

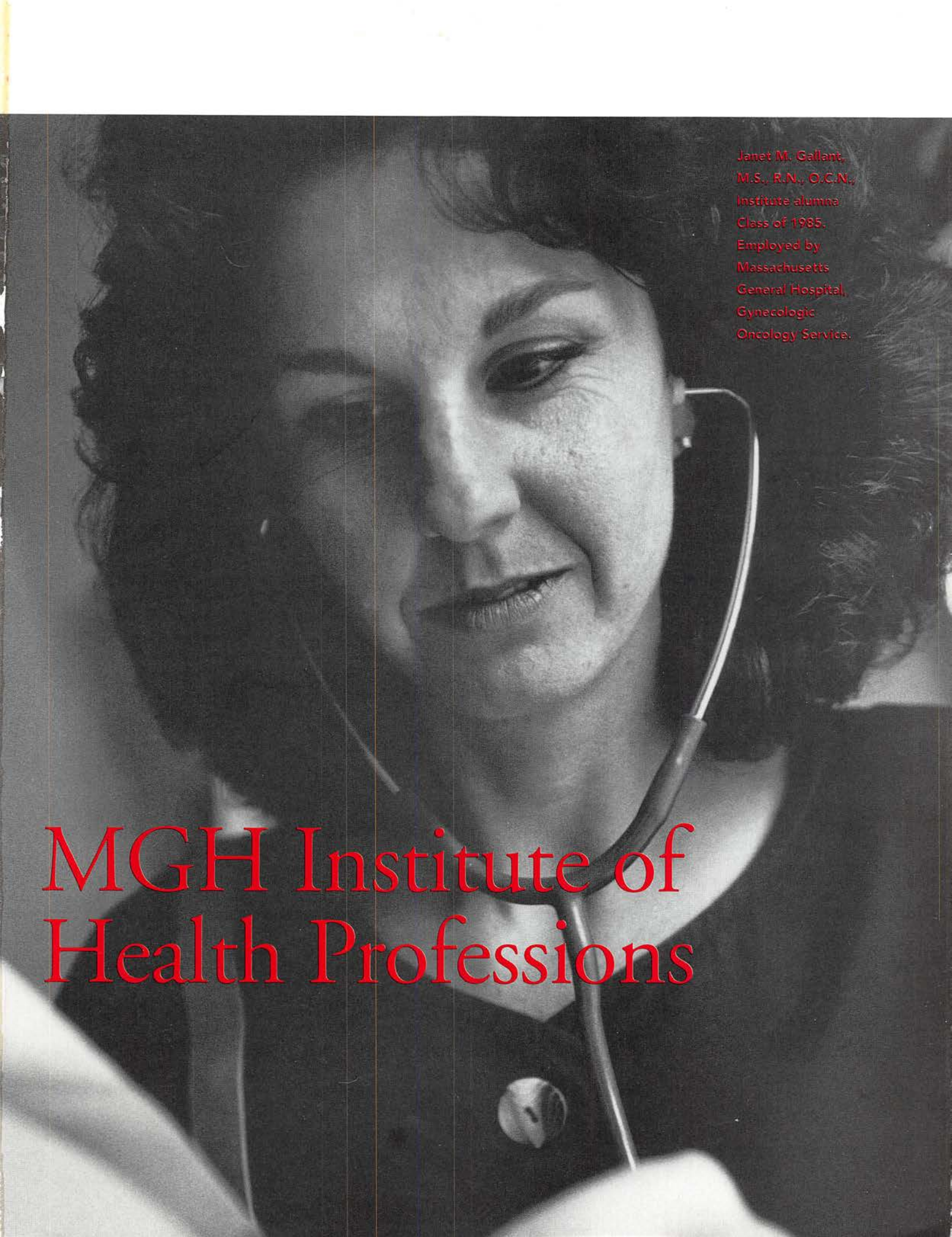
MGH Institute of Health Professions

at Massachusetts General Hospital

Catalog 1994-96

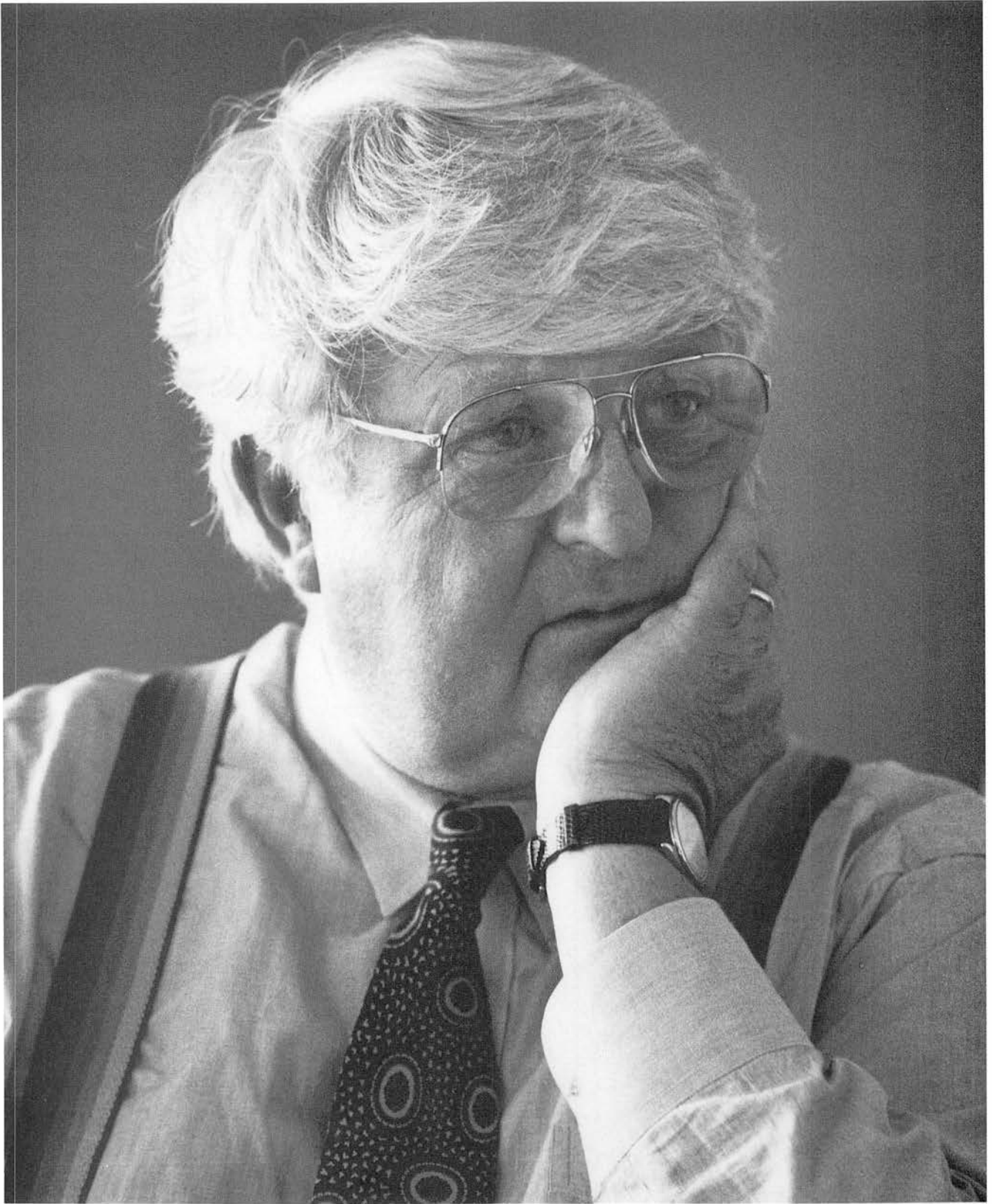


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Janet M. Gallant,
M.S., R.N., O.C.N.,
Institute alumna
Class of 1985.
Employed by
Massachusetts
General Hospital,
Gynecologic
Oncology Service.

MGH Institute of Health Professions



Dear Friends or Candidates for Study:

I am delighted that you may be considering the MGH Institute of Health Professions for graduate study or may have other professional or general interest in the Institute.

The Institute is a young, fully accredited graduate school attached to one of the oldest and finest hospitals in the country—the Massachusetts General Hospital. The Institute has recruited and developed an excellent faculty that provide academic leadership and programs that are on the leading edge of their disciplines.

The Institute is proud to have two fully endowed chairs, one in ethics and one in nursing research. The Henry Knox Sherrill Endowed Professorship in Medical Ethics has attracted international attention and has offered an opportunity to convene important conferences. The Amelia Peabody Endowed Professorship in Nursing Research has also attracted national attention and promises to be a catalyst in the growth of nursing research.

The Institute offers a variety of programs in the health-care professions. The Institute's educational philosophy springs from a belief that concurrent clinical and didactic instruction is essential for full professional development. The multidisciplinary nature of the Institute's academic programs offers a unique background against which students are able to view their special interests.

