communication*	*Institutional issues, cultural issues*	
CaSS electives	Comm 410/510: Organizational Behavior and Communication Comm 422/622: Psychology of Television Comm 610: Organizational Communication Comm 681: Psychology of Communication	Comm 421/621: Communication and the Environment Comm 426/626: Impact of Communication Technologies Comm 624: Communication in Developing Nations Comm 680: Communication Theory	Comm 418/618: Communication and Persuasion Comm 420/620: Public Opinion and Social Processes

Relevant courses in other departments [When selecting courses for the outside concentration, students may want to consider their longterm goals (academic or applied research) and their field of interest (research methods, psychology, sociology), using this chart.]	Academic path	Applied research path
Alternative and advanced research methods	ILR 210: Statistical Reasoning, I ILR 211: Statistical Reasoning, II ILR 310: Statistical Sampling ILR 313: Design and Analysis of Experiments ILR 410: Techniques of Multivariate Analysis ILR 411: Statistical Analysis of Qualitative Data SOC 301: Evaluating Statistical Evidence SOC 303: Design and Measurement	ILR 210: Statistical Reasoning, I ILR 211: Statistical Reasoning, II ILR 310: Statistical Sampling ILR 313: Design and Analysis of Experiments ILR 410: Techniques of Multivariate Analysis ILR 411: Statistical Analysis of Qualitative Data SOC 301: Evaluating Statistical Evidence SOC 303: Design and Measurement
Specialized psychology	PSYC 205: Perception PSYC 214: Issues in Cognitive Psychology PSYC 215: Psycholinguistics PSYC 276: Motivation PSYC 280: Intro to Social Psychology PSYC 305: Visual Perception PSYC 311: Human Learning and Memory HDFS 115: Human Development HDFS 331: Human Learning and Memory Courses identified by the Cognitive Studies Program	PSYC 265: Psychology and Law ILR 325: Organizational and Social Inequality ILR 329: Organizational Cultures ILR 370: The Study of Work Motivation ILR 371: Individual Differences and Organizational Behavior ILR 428: Organizational Change and Intervention ILR 470: Group Processes ILR 472: Applied Organizational Behavior
Specialized sociology	SOC 222: Social Policy and Organization in Health, Education and Welfare SOC/PSYCH 283: Groups and Relationships SOC 290: Social Psychology of Interpersonal Relations RS 200: Social Problems	SOC 340: Health, Behavior, and Health Policy SOC 426: Social Policy RS 200: Social Problems RS 213: Social Indicators, Data Management, and Analysis RS 438: Social Demography
Other	GOVT 302: Social Movements in American Politics GOVT 303: Intro to American Political Parties GOVT 402: Public Opinion and Mass Political Behavior	GOVT 302: Social Movements in American Politics GOVT 303: Intro to American Political Parties GOVT 407: Law, Science, and Public Values GOVT 410: Legislatures, Courts, and Public Policy GOVT 428/429: Government and Public Policy: Intro to Analysis and Criticism

Focus area: Communication Systems and Technology

Students focusing on Communication Systems and Technology (CST) are expected to do three things:

* Explore the nature of communication systems and technology
* Explore issues of social design
* Apply knowledge of systems and design in an internship, senior project, or honors thesis

After taking the introductory course, Comm 240: Communication Systems and Technologies, students should choose courses from those listed below. Courses marked (*) are essential for pursuing this focus area. Students pursuing greater breadth and depth should balance their coursework among the three areas. Coherent packages of courses from other departments (for example, in the social construction of technology, in perception, in visual discourse, etc.) can fulfill the department's outside concentration requirement.

CST Introductory course	*Comm 240: Communication Systems and Technologies		
	Communication Systems & Technology	Social Design	Project
Keywords:	*Institutions, economics, sociology, culture, policy, politics,*	*Perception, reception, visual literacy and discourse, design process, user-centered design, design in context, effect of content on form*	*Experiential learning, applications*
CST-specific courses	Comm 426: Impact of Communication Technologies	Comm 225. Visualizing Science and Technology	*Comm 459: Advanced Studio and Collaboration (1 credit, to be taken while also doing internship, project, or honors)
		Comm 342: Electronic Media: Message and Design Processes	
		Comm 439: Interactive Media: Research and Design	
		Comm 440: Computer Mediated Communication	
	Comm 330: Information Systems Management and Use	Comm 331: Advanced Visual Communication	
Future offerings	*Comm 4XX: Global Telecommunications, Networks & Policy*		
	Comm 4XX: Comm Law: Issues of Security, Copyright and Policy		

	Communication Systems & Technology	Social Design	Project
Keywords:	*Institutions, economics, sociology, culture, policy, politics*	*Perception, reception, visual literacy and discourse, design process, user-centered design, design in context, effect of content on form*	*Experiential learning, applications*
Other relevant department courses	Comm 410: Organizational Behavior and Communication Comm 426: Communication Ethics Comm 428: Communication Law	Comm 422: Psychology of Television	Comm 380: Honors Research Comm 496: Internship Comm 497: Independent Study Comm 499: Independent Research
Courses in other departments (Note: This list subject to change without notice. Many other courses not listed are also relevant in these areas.)	ARME 413: Information Systems and Decision Models [Pre-reqs: ARME 102, ECON 101, ARME 310] ARME 428: Technology: Management and Economic Issues [Pre-reqs: ECON 101 or permission] ENGR 250: Technology in Western Society ENGR 298: The Electrical and Electronic Revolutions ILRID 451: Science, Technology, and the American Economy RSOC 208: Technology and Society	ANTHR 453: Visual Anthropology [Pre-req: Permission] ARCH 372: Imaging and the Electronic Age ARCH 374: Computer Graphics and Visualization [Pre-req: CompSci 211 or 212] PSYC 205: Perception PSYC 305: Visual Perception [Pre-req: PSYC 205 or permission] PSYC 342: Human Perception: Applicatons to Computer Graphics, Art, and Visual Display [Pre-reqs: PSYC 101 or permission; PSYC 205 recommended] PSYC 347: Psychology of Visual Perception [Pre-reqs: PSYC 101 and permission]	

Individual course plan for:_____ as of _____(date).