The Institute attracts and serves superior students and interacts with its outstanding alumnae. Institute students have traditionally come from a wide variety of backgrounds and experiences. Such diversity further enriches the learning environment. Faculty also bring a wealth of different academic and clinical backgrounds to the educational experience. Intelligent students from diverse backgrounds combine with a richly prepared faculty and interact with the world-renowned Massachusetts General Hospital and its affiliates. This environment creates a crucible in which leaders of tomorrow are developed. Although young, the Institute has achieved a strong national reputation.

Graduate study at the Institute will prepare students for the challenges of health care during the decade of the nineties and beyond. Students who have a strong commitment to a career in health care and who are seeking to perform as clinical leaders can find no finer institution than the MGH Institute of Health Professions. I urge those of you who are interested in becoming students to carefully consider the Institute. Please contact us if we can assist you in making this important career decision.

Sincerely,

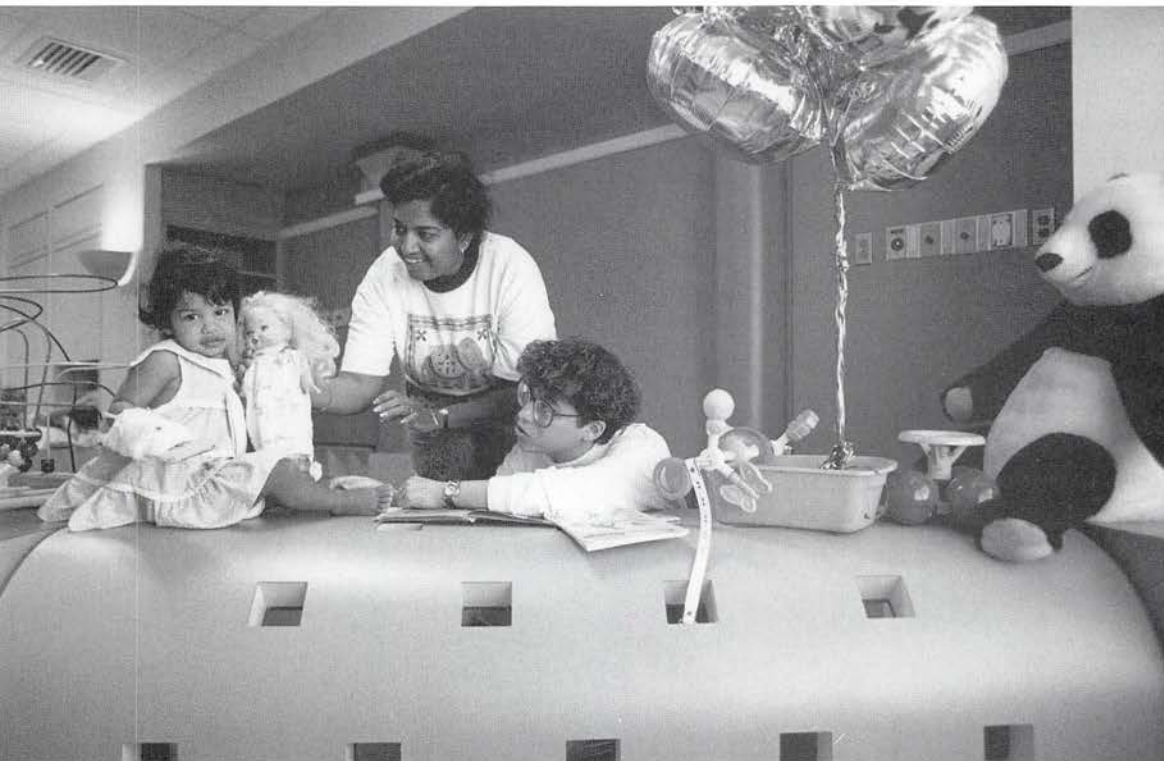
Patrick E. McCarthy
President

The MGH Institute of Health Professions

Founded in 1977 by the world-renowned Massachusetts General Hospital, the MGH Institute of Health Professions was separately incorporated in 1985 but maintains a close affiliation with the Hospital. Located on the campus of the Massachusetts General Hospital in Boston, the Institute offers academic programs leading to the Master of Science degree in dietetics, nursing, physical therapy, and speech-language pathology. The Institute is accredited by the New England Association of Schools and Colleges.

The Institute offers an exciting graduate education opportunity in the health-care professions. Here you will find students from diverse backgrounds. All are highly motivated individuals seeking either to begin careers as health-care providers or to become more accomplished in their existing professions. Some students enter the Institute's programs immediately after graduating from college. Others enroll after working in national or international service organizations such as the Peace Corps. Growing numbers come to the Institute as mid-life career changers, or in preparation for returning to the work force. Some are practicing professionals who wish to continue their education in a chosen area of specialization.

At the Institute you will benefit from a personalized education. Individual attention from faculty and staff and frequent small-group interaction will allow you to develop important professional relationships while having access to the support and guidance you deserve.



You will work with a talented faculty who are engaged in teaching, clinical practice, and research. Along with you, they will test the theories of the classroom through clinical application and enliven classroom discussion with clinical examples. As model practitioners, their clinical expertise and scholarly pursuits will guide you as you integrate theory with the care of patients, evaluate that care, and design and implement research to improve health care.

Because of its close association with the 1000-bed Massachusetts General Hospital and its affiliates, the Institute offers a comprehensive health-care environment. The Hospital is on the leading edge of new knowledge and care innovation and oversees the largest research budget of any hospital in the United States. The MGH Health Sciences Library and the Countway Library of Medicine at Harvard Medical School provide major basic science, medical, and nursing collections, periodicals, and on-line computer databases.

You will benefit from the Institute's multidisciplinary approach to health-care education. Advances in research and technology, evolving social and political values, a changing demographic picture, and economic concerns are causing extraordinary changes in the health-care world. The multidisciplinary approach will equip you to deal effectively with the humanistic concerns, ethical challenges, and social influence of contemporary care.

Educational Philosophy

The programs of the MGH Institute of Health Professions have been designed to incorporate the following basic educational concepts and beliefs:

- *Education for the health professions requires a thorough foundation in both theory and practice. It is of primary importance that the theory and practice components of the curriculum be integrated so that the student can clearly perceive their interrelation.*
- *Faculty in applied disciplines are best prepared to teach if they are experienced practicing clinicians. The clinical setting is an essential environment in which to teach and learn the skills necessary to become a competent health practitioner. A faculty that is responsible for teaching the curriculum as well as supervising the practicum is best equipped to integrate theory and practice and to provide appropriate role models for professional practice.*



- *Health professionals will be most effective if they possess a foundation in scientific methodology. This will enable them to evaluate the relative effectiveness of clinical practices within their disciplines, to evaluate critically the research of others, and to add to health-care knowledge through their research.*
- *Health professionals need to provide care within their respective disciplines. They also need to contribute to the continuous process of evaluation and improvement of health-delivery methods by working cooperatively with professionals from other disciplines. Students who are trained in a multidisciplinary setting in which they cooperate in both academic and clinical pursuits will be well equipped to function throughout their careers as effective members of health-care teams.*
- *The integration of theoretical and practical knowledge and multidisciplinary cooperation will be best supported by involving active practitioners from all fields in program planning and in student supervision and teaching.*