	Fall Semester	Spring Semester
First year	Comm 120	Comm 116
	Comm 121	Comm 117
	Math (CALS Group A)	Comm 201 (CALS Group D)
	CALS Group B	CALS Group B
	CALS Group C	
Second year	Comm 230	Comm 282
	Comm 253	[Focus area introductory course]
	CALS Group A	CALS Group A
	CALS Group B	CALS Group C
		CALS Group D
Third year	[Focus area course]	[Focus area course]
	[Focus area course]	[Outside concentration]
	[Outside concentration]	CALS Group D
	CALS Group C	CALS Group C
Fourth year	[Focus area course]	[Focus area course]
	[Outside concentration]	[Outside concentration]

CORNELL
UNIVERSITY

Courses of Study

1997–1998

Cornell University
(USPS 132-860)

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COMMUNICATION

C. J. Glynn, chair; R. D. Colle, L. Cowdery, K. Druckman, B. O. Earle, G. Gay, D. A. Grossman, B. Lewenstein, D. G. McDonald, R. E. Ostman, A. Plummer, T. M. Russo, C. Scherer, D. F. Schwartz, J. Shanahan, M. A. Shapiro, P. Stepp, R. B. Thompson, M. Toor, C. Trumbo, L. VanBuskirk, W. B. Ward, J. P. Yarbrough

Note: class meeting times are accurate at the time of publication. If changes are necessary, the department will provide new information as soon as possible.

COMM 116 Communication in Social Relationships
Spring or summer. 3 credits. Not open to first-semester freshmen. Spring: lecs, M W F 1:25–2:15. C. Trumbo.
An overview of current knowledge about communication, with particular emphasis on interpersonal communication. Introduction to a wide range of contemporary theories and research about effective communication in contexts such as friendships, small groups, organizations, and health care settings.

COMM 117 Writing about Communication
Spring. 3 credits. Concurrent enrollment in Comm 116 required. TR 10:10–11:25. L. VanBuskirk and staff.
Students develop skill in various writing styles and genres. The class explores communication practices and theories as they are observed and studied in personal and professional contexts. Assignments polish students' ability to gather information, to analyze information, to integrate ideas about communication, and to express those ideas clearly and cogently.

COMM 120 Contemporary Mass Communication
Fall. Lecs, M W F 12:20–1:10. J. Shanahan and D. G. McDonald.
The processes and effects of communication systems. Topics include the evolution of communication media, current knowledge about mediated communication, and the role of communication in contemporary social issues. Discussion sections relate the course topics to students' personal experience. Assignments include case studies, experiential learning exercises, and short papers.

COMM 121 Investigating Communication
Fall. 3 credits. Students must be enrolled concurrently in COMM 120. Lecs, T R 8:40–9:55, 10:10–11:25, 11:40–12:55 or 1:25–2:40. R. Ostman.
An examination of research methods in communication, with particular emphasis on the mass communication process. Exercises in writing, speaking, and working in small groups focus on topics such as gender depictions, violence in the media, and social roles.

COMM 191 Topics in Communication
Summer. 1–3 credits. Hours to be arranged. Staff.
Study of topics in communication at lower-division level. Special emphasis on topics reflecting the expertise of visiting faculty available in summer session and on topics suitable for entry-level college students.

COMM 201 Oral Communication
Fall, spring, or summer. 3 credits. Each section limited to 20 students (fall and spring) or 15 students (summer). Preference given to sophomores, juniors, and seniors. Fluency in spoken English is assumed. Students missing the first two class meetings without university excuse are dropped so others may register. No student will be added or dropped after the second week of classes. B. Earle, K. Druckman, T. Russo, R. Thompson, and staff.
Through theory and practice students develop self-confidence and competence in researching, organizing, and presenting material to audiences. Students give four graded speeches, write short papers, perform speaker evaluations, and engage in other speech-related activities.

COMM 203 Argumentation and Debate
Fall. 3 credits. T R 10:10–11:25. P. Stepp.
The student will learn the principles of argumentation and the rules of debate. Classroom debates on the CEDA national topic will provide experience in critical thinking, rapid organization of thoughts, employment of research, and writing and speaking in a logical, persuasive manner.

COMM 204 Effective Listening
Fall and spring. 3 credits. Limited to 25 nonfreshman students per section. No students accepted or allowed to drop after the second week of classes. Lec, M 2:55–4:10; sec, W 1:25–2:40, 2:55–4:10; R 1:25–2:40, 2:55–4:10. R. Thompson.
Lecture and sections are used to present an analysis of the process of listening, to identify barriers to effective listening, and to develop students' listening skills. Topics include audiology, cultural contexts, intercultural communication, linguistics, therapeutic listening, and critical analysis of information. Students are involved in skill-building exercises and in writing self-analytical papers, as well as attending seminars.

COMM 230 Visual Communication
Fall. 3 credits. Lec, T R 9:05–9:55; lab, T 2:30–4:25; W 10:10–12:05, 12:20–2:15 or 2:30–4:25. C. Scherer.
An introduction to visual communication theory. Course examines how visuals influence our attention, perspectives, and understanding. Examples of visuals drawn from advertising, TV news, documentaries, entertainment movies, print and interactive media are used to develop a theoretical

framework for becoming more visually aware and for thinking more critically about how visuals influence us.

COMM 232 Art of Publication
Fall. 3 credits. Each lab limited to 24 nonfreshman students. Students missing the first two classes without university excuse are dropped so others may register. Project materials cost $75–$100. Lecs, M W 10:10–11:00 or 11:15–12:05; labs M 2:30–4:25; W 2:30–4:25. M. Toor.
A basic course designed to explore visual concepts that increase communication effectiveness through the printed word. The importance of selecting and coordinating format, layout, typography, and illustrations is stressed. Lectures, in-class laboratory assignments, and outside projects examine opportunities and problems in publication design and desktop publishing.

COMM 240 Communication Systems and Technologies
Spring. 3 credits. T R 10:10–12:05. D. G. McDonald.
An exploration of the nature of communication systems and technologies. Topics include a brief history of communication and information technologies, descriptions of the uses, and impacts of technologies within the social system, and an introduction to electronic message design and construction. Lab includes practical application of course topics.

COMM 250 Newswriting for Newspapers
Fall, spring, or summer. 3 credits. Limited to 25 students. Prerequisite: Major in communication, or permission of instructor. Keyboarding ability essential. Students missing first two classes without university excuse will be dropped. Lecs, M W 9:05–9:55; labs, R 2:30–4:25 or F 9:05–11:00. Staff.
Writing and analyzing news stories. A study of the elements that make news, sources of news, interviewing, writing style and structure, press problems, and press-society relations. Concentration on newswriting as it is practiced by newspapers in the United States. Two writing assignments each week, one done in class, one done out of class.

COMM 253 Information Gathering and Presentation
Spring. 3 credits. Prerequisite: COMM 117, COMM 121; concurrent registration with COMM 282. Lec, M W 11:15; sec, F 11:15–12:05. L. Cowdery.
Students learn how to locate information from data bases, interviews, and printed materials, to evaluate it, and to present it in written, tabular, and graphic form. Formats include media stories, research reports, and materials for public information. Special emphasis is placed on presenting numerical information and on writing for specific audiences.

COMM 260 Science Writing for Public Information
Fall, spring, or summer. 3 credits. Limited to 35 nonfreshman or graduate students per section. Prerequisite: one college-level writing course. Fall: Lec 01, M W F 9:05–9:55, Lec 02, M W F 10:10–11:00; Spring: M W F 9:05–9:55. Sections to be announced. L. Cowdery.
An intensive course in simplifying scientific and technical material for specific audiences within the general public. Weekly assignments include instructions, descriptions, explanations, and summaries in such formats as the newsletter, brochure, and report. Audience analysis will be emphasized. Not oriented to the mass media, or writing for scientists.

COMM 263 Organizational Writing
Fall, spring, or summer. 3 credits. Limited to 25 junior, senior, or graduate students per section. Prerequisite: any college-level writing course. Lec, M F 11:15–12:05; Fall: Sec M 12:20–2:15, W 10:10–12:05; Spring: Sec M 12:20–2:15, W 10:10–12:05. L. Van Buskirk and staff.
Students write as members of different organizations, in the position of supervisor, subordinate, colleague, and representative of business, government, community, and other organizations. Emphasis on adapting tone to the audience and the purpose of the message. Weekly writing assignments include various kinds of internal and external reports, memoranda, proposals, and letters. Assignments based on the Exxon Valdez oil spill and other case studies.

COMM 272 Principles of Public Relations and Advertising
Summer. 3 credits. Not open to freshmen. Staff.
Survey of the fields of public relations and advertising. Descriptions of organizations, jobs, and functions in the industry. The roles of public relations and advertising in society, the economic system, and organizations. Psychological and sociological principles as bases for appeals. Strategies for media selection and message execution. Introduction to research and regulation.

[COMM 273 Communication Institutions
Spring. 3 credits. Letter only. T R 11:40–12:55. Not offered 1997–98. J. Shanahan.
A survey of the history, organization, and social importance of communication institutions. Institutions to be analyzed include advertising/PR, media industries, propaganda and political communication, news/journalism, and new technologies. Cases and examples will be drawn from areas relevant to CALS programs, including environment, agricultural policy and land use. Communication 116 or 120 are suggested but not required.]

COMM 282 Communication Industry Research
Spring. 3 credits. Prerequisite: COMM 116, 120, 121. Lec, M W 12:20–1:10; labs, F 9:05–11:00 or F 12:20–2:15. D. G. McDonald and J. Shanahan.
Public opinion polls, readership/viewership studies, audience segmentation techniques, and media and message effect evaluation are all widely used in communication industries. This course covers the use of basic research design, measurement, sampling, and simple descriptive statistics in conducting these studies.

COMM 284 Sex, Gender, and Communication
Fall. 3 credits. Not open to freshmen. T R 2:55–4:10. L. Van Buskirk.
The course explores the personal, career, social, and economic implications of gender categories. Topics considered include theories of gender construction, social structures, personal relationships, and gender concerns in the workplace.

COMM 285 Communication in Life Sciences
Spring. 3 credits. M W 2:55–4:10. B. Lewenstein.
Environmental problems...public health issues...scientific research. In each of these areas, communication plays a fundamental role. From the mass media to individual conversations, from technical journals to textbooks, from lab notes to the World Wide Web, communication helps define social issues and research findings. This course examines the institutional and intellectual contexts, processes, and practical constraints on communication in the life sciences.

COMM 301 Business and Professional Speaking
Fall, spring, or summer. 3 credits. Prerequisite: COMM 201. Limited to second term sophomores, juniors and seniors during fall and spring. Lec, M W 11:15–12:05; sec, T 2:30–4:25; W 12:20–2:15; R 10:10–12:05. B. Earle.
The study and practice of written and oral communication skills used in formal and informal organizations, including interviews, informative and persuasive speeches, reports, and discussions. Students exercise and enhance the organizational, analytical, and presentational skills needed in particular settings suited to their own business and professional careers.