**Kathleen Harrington,
B.S., Human Services,
Nursing Student,
MGH Institute of
Health Professions,
Class of 1996.**

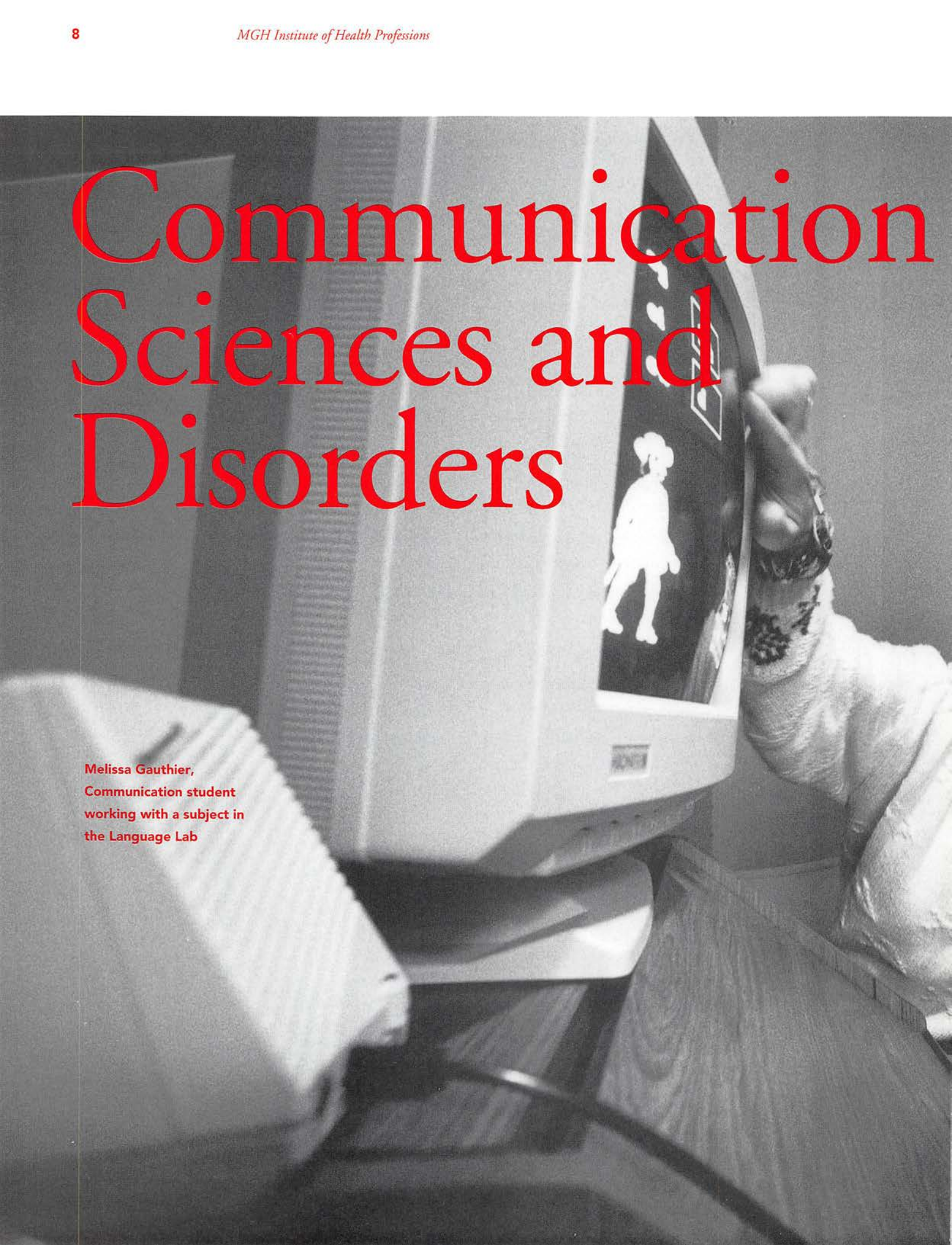
- *All health education curricula should be designed to develop students' awareness of and commitment to the ethical and humanistic aspects of professional practice. Education for health professionals should not only equip graduates with the scientific knowledge and technical skills necessary to provide quality care but also prepare them to be sensitive to the rights, dignity, and individuality of each patient.*
- *To maintain their proficiency, health professionals must stay abreast of the advances and changes in their disciplines throughout their careers. Students should learn early to assess their own educational needs and to identify a variety of means for meeting those needs.*

Mission

The MGH Institute of Health Professions, an autonomous, educational institution on the campus of Massachusetts General Hospital (MGH), is an interdisciplinary academic center for learning, research, and clinical scholarship with the power to grant degrees in selected health professions. The mission includes:

- *preparing skilled health-care specialists, capable of becoming leaders in their clinical disciplines;*
- *developing innovative instructional models and methods for preparing skilled clinicians;*
- *strengthening the scientific foundations of health-care practices;*
- *developing new methods of practice and patterns of service to foster provision of effective, affordable, accessible, ethical, and humane health care;*
- *providing opportunities to explore innovative approaches to health-care practice and education.*

Communication Sciences and Disorders



Melissa Gauthier,
Communication student
working with a subject in
the Language Lab



The Graduate Program in Communication Sciences and Disorders at the MGH Institute of Health Professions, a fully accredited graduate institution affiliated with the Massachusetts General Hospital, offers the Master of Science degree with comprehensive scientific and clinical education in spoken and written language disorders.

Students receive the academic and supervised clinical training required for clinical certification by the American Speech-Language-Hearing Association.

Graduates of the program may pursue a career in the diagnosis and treatment of human communication disorders or, as the program provides a strong grounding in theory and scientific methods, pursue additional study at the doctoral level before launching a clinical, academic, or research career. As research reveals a close correspondence between disorders of spoken and written language, students are encouraged to choose freely from a curriculum that is rich in both areas.

Research in cognitive neuroscience is causing major changes in the field of communication disorders. Not long ago, “neurogenic disorder” referred mainly to aphasia, and the term “genetic speech disorder” would have brought to mind Huntington’s disease or Down’s syndrome. But research now suggests that a range of speech and language disorders—from developmental language delays to stuttering, dyslexia, and autism—may have a genetic and neuroanatomical basis. Consequently, we teach our students to interpret the advances in cognitive neuroscience that relate to, and potentially explain, communication impairments.

But genes and brain structure do not tell the whole story. To understand the strategies children use to recognize printed words, or to interpret the meaning of spoken sentences, we need the information processing models of psycholinguistics and cognitive neuropsychology. These models offer new insights into normal communication capabilities and, where these capabilities are disordered, inspire more insightful methods of diagnosis and remediation.

Our curriculum reflects recent advances in cognitive neuroscience and provides students with a theoretical framework for the evaluation and treatment of speech and language disorders. Students are given an intensive theoretical grounding in the neurobiological, cognitive, social, and linguistic bases of communicative disorders, and this grounding is integrated with supervised training. Students also receive carefully guided research experience that is intended to help them become effective clinical scientists.