COMM 303 Speech and Debate Practicum
Fall and spring. 2 credits. Limited to 10–15 Program in Speech and Debate members only; permission of instructor and completion of one-year trial basis. Hours to be arranged. P. Stepp.
Students will learn preparation for practice in CEDA (Cross Examination Debate Association) debate, Lincoln Douglas debate, or individual speaking events. The class will be divided into four groups according to level of experience; therefore it may be repeated to a maximum of 8 credits.

[COMM 315 Introduction to Health Communication
Fall. 3 credits. COMM 116 or COMM 120 or permission of instructor. Juniors and seniors only. M W F 10:10. Not offered 1997–98. Staff.
An overview of health communication, examining topics such as physician-patient relationships, the role of support groups, communication in health care organizations, cultural differences in health beliefs and communication, and public health campaigns. Instruction techniques include class discussion, presentations, and group projects.]

COMM 330 Information Systems Management and Use
Spring. 3 credits. Prerequisite: COMM 240. Offered even-numbered years. M W F 1:25. A. Plummer.
Examination of the theory and techniques of information management and communication/information technologies. Course focus is on the manner in which people use and manage information.

COMM 342 Electronic Media
Spring or summer. 3 credits. Limited to 21 communication majors. Prerequisite: MA COMM 120. Lec, T R 1:25–2:40. T. Russo.
The process of audio and video message design and production is explored. Emphasis is on development of skills needed for the

creation of effective audio/video production. Students complete exercises designed to develop specific competencies and work on productions from conception through completion.

COMM 350 Writing for Magazines
Fall or spring. 3 credits. Limited to 25 juniors, seniors, and graduate students, or others with permission of instructor. No drops after third week. Extensive out-of-class writing assignments. Fall: M 1:25–4:25; spring: T R 12:20–1:50. W. Ward and staff.
A course in nonfiction freelance writing for magazines. Intensive fact writing to help students communicate more effectively through the medium of the printed word in magazines. Art and techniques of good writing are studied; magazines in many fields of interest are reviewed. All articles are analyzed and returned to the student to rewrite and submit to a magazine.

COMM 352 Science Writing for the Mass Media
Fall. 3 credits. Not open to freshmen. Prerequisite: one college-level writing course. Lecs, M W 9:05; lab, W 12:20–2:15, 2:30–4:25. B. Lewenstein.
How to write about science, technology, and medicine for the mass media. Discussion topics include accuracy, simplicity, comprehensiveness, risk communication, and the history and social structure of science. Writing assignments focus on writing news and feature stories for newspapers and magazines, with excursions into newsletters, radio, TV, and other media.

COMM 368 Text Editing and Management
Fall. 3 credits. Limited to 25 junior, senior, or graduate students. Prerequisite: COMM 250, 260, 263, 350 or 352. M W F 12:20–1:10. L. Cowdery.
How to guide a manuscript from draft to presentation. Topics include production, copy editing and design, document management, and editorial decision making. Publications include books, magazines, newsletters, and promotional and educational materials for internal and external use. Appropriate for those who will oversee publications as part of their work.

COMM 376 Planning Communication Campaigns
Spring. 3 credits. Limited to 20 juniors and seniors. Prerequisite: COMM 116 or 120 or permission of instructor. T R 10:10–11:25. D. F. Schwartz.
Overviews theories that guide and influence social change efforts. Research techniques and communication tools used in communication planning and campaign design are reviewed. Class discussion focuses on social change efforts in nutrition and health, rural development, marketing, and the environment. Students work closely with a client in designing a communication campaign.

COMM 380 Independent Honors Research in Social Science
Fall or spring. 1–6 credits. Limited to undergraduates who have met the requirements for the honors program. B. Lewenstein.

COMM 382 Communication Research Design
Spring. 3 credits. Lec, T R 3:35; lab, W 2:30–4:25. Prerequisite: COMM 282 or equivalent; one course in statistics (may be concurrent). J. P. Yarbrough.
Discussion of advanced communication research methods. Emphasis on research design and measurement techniques. Final paper will be a complete research proposal for a senior or Honors thesis in Communication.

COMM 405 Community Service Practicum
Fall and spring. 2 credits. May be repeated for credit. Limited to 10–15 Program in Speech and Debate members; permission of instructor required. Hours to be arranged. P. Stepp.
Students share their communication talents in structured experiences in which they design and implement a speech or debate project in local schools or the community.

COMM 410 Organizational Behavior and Communication
Fall. 3 credits. Labs limited to 15 junior, senior, or graduate students. Prerequisite: COMM 116 or equivalent. Lec, M W 11:15–12:05; Sec 01, W 2:30–4:25; Sec 02, F 10:10–12:05. D. Schwartz.
Study of management and leadership in formal organizations with emphasis on the psychology of communication between supervisor and employee; examination of formal and informal communication networks, and interpersonal communication in an organizational context. Case studies analyzed in lab.

COMM 411 Leadership from a Communication Perspective
Spring. 3 credits. Limited to 30 students. Lec, T R 1:25–2:40. P. Stepp.
Leadership is a product of human communication. Leadership competence can be increased by increasing communication competence. Leadership theories, particularly transformational leadership will be studied, and gender/minority responsive leadership will be stressed. Practical application will include leadership exercises and observation of leaders.

[COMM 418 Communication and Persuasion
Spring. 3 credits. Prerequisite: COMM 116 and 120 or introductory psychology or social psychology. M W 2:55–4:10 (one evening mid-semester prelim). Not offered 1997–98. M. Shapiro.
The course focuses on theories of communication influence on persuasion and attitude change. Students will become familiar with a variety of social-psychological theories of attitude change and persuasion. Those theories also will be applied to a variety of communication situations including mass communication, advertising, public relations, public information, and interpersonal communication. Lectures concurrent with COMM 618; graduate students should enroll in COMM 618.]

[COMM 420 Public Opinion and Social Processes
Fall. 3 credits. Lec, T R 10:10–11:25. Not offered 1997–98. C. Glynn.
The course provides an overview of the theoretical and applied literature related to the concept "public opinion." Students investigate how public opinion is perceived and acted upon by society. Relationships between public opinion, communication and social psychological variables are examined. Public opinion is studied using current theoretical and practical applications. Analysis and interpretation of public opinion polls and trends in public opinion on specific issues. Lectures concurrent with COMM 620; graduate students should enroll in COMM 620.]

[COMM 421 Communication and the Environment
Spring. 3 credits. Limited to 20 junior, senior, or graduate students or permission of the instructor. Lec, T R 2:55–4:10. Not offered 1997–98. J. Shanahan.
Students will investigate how values, attitudes, social structure, and communication affect public perceptions of environmental risk and public opinion about the environment. A primary focus will be mass media's impact in public perceptions of the environment, how the media portray the environment, and discussion of the implications of public consumption of environmental content.]

COMM 422 Psychology of Television
Fall. 3 credits. Prerequisites: Introductory psychology and COMM 120. M W F 12:20–1:10 (one evening mid-semester prelim). M. Shapiro.
A survey of knowledge about the psychological influence of television and other audio-visual communication technologies. Topics may include: the history of concerns about television and movies, who watches television and why, how people understand and mentally process television, how television influences thinking and emotions, the effects of various forms (including entertainment, news, and advertising), the future forms of mass media including multimedia and virtual reality. Lectures concurrent with COMM 622; graduate students should enroll in COMM 622.

COMM 424 Communication in the Developing Nations
Fall. 3 credits. Limited to juniors and seniors. T R 2:55–4:10. R. Colle.
The role of communication in development programs, particularly in Third World. Emphasis is on communication interventions in agriculture, health, nutrition, family planning and community development, and especially on methods for designing communication strategies for reaching low-income, rural people. Among the approaches considered are extension, social marketing, and development support communication. Lectures concurrent with COMM 624; graduate students should enroll in COMM 624.

COMM 426 Impact of Communication Technologies
Fall. 3 credits. M W 2:55–4:10. P. Yarbrough.
Examine emerging technologies of communication, such as computer-based information systems and satellites and their potential for influencing communication processes and social systems. Also examines the impacts of previous communication innovations from cave painting to television. Lectures concurrent with COMM 626; graduate students should enroll in COMM 626.

COMM 428 Communication Law
Spring. 3 credits. Limited to junior, senior, and graduate students; others by permission of the instructor. Lec, M W F 11:15–12:05. D. Grossman.

A practical survey of the law governing mass media, primarily for those working in the field. Coverage includes restraints on news gathering and publication, privacy, defamation, copyright, broadcast and cable regulation, access, electronic media and other issues of current interest.

COMM 439 Interactive Multimedia: Design and Research Issues
Fall. 3 credits. Prerequisite: permission of instructor. Lec, T R 11:15–12:05; lab T 12:20–2:15. G. Gay.
An overview of interactive multimedia technologies (videodisc, CD-ROM, digital video technologies, computer graphics, and text). Course will focus on theories and research applicable to interactive multimedia such as visualization, learner control, mental models, knowledge representations, and information processing. Course will also emphasize interactive multimedia design, application, and evaluation.

COMM 440 Computer Mediated Communication: Theory and Practice
Spring. 3 credits. Permission of instructor. Letter grade only. Lec, T R 11:15–12:05; lab, T 12:20–2:15. G. Gay.
Course will focus on the design of computer interfaces and software from the user's point of view. The goal is to teach user interface designs that "serve human needs" while building feelings of competence, confidence, and satisfaction. Topics include formal models of people and interactions, collaborative design issues, psychological and philosophical design considerastions, and cultural and social issues. Lectures concurrent with COMM 640; graduate students should enroll in COMM 640.

[COMM 466 Public Communication of Science and Technology
Fall. 3 credits. Limited to 15 students. Prerequisite: COMM 352 or 360, or Engineering 350, or permission of instructor. M W 2:55–4:10. Not offered 1997–98. B. Lewenstein.
Explore the structure, meanings, and implications of "public communication of science and technology" (PCST). Examine the contexts in which PCST occurs, look at motivations and constraints of those involved in producing information about science for nonprofessional audiences, analyze the functions of PCST. Tie existing ideas about PCST to general communication research, and learn how to develop new knowledge about PCST. Course format is primarily seminar/discussion.]

COMM 476 Communication Fellows Program
Spring. 2 credits. M 2:55–4:10. Prerequisites: permission of instructor; limited to Communication seniors selected based on goals and academic preparation. B. O. Earle.
A series of lectures, seminars and guest speakers exploring the planning, evaluation and policy-making process. Includes a three-day trip to a metropolitan area to visit corporate leaders, administrative agencies and policy makers. Fee charged.

COMM 486 Risk Communication
Spring. 3 credits. T R 2:55–4:10. C. Scherer.
An examination of theory and research related to the communication of scientific information about environmental, agricultural, food, health, and nutritional risks. Course will concentrate on social theories related to risk perception and behavior. Case studies involving pesticide residues, waste management, water quality, environmental hazards, and personal health behaviors will be examined. Emphasis will be placed on understanding, applying, and developing theories of risk communication. Lectures concurrent with COMM 686; graduate students should enroll in COMM 686.

COMM 490 Senior Thesis in Communication
Fall, spring. 3 credits; may be repeated for a maximum of 6 credits. Prerequisite: Comm 382. Staff.
Seniors conduct research based on a thesis proposal written in COMM 382. Supervision provided by a member of the Communication graduate faculty assisted by a Ph.D. candidate. Thesis will be reviewed by faculty readers before approval.

COMM 494 Special Topics in Communication
Fall, spring, or summer. 1–3 credits variable. S-U grades optional. Prerequisite: permission of instructor.
Study of topics in communication not otherwise provided by a department course and determined by the interest of the faculty and students.