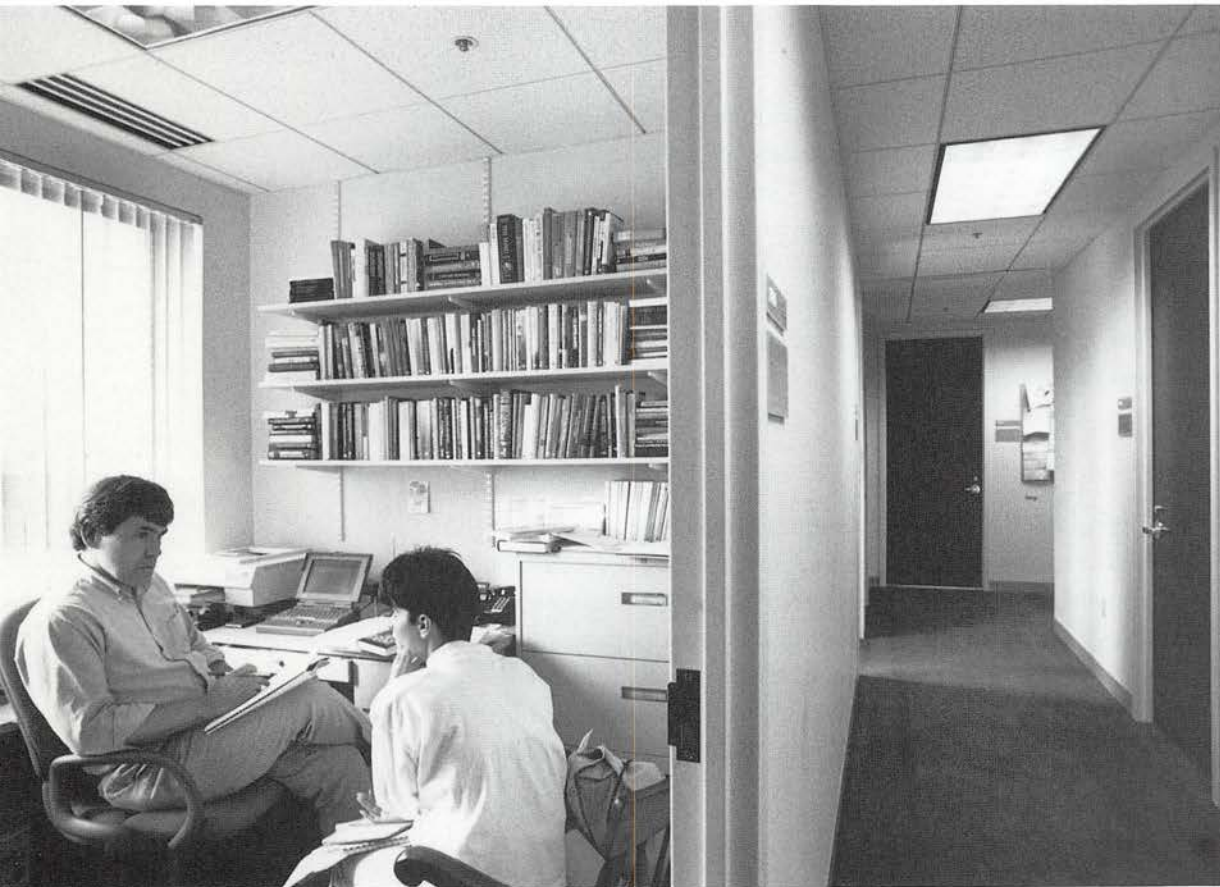
Though language is a central feature of the program, students also are prepared to deal with conditions that impede the normal expression of language—including vocal pathologies, fluency problems, and neuromotor disorders. The program also offers course work and clinical training opportunities in dysphagia.

Special Features of the Program

The Graduate Program in Communication Sciences and Disorders has a number of special features. These include a range of clinical training and research opportunities at the Institute, the MGH and Spaulding Rehabilitation Hospital, and other affiliated institutions, including hospitals, schools, and early intervention programs; well-equipped clinical and experimental research facilities at the Institute and the Hospital; and a progressive curriculum that is coordinated with clinical training experiences.

Clinical instruction

Students are instructed by clinical scientists who are actively engaged in research on the nature and treatment of communication disorders. Clinical practica are supervised by certified speech-language pathologists and offer experiences with patients having a variety of developmental and acquired disorders. Training in basic and clinical research is available to all students in the Language Laboratory, the Experimental Phonetics Laboratory, the Neurolinguistics Laboratory, and the Center for Reading and Writing Research.



James S. Hodgson, Ph.D., Associate Professor, talks with a Communication Sciences student.

Research opportunities

Language Laboratory: The Language Laboratory represents our commitment to the convergence of science and practice. The Laboratory is used for evaluation of clinical and remedial processes associated with management of written and spoken language disorders, basic preparation of students to offer clinical and educational services, and study of the training process. All rooms are equipped with video and audio recording equipment and computers.

Experimental Phonetics Laboratory: This research laboratory is dedicated to the acoustic and phonetic analysis of speech and preparation of audio materials. The lab includes two sound rooms that are equipped with computers and recording equipment.

Neurolinguistics Laboratory: In the Neurolinguistics Laboratory, faculty and students study normal and disordered brain and language mechanisms in children and adults. These studies are directed toward two goals: To increase understanding of the processes by which the human brain performs the functions of language and related cognitive operations and to expand knowledge of linguistic and associated cognitive disorders. Investigations currently underway involve the biological bases of spoken language, developmental language delay, adult literacy, mathematical disorders, and early identification of children at risk for dyslexia.

Center for Reading and Writing Research: The Graduate Program in Communication Sciences and Disorders operates the Center for Reading and Writing Research. The Center conducts and sponsors research on genetic, neurological, cognitive, and educational aspects of developmental dyslexia. The Center's staff perform their work at the MGH Institute of Health Professions, the Massachusetts General Hospital, Landmark School (a private school for dyslexic young people), and other area institutions.

Cross Registration at Harvard

The Graduate Program in Communication Sciences and Disorders has a full curriculum of progressive courses, which is described below. Additionally, the program has a cross-registration program with the Harvard Graduate School of Education. Under this program, students may occasionally register for graduate courses at Harvard without paying additional tuition or fees. A list of recommended courses will be made available to those wishing to take advantage of this opportunity.

Admissions Requirements

The Graduate Program in Communication Sciences and Disorders is open to individuals with a bachelor's degree in various fields including, but not limited to, communication disorders, psychology, linguistics, the biological sciences, or related fields. All applicants must submit scores from the Graduate Record Examination. An undergraduate grade point average of 3.0 on the basis of a four-point scale is required. Those who have unusual circumstances are invited to contact the director of the program.

Curriculum

The Graduate Program in Communication Sciences and Disorders takes two calendar years of full-time study to complete. As a developing program, we occasionally make minor changes in course titles and content and in the timing and sequence of courses.

Degree Requirements

The program requires completion of 80 credit hours of course work, including the thesis. Those seeking clinical certification should sign up for 3 credits of clinical lab and practicum (Year 1) or clinical practicum (Year 2) each semester in which supervision is expected. These credits do not count toward graduation.

Communication Sciences and Disorders (68 credits)

<i>Spoken and written language</i>	<i>56 credits</i>
<i>Audiology</i>	<i>6 credits</i>
<i>Thesis</i>	<i>6 credits</i>

Health Professions (9 credits)

<i>Designing clinical research</i>	<i>3 credits</i>
<i>Statistics for clinical research</i>	<i>3 credits</i>
<i>Computer lab</i>	<i>1 credit</i>
<i>Ethical issues in health care</i>	<i>2 credits</i>
<i>Elective</i>	<i>3 credits</i>

Kim Ziemer, M.S., R.D.,
Class of 1992, discussing
nutritional programs with
a patient at the
Massachusetts General
Hospital.