COMM 496 Internship
Fall, spring, summer, and intersession. 1–3 credits. Students must apply no later than the spring pre-course enrollment period for a fall internship or the fall pre-course enrollment period for a spring or summer internship. Prerequisites: Limited to communication juniors or seniors, 3.0 average in communication courses, and approval of academic advisor. S-U grades only.
Structured, on-the-job learning experience under supervision of communication professionals in a cooperating organization. Maximum of 6 credits total may be earned; no more than 3 per internship but flexibility allows 6 for 1 credit each, 3 for 2 credits each, or 2 for 3 credits each. Internships must be approved in advance by the student's academic adviser and must be supervised by a communication professional in fields of public relations, advertising, publishing, or broadcasting. Minimum of 60 on-the-job hours per credit required.

COMM 497 Individual Study in Communication
Fall or spring. 1–3 credits; may be repeated to 6 credits with a different supervising faculty member. Prerequisite: 3.0 cumulative average. Students must register with an Independent Study form (available in 140 Roberts Hall).
Individual study under faculty supervision. Work should concentrate on locating, assimilating, synthesizing, and reporting existing knowledge on a selected topic. Attempts to implement this knowledge in a practical application are desirable.

COMM 498 Communication Teaching Experience
Fall or spring. 1–3 credits; may be repeated to 6 credits with different courses. Limited to juniors and seniors. Intended for undergraduates desiring classroom teaching experience. Prerequisite: 3.0 cumulative average (2.7 if teaching assistant for a skill development course) and permission of the faculty member who will supervise the work and assign the grade. Students must register with an Independent Study form (available in 140 Roberts Hall).
Periodic meetings with the instructor cover realization of course objectives, evaluation of teaching methods, and student feedback. In addition to aiding with the actual instruction, each student prepares a paper on some aspect of the course.

COMM 499 Independent Research
Fall or spring. 1–3 credits; may be repeated to 6 credits. Limited to seniors and graduate students. Prerequisite: 3.0 cumulative average. Students must register with an Independent Study form (available in 140 Roberts Hall).
Permits outstanding students to conduct laboratory or field research in communication under appropriate faculty supervision. The research should be scientific: systematic, controlled, empirical. Research goals should include description, prediction, explanation, or policy orientation and should generate new knowledge.

[COMM 510 Organizational Behavior and Communication
Fall. 3 credits. Not offered 1997–98.
Study of management and leadership in formal organizations with emphasis on the psychology of communication between supervisor and employee; examination of formal and informal communication networks, and interpersonal communciation in an organizational context. Case studies analyzed in lab. Lectures concurrent with COMM 410; graduate students should enroll in COMM 510.]

[COMM 610 Seminar in Organizational Communication
Spring. 3 credits. Prerequisites: COMM 410/510 or one course in organizational behavior or permission of instructor. Lec, M W 11:15–12:05; lab, F 10:10–12:05. Not offered 1997–98. D. Schwartz.
Examination of contemporary research on the social psychology of interpersonal communication in organizations including supervisor-employee relations, leadership style, work motivation, organizational socialization, and formal and informal communication networks.]

[COMM 618 Communication and Persuasion
Spring. 3 credits. Prerequisite: introductory psychology or social psychology or introductory research methods course. M W 2:55–4:10. Not offered 1997–98. M. Shapiro.
The course focuses on theories of communication influence on persuasion and attitude change. Students will become familiar with a variety of social-psychological theories of attitude change and persuasion. Those theories also will be applied to a variety of communication situations including mass communication, advertising, public relations/public information, and interpersonal communication. Lectures concurrent with COMM 418; graduate students should enroll in COMM 618.]

COMM 620 Public Opinion and Social Processes
Fall. 3 credits. T R 10:10–11:25. C. Glynn.
The course provides an overview of the theoretical and applied literature related to the concept "public opinion." Students investigate how public opinion is perceived and acted upon by society. Relationships between public opinion, communcation and social psychological variables are examined. Public opinion is studied using current theoretical and practical applications. Analysis and interpretation of public opinion polls and trends in public opinion on specific issues.

COMM 622 Psychology of Television
Fall. 3 credits. Prerequisites: introductory psychology or social psychology and introductory research-methods course. M W F 12:20–1:10. M. Shapiro.
A survey of knowledge about the psychological influence of television and other audio-visual communication technologies. Topics may include: the history of concerns about television and movies, who watches television and why, how people understand and mentally process television, how television influences thinking and emotions, the effects of various forms (including entertainment, news, and advertising), the future forms of mass media including multimedia and virtual reality. Lectures concurrent with COMM 422; graduate students should enroll in COMM 622.

COMM 624 Communication in the Developing Nations
Fall. 3 credits. Open to juniors, seniors, and graduate students. T R 2:55–4:10. R. D. Colle.
The role of communication in development programs, particularly in Third World nations. Emphasis is on communication interventions in agriculture, health, nutrition, family planning and community development, and especially on methods for designing communication strategies for reaching low-income, rural people. Among the approaches considered are extension, social marketing, and development support communication. Lectures concurrent with COMM 424; graduate students should enroll in COMM 624.

COMM 626 Impact of Communication Technologies
Fall. 3 credits. Open to seniors. M W 2:55–4:10. P. Yarbrough.
Examines emerging technologies of communication, such as computer-based information systems and satellites and their potential for influencing communication processes and social systems. Also examines the impacts of previous communication innovations from cave painting to television. Lectures concurrent with COMM 426; graduate students enroll in COMM 626.

COMM 639 Interactive Multimedia: Design and Research Issues
Fall. 3 credits. Prerequisite: permission of instructor. Lec, T R 11:15–12:05; lab, T 12:20–2:15. G. Gay.
An overview of multimedia technologies (videodisk, CD-ROM, digital video technologies, computer graphics, and text). Course will focus on theories and research applicable to interactive multimedia such as visualization, learner control, mental models, knowledge representations, and information processing. Course will also emphasize interactive multimedia design, application, and evaluation.