Dietetics



The Graduate Program in Dietetics offers a Master of Science degree. The increasing complexity of professional practice in dietetics has created a need for dietitians who have in-depth knowledge and skills and can fill specialized leadership positions in the health-care setting. The program is designed to address this need by educating registered dietitians to become practitioners in specialties of clinical dietetics and clinical management.

The goals of the Graduate Program in Dietetics are to give students the opportunity to

- *gain in-depth knowledge of their chosen area of interest;*
- *develop advanced skills in management of food and nutrition services;*
- *refine their clinical and managerial decision-making skills through critical analysis of dietetic practice;*
- *evaluate state-of-the-art practice in their chosen specialty and identify clinically relevant questions for future study based on current research;*
- *gain the tools necessary to integrate theory and practice and to work toward specialization in clinical practice or management.*

The program provides a foundation in both theory and practice. It prepares students for the demands of complex health-care systems by offering a combination of didactic study, guided clinical practicums, and research experience. Students can specialize, within the framework of clinical dietetics, in the provision of nutritional care across the life-cycle (e.g. pediatrics, geriatrics) and for disease/disorder treatment and prevention (e.g. metabolic support, cardiovascular health). Opportunities to explore other specialties are planned on an individual basis. The health professions courses in research, humanistic concerns, and education are integrated into the program according to professional and personal goals and objectives.

The management specialty was recently developed in response to a recognized need for dietitians and other health-care professionals who are prepared to assume management roles in the rapidly changing health-care environment. The opportunity to gain clinical expertise while, at the same time, honing valuable management skills is unique to this program. Students join those at the Heller School at Brandeis University for their management course work.

Clinical Dietetics

Degree Requirements

A minimum of 48 credit hours is required, including specialized practicums and a thesis. The program incorporates two broad areas: the core in dietetics and the health professions core. In both areas, emphasis is placed upon research, humanistic concerns, and interdisciplinary approaches to health care. The minimum requirements are:

Dietetics (33 credit hours)

<i>Specialization related courses</i>	<i>17-20 credits</i>
<i>Specialized practicums</i>	<i>6-9 credits</i>
<i>Thesis</i>	<i>6 credits</i>
<i>Dietetics seminar course</i>	<i>1 credit</i>

Health Professions Courses (15 credit hours)

<i>Clinical Research</i>	<i>3 credits</i>
<i>Statistics for Clinical Research</i>	<i>4 credits</i>
<i>Other health professions courses</i>	<i>8 credits</i>

Requirements may be completed through either full-time or part-time study. The average full-time student may expect to complete the program within four 15-week terms. Since the nature of research projects varies based upon individual interest, time for completion of the degree may also vary. All degree requirements must be completed within five consecutive calendar years.

Individually Designed Practicums

Practicums allow students to develop and strengthen their practice skills in a selected area of clinical dietetics and to integrate classroom instruction within the clinical setting. Practicums are arranged with Massachusetts General Hospital, area health programs, and other affiliated institutions. A practicum at Massachusetts General Hospital might involve nutrition management of the critically ill burn patient, while one at Sports Medicine Boston might emphasize nutritional counseling of athletes.



"There is a special relationship between the Massachusetts General Hospital and the Institute that produces unique teaching and learning opportunities for students and faculty alike." Judith Manola, M.S., R.D., Instructor.



Clinically Relevant Research

Students complete a thesis, the body of which is an article prepared for a peer-reviewed journal. The research is in the area of specialization chosen by the student and is one which is clinically relevant to the practice of dietetics. Examples of recent thesis projects include:

- *Client characteristics that predict success on a hospital-based weight loss program*
- *Energy expenditure in mechanically ventilated patients*
- *Prevalence of hypomagnesemia among critically ill neonates*
- *Use of tube feeding in low weight anorexia nervosa patients*

Educational Outcomes

Upon completion of the program, graduates will possess specialized knowledge and skills in dietetics and an understanding of the relationship of professional practice to humanistic and social concerns and to the health-care system. They will be ready to assume specialist positions in dietetics, serve as leaders in the profession, and play active roles in dietetic research. Graduates will be able to:

- *apply principles of nutrition science to the practice of a specialty area of clinical dietetics and utilize the scientific method in the evaluation of daily clinical practice;*
- *define, accomplish, and evaluate the goals and objectives of clinical dietetics services within a health-care organization;*
- *apply the principles of management to assure delivery of nutrition in a cost-effective manner;*
- *demonstrate empathy and understanding with respect to socioeconomic, ethnic, and educational differences in clients, employees, and peers;*
- *function as a leader within the health care system in the provision of nutritional care;*
- *advocate for nutrition care by identifying competent, qualified practitioners and identifying and prioritizing recipients of that care;*
- *plan, advocate for, and manage change recognizing social policy and legislative implications for dietetic practice;*
- *conduct applied research;*
- *demonstrate enhanced ethical and professional behavior;*
- *develop, maintain, and evaluate standards of practice.*



"The Graduate Program in Dietetics provides new educational opportunities to enhance clinical knowledge and expertise along with management skills through the management specialty."
Mary Carey, Ph.D., R.D., Director of the Graduate Program in Dietetics.



Ellen Anderson, M.S., R.D., Assistant Professor, discussing the nutritional needs of diabetics with Isabel Vasquez, M.S., R.D., MGH Institute of Health Professions alumna.

Management in Dietetics

Degree Requirements

A minimum of 48 credit hours is required, including specialized practicums and a thesis. A complete description of this specialization may be found in the section, Management Specialization. The program incorporates two broad areas: the management core and the core in dietetics. The practicums and thesis integrate the cores.