COMM 640 Computer Mediated Communication: Theory and Practice
Spring. 3 credits. Prerequisite: permission of instructor. Lec, T R 11:15–12:05; lab, T 12:20–2:15. G. Gay.
Course will focus on the design of computer interfaces and software from the user's point of view. The goal is to teach user interface designs that "serve human needs" while building feelings of competence, confidence, and satisfaction. Topics include formal models of people and interactions, collaborative design issues, psychological and philosophical design considerations, and cultural and social issues. Lectures concurrent with COMM 440; graduate students should enroll in COMM 640.

COMM 676 Communication Planning for Social and Behavioral Change
Spring. 3 credits. T R 10:10–12:05. R. D. Colle.
Overview theories that guide and influence social change efforts. Research techniques and communication tools used in communication planning and campaign techniques and communication tools used in communication planning and campaign design are reviewed. Class discussion focuses on social change efforts in nutrition and health, rural development, marketing, and the environment. Course seeks to integrate theory, data-based generalizations, and planning processes into an integrated communication plan.

COMM 680 Studies in Communication
Fall. 3 credits. Limited to graduate students in communication; others by permission of instructor. M W 9:05–11:00. D. McDonald and J. Shanahan.
A review of classical and contemporary readings in communication, including key concepts and areas of investigation. An exploration of the scope of the field, the interrelationships of its various branches, and an examination of the role of theory in the research process.

COMM 681 Seminar in Psychology of Communication
Spring. 3 credits. Prerequisite: graduate students in communication; others by permission of instructor. M W 2:55–4:10. M. Shapiro.
An introduction to theory and research in the mental processes of the communicating individual. Discussions and readings may include how individuals process and remember communication information, how communication information is used in decision processes, how motivation influences processing of mass communication information, and how attitudes form and change.

COMM 682 Methods of Communication Research
Spring. 3 credits. Lec, M W 12:20–1:10; sec, F 12:20–2:15. R. Ostman.
An analysis of the methods used in communication research. Emphasis on understanding the rationale for survey, textual, experimental, and ethnographic research methods. Development of class research project from research question to final report. Computer use of Statistical Package for the Social Sciences (SPSS) to assist in data analysis. Familiarity with basic statistical concepts helpful.

COMM 683 Quantitative Research Methods in Communication
Spring. 3 credits. Prerequisite: COMM 682 or equivalent. Lec, M 6:00 p.m.–9:00 p.m. D. McDonald.
Experience in quantitative research techniques. The course provides an introduction to inter- and multi-disciplinary research through examination of the procedures, techniques and assumptions associated with particular techniques of design and measurement, data collection, data preparation, data analysis, and hypothesis testing. Readings include a variety of fields and disciplines in the social and natural sciences.

COMM 684 Qualitative Methods in Communication Research
Spring. 3 credits. M W 8:40–9:55. B. Lewenstein.
This course explores the nature of communication research and the place of qualitative methods in that research. Through readings, discussions, and papers, students will examine the various techniques of qualitative research, gaining both an introduction to those methods and an appreciation of when those methods are appropriate for addressing particular issues in communication.

COMM 685 Training and Development: Theory and Practice (also International Agriculture 685 and EDUC 685)
Spring. 4 credits. S-U grades optional. Charge for materials, $45. F 9:05–12:05; lab to be arranged. Staff.
Analysis, design, conduct, administration, and evaluation of training programs for the development of human resources in small-farm agriculture, rural health and nutrition, literacy and nonformal education, and general community development. Design for scientists, administrators, eductor-trainers, and social organizers in rural and agricultural development programs in the U.S. and abroad.

COMM 686 Risk Communication
Spring. 3 credits. T R 2:55–4:10. C. Scherer.
An examination of theory and research related to the communication of scientific information about environmental, agricultural, food, health, and nutritional risks. Course will concentrate on social theories related to risk perception and behavior. Case studies involving pesticide residues, waste management, water quality, environmental hazards, and personal health behaviors will be examined. Emphasis will be placed on understanding, applying, and developing theories of risk communication. Lectures concurrent with COMM 486; graduate students should enroll in COMM 686.

COMM 691 Seminar: Topics in Communication
Fall and spring. No credit. S-U grades only. Hours to be arranged. Staff.
Some weeks scholars from a wide variety of fields will present varied topics in theory or research as it relates to communication; other weeks graduate students will present thesis (project) proposals to faculty and peers.

COMM 694 Special Topics in Communication
Fall, spring, or summer. 1–3 credits variable. S-U grades optional. Prerequisite: permission of instructor. Hours to be arranged. Staff.

Study of topics in communication not otherwise provided by a department course and determined by the interest of the faculty and students.

COMM 700 MPS Project Research
Fall or spring. 1–6 credits. May be repeated for a maximum of 6 credits. S-U grades only. Prerequisite: permission of committee chair.
Project research for Master of Professional Studies (Communication) students.

COMM 794 Seminar in Communication Issues
Fall, spring, or summer. 1–3 credits. Letter grade only. Prerequisite: permission of instructor.
Small group study of topical issue(s) in communication not otherwise examined in a graduate field course.

COMM 797 Graduate Independent Study
Fall, spring, or summer. 1–3 credits. Letter grade only. Prerequisite: permission of instructor.
Individual study concentrating on locating, assimilating, synthesizing, and reporting existing knowledge on a selected topic.

COMM 798 Communication Teaching Laboratory
Fall and spring. 1–3 credits each semester. Letter grade only. May be repeated once. Limited to graduate students. Prerequisite: permission of the faculty member who will supervise the work and assign the grade. Students must use the faculty member's section number to register. Graduate faculty.
Designed primarily for graduate students who want experience in teaching communication courses. Students work with an instructor in developing course objectives and philosophy, planning, and teaching.

COMM 799 Graduate Research
Fall, spring, or summer. 1–3 credits. Letter grade only. Prerequisite: appropriate communication graduate course work or permission of instructor.
Small-group or individual research based on original, empirical, data-based designs regarding topical issues in communication not otherwise examined in a graduate field course.

COMM 800 Master's-Level Thesis Research
Fall or spring. 1–6 credits. May be repeated for a maximum of 6 credits. S-U grades only. Prerequisite: permission of committee chair.
Thesis research for Master of Science (Communication) students.

COMM 901 Doctoral-Level Dissertation Research
Fall or spring. 1–9 credits. May be repeated for a maximum of 9 credits. S-U grades only. Prerequisites: completion of "A" exam; permission of committee chair.
Dissertation research for doctoral candidates.

Cornell University Development Communication Graduate Student Research, 1971-1998

Ph.D. Dissertation

Gomez, R. (1997, August). *Democratization and the information society: Use of computer-mediated communication in non-governmental organizations in a Latin American country.*

M.S. Theses

Adam, E. (1991, August). *Perceptions and behaviors of South Pacific extension officers towards communication of information.*

Dyer, S. S. (1993, January). *The silkscreen poster of the graphic arts workshop of the Division of Community Education in Puerto Rico: 1949 - 1964.*

Franco, V. (1994, May). *A model of community development: The Puerto Rican Division of Community Education.*

Gallop, T. L. (1997, January). *Global Africans: A content analysis of Pan-African issues as reported in contemporary African American and Ghanian newspapers.*

Glass, W. S. (1992, August). *Fakube Jarra: A radio campaign as a determinant of family planning behavior in The Gambia, West Africa.*

Hsu, L. (1995, January). *The news coverage of China and Taiwan in The New York Times, 1949 - 1994: The press, foreign policy and Sino-American relations.*

Hu, H. (1993, August). *The development of cable television on satellite broadcast systems in the Far East: A regional development.*

Karriker, K. J. (1997, August). *Development communication and continuing education in Honduras: Barriers to the promotion of health behaviors.*

Mizuno, T. Y. (1996, January). *Japanese sojourners in the New York metropolitan area: The relationship of domestic and ethnic media use and assimilation to American culture.*

Moody, M. C. (1996, August). *The influence of culture on managerial communication behaviors: A study of five African country offices of an international organization.*

Mulugeta, D. B. (1991, January). *Views of policy makers and potential adopters on existing educational media and new communication technologies in the Ethiopian educational system.*

Nakanishi, M. (1991, August). *Leadership, satisfaction with supervision and interpersonal communication: A study of Japanese managers in the United States.*

Odagawa, K. (1991, May). *Communication satisfaction and organizational commitment: U.S. and Japanese workers under Japanese-style management.*

Paddock, T. W. (1994, August). *Science reporting across two cultures: Newspaper and science magazine coverage of the environmental controversies alar and mad cow disease in the U.S. and Britain.*

Parkinson, S. N. A. (1994, August). *Empowerment perspectives: European-American women and African-Americans in the workplace.*

Robinson, H. H. (1992, January). *U.S. - Japan cross-cultural audience research in advertising: Emotion and advertising effectiveness.*

Thapalia, C. F. (1995, August). *Modelling local development processes: The role of the community development field worker in Nepal.*

Underwood, R. B. (1995, August). *Foreign news at home: A comparative analysis of British and Nigerian press coverage of international news.*

Wray, R. J. (1991, August). *Taking stock of Consequences: The evaluation of a dramatic film about teenage pregnancy in an educational setting in Kenya.*

Yamaguchi, Y. (1993, January). *Mentoring and career success among Japanese employees.*

Yen, S. (1995, January). *News media exposure, personal experience and opinions of three Far East countries: An agenda-setting study.*

Zalik, A. (1997, August). *North American constructions of African food crises: A study of American and Canadian press coverage and development social movement discourse on the Southern African drought of 1992.*

M.P.S. Special Projects

Abdullah, M. Y. B. (1986, June). *A curriculum of development communication for Universiti Kebangsaan Malaysia.*

Adhikarya, R. (1972, August). *The intensification of the communication strategies to family planning programs in rural Java: With an emphasis on the use of traditional communication networks.*

Aliprandi, W. B. (1971, December). *Development of a course in mass media for education and training of Catholic clergy in Australia.*

Arnst, R. D. (1989, August). *Participatory development communication, research, and video: A discussion and exploratory study.*

Baah-Boakye, E. A. N. (1988, May). *Husband-wife communication in family planning decisions in urban Ghana.*

Babatunde, J. R. M. (1991, May). *Communicating agriculture to rural Sierra Leone: Emerging patterns from a case study.*

Barrett, M. (1971, December). *Develop curriculum/courses/materials concerning Canadian mass media.*

Belli, L. (1989, August). *Communication support for health related activities: The Nicaraguan National Campaign for the Defense of Lives of Children.*

Booker, D. M. (1997, January). *Profiles of participatory programs: Visual motion media in Indian development.*

Boylan, E. M. (1985, January). *The videotape French culture assimilator.*

Brown, S. M. (1984, January). *A guide to effective visual communication with populations in developing countries.*

Cervantes, R. V. H. (1976, August). *Comics as educational material for breastfeeding in the Southern Tagalog region of the Philippines.*

Chaplin, L. E. (1987, December). *A communication strategy for Cornellians overseas.*

Chathoth, P. (1991, August). *The adaptation of foreign students to life in the U.S.: An exploratory study of Indian students at Cornell and Maryland University.*

Chen, Y. (1988, August). *Investigation of factors affecting the process of home computer adoption in Taipei, Taiwan.*

Chung, Y. (1994, May). *Exploring cultures in an organization from three perspectives: A case study of a Taiwan advertising program.*

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Cornell University
Ithaca, NY 14853

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