Management (15 credit hours)

See section on management specialization

Dietetics (14 credit hours)

Dietetics specialty-related courses

13 credits

Dietetics seminar course

1 credit

Integrated and Interdisciplinary (19 credits)

Clinical Research

3 credits

Statistics

4 credits

Practicum in the Management of Health Care Services

6 credits

Thesis

6 credits

Program Advantages

Faculty

The Dietetics faculty include individuals who are active scholars and have extensive practitioner experience in the health-care setting. A wide range of expertise and interests within the field of dietetics is represented. Expertise in the areas of nutrition and disease, the critically ill, and management is most prominent and specifically relates to such interests as the role of nutrition in diabetes mellitus, cardiovascular health, bone health, nutrition support, cost-benefit of nutrition services, and clinical management. Most faculty members hold appointments with Massachusetts General Hospital and are involved in research.

Program Flexibility

Students are given maximum choice and flexibility in matching the focus of study with individual interests and experience. Course selection, course projects, and other assignments allow much of their work to focus on topics of individual interest.

Tufts University School of Nutrition Cross Registration

The Graduate Program in Dietetics has an agreement whereby Institute students may enroll in graduate courses at the School of Nutrition. A student who wishes to enroll in a course should obtain information from the Director of the Graduate Program in Dietetics.

"Our newly revised nursing curriculum serves as a national model for preparing graduates to become Nurse Practitioners."
Maureen W. Groër,
Director of the Graduate
Program in Nursing.

Nursing



The Graduate Program in Nursing offers the Master of Science in Nursing degree and is designed to prepare both non-nurse and registered nurse college graduates to become advanced practice nurses. During the first three semesters, non-nurse college graduates receive instruction and experience in general nursing practice.

Upon completing these requirements successfully, students receive certificates in generalist professional nursing and become eligible for licensure as registered nurses by the Massachusetts Board of Registration in Nursing. Registered nurse students enter the program with advanced standing.

The program requires prerequisite undergraduate courses in anatomy and physiology, chemistry, microbiology, and nutrition. Potential applicants submit transcripts of courses taken previously to meet these prerequisites. If applicants are deficient in any of these science courses, they may be admitted into the program and can matriculate into the first semester after successfully completing courses offered in the summer preceding admission. These courses are offered during an intensive summer term at the Institute and will fulfill the prerequisite requirements. Students must also demonstrate either course work or evidence of competency in the use of computers. A course in computer competency is available for students without this prerequisite during the science summer. While no other courses are prerequisite, students are encouraged to take basic courses in psychology and sociology if they have not taken such courses before.

The program offers a curriculum which will allow non-nurse students to complete a three semester generalist-level curriculum that prepares the students with both undergraduate-equivalent and more advanced course work. At the successful completion of these courses, students receive a certificate of completion and are eligible for licensure as reg-



**John Deckro, M.S.,
R.N., Assistant
Professor, and nurs-
ing students Susan
Raymond and Curtis
Carlson.**

istered nurses by the Massachusetts Board of Registration in Nursing. At the completion of the generalist curriculum, students begin a series of advanced practice courses that will provide them with beginning skills as adult or pediatric nurse practitioners. These courses are the foundation for advanced practice courses in adult or pediatric nurse practitioner, family nurse practitioner, oncology, critical care, women's health, gerontology, parish nursing, nursing management, and a variety of other options. Students work closely with the academic advisor to plan for a sequence of courses individualized to the student's career goals. Students may be eligible to sit for both nurse practitioner certification and other specialty certifications, depending upon the course of study after graduation. The program also requires students to be intelligent consumers of research, have a beginning knowledge of nursing research, and to complete either a scholarly project or thesis.

RN students receive advanced standing depending upon academic preparation and experience. Non-BSN prepared RN college graduates are required to successfully complete the RN Mobility Profile Exam and a Community Health Nursing course before progressing on to the advanced practice courses.

Faculty

Most of the faculty are doctorally prepared and represent a diversity of backgrounds, academic preparations, and geographical origins. Many faculty maintain practices in a variety of hospital and community settings. Nursing research and scholarship are also strengths, with faculty maintaining research programs in maternal-infant health, women's health, HIV disease, behavioral immunology, stress coping and hardiness, and many other areas.

Facilities for clinical instruction include inpatient and outpatient services of the Massachusetts General Hospital and its affiliates and a variety of other major medical centers and community settings within a ninety-mile radius of Boston. The clinical credit ratio is 1 credit of clinical is equal to 3 hours of practice.

Professional Accreditation

The Massachusetts Board of Registration in Nursing has granted full approval to the Graduate Program in Nursing. The program is fully accredited by the National League for Nursing.



Jean Leuner, M.S., R.N., Assistant Professor, assisting Shannon Smith, a nursing student, with her techniques in one of the Institute's new instructional labs.

Degree Requirements

The Master of Science in Nursing degree is conferred upon successful completion of the prescribed curriculum, which consists of 92-95 semester hours. Non-nurse students are required to take the National Council Licensure Examination (NCLEX-RN) before progressing on to the advanced nursing practice curriculum. For R.N. students, depending upon academic preparation and experience, the curriculum may consist of 43 to 58 hours.

Curriculum Outline

Prerequisite Level:

Year 1

Summer Semester (for students missing prerequisites)

Integrated Science Modules (1-3)

Human Anatomy and Physiology (6)

Computer Competency Module (1)

Generalist Level:

Fall Semester

Nursing Practice: Process and Skills (3-3)

Health Promotion and Wellness Assessment (2, 1)

Biobehavioral Principles and Theories (3, 1)

Pharmacology (3)

Spring Semester

Nursing Practice: Common Problems in Adult Health (3, 3)

Community Principles and Theories (3, 1)

Pathophysiology (3)

Health Care Policy and Politics (3)

Year 2

Fall Semester

Maternal-Child Nursing (3,3)

The History of Nursing Ideas (3)

Advanced Health Assessment and Diagnostic Reasoning (3,3)

Advanced Practice Level:

Spring Semester

Designing Clinical Research (3)

Advanced Pharmacology (3)

Statistics for Clinical Research (3)

Nursing Management of the Child: Primary Care 1 (3, 3)

or Nursing Management of the Adult: Primary Care 1 (3, 3)

Year 3

Fall Semester

Management for Health Care Professions (3)

Nursing Management of the Child: Primary Care II (3, 3)

or Nursing Management of the Adult: Primary Care II (3, 3)

Advanced Practice Modules (3) (*can take 2 per semester*)

Spring Semester

Scholarly Project (3) or Thesis (6)

Advanced Practice Modules (3) (*can take 3 per semester*)

Professional Issues (1)

Ethical Issues in Health Care (2)

Program Advantages

- *The curriculum is designed for a heterogeneous adult population.*
- *RN applicants may have earned degrees in disciplines other than nursing.*
- *The program is clinically rigorous and prepares advanced practice nurses who have both nurse practitioner preparation and the opportunity to specialize.*
- *Small student-faculty ratios are the norm in clinical practicums.*

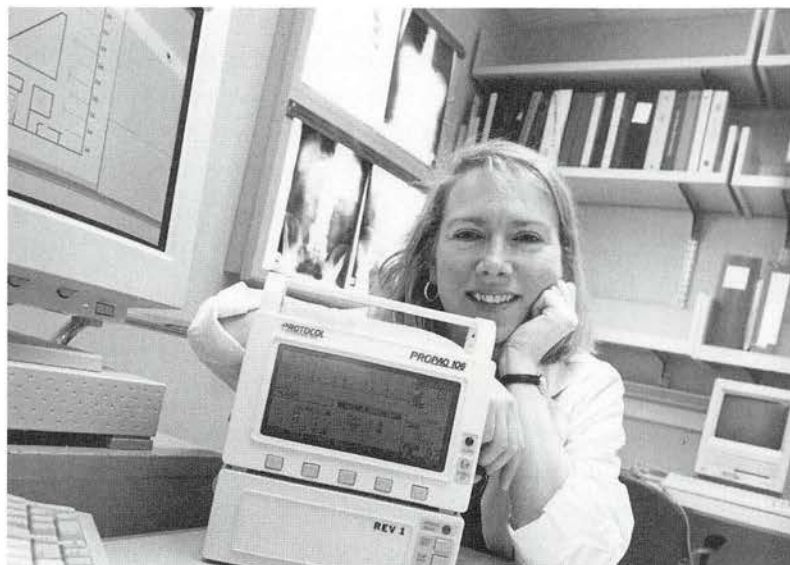
Program Philosophy

The Graduate Program in Nursing subscribes to the established philosophy of the MGH Institute of Health Professions and promotes a collaboration approach to the education of health professionals. This approach assumes faculty competence in clinical practice and research and seeks to develop these skills in students as integral components of the professional role. The program is based on the faculty's beliefs concerning the person-in-relation, environment, health, and nursing.

Nursing is holistic concern and caring for the body-mind-spirit unity of persons within their environments. The faculty believe that caring is facilitated by viewing human beings as persons-in-relation at every level of human existence and connection: individual, family, group, and community. Acknowledging each person's right to, and responsibility for, well-being, the faculty understand health to be the active

**Maureen W. Groër,
Director of the
Graduate Program in
Nursing, using multi-
media computer tech-
nology with nursing
student Frank Benson.**





**Patrice K. Nicholas,
D.N.Sc., R.N.,
Assistant Professor.**

pursuit of high-level wellness rather than the absence of disease. The faculty believe that the knowledge base of nursing is predicated upon both objective and subjective knowing, empirical as well as intuitive, ethical as well as aesthetic. Each approach to understanding reality complements and informs the other, thus creating a dynamic tension capable of reflecting the wholeness, the oneness, the interrelatedness and interconnectedness of all things. Nursing, as both art and science, encounters persons in their physiological, psychological, spiritual, and socio-cultural dimensions. Each of these dimensions of personhood comprise the context within which nursing addresses the potential for promotion, maintenance, and restoration of health.

As advocates for patients and their families, the faculty believe that nursing is appropriately involved at the critical intersects of political, economic, and cultural forces in the environment, in order to assure access to, and informed participation in, a responsive and responsible health-care system. The faculty believe that students and faculty are persons-in-relation; the experience and knowledge that each student brings to the study of nursing is valued. With an appreciation for the richness that diversity affords, the faculty believe that a community which seeks to maximize the potential of each individual can become a facilitating context for learning. The metaparadigm concepts of person-in-relation, environment, health, and nursing are dynamic, dependent upon initial conditions, complex, evolving, and changing in space and time.

Person-In-Relation

Person-in-relation is a multidimensional, unique, holistic being, an emergent unity of body-mind and spirit. The person is interactive and interdependent with others and the environment. The person is conceptualized as person-in-relation. Nursing encounters person-in-relation as either individuals and/or aggregates, as families, communities, and groups, existing in dynamic relationships with both microcosmic and macrocosmic universes.

Environment

The environment includes everything that surrounds human beings, visible and invisible, internal and external. The environment is all and everything to which people relate. Environmental variables are multidimensional, stochastic, and dynamic. These environmental variables include (but are not limited to) the biophysical environment in which we live, our diverse cultures, and bodies, minds, and spirits. Social, political, and economic structures intersect with these variables to constrain or facilitate contextual factors that impact the environment, thereby influencing the health of individuals, families, groups, communities, nations, the world, and the universe.

Health

Health is a dynamic, non-linear, relativistic, interdependent, multidimensional process of balance and wholeness. Health is whole-person well being, not the absence of disease. Health exists on a wellness continuum, and high level wellness involves self-actualization and harmony of body, mind, and spirit. The achievement of high level wellness transcends biological, emotional, or spiritual states, but rather reflects an emergent harmony of the whole.

Health is self-defined, requires personal responsibility, and is a right, not a privilege. It is influenced by culture, society, biology, development, environment, politics, economics, ethics, and access to health care.

Nursing

Nursing is an autonomous and collaborative practice profession emerging from an academic discipline. Nursing is a human science that encompasses an evolving body of knowledge that has both the aspects of scientific inquiry and creative art. The art of nursing includes caring, nurturance, and intuition. The science of nursing includes both basic and applied, quantitative and qualitative knowledge bases. The focus of nursing is on human responses to real or potential problems.

The goals of nursing are the promotion, maintenance, and restoration of health through facilitating harmonious interchange within and between persons and their environments. Nursing interventions are planned to achieve these goals. Health can be promoted and maintained through education, screening, self-awareness, and health-care support systems. Health can be restored through caring interventions that attend to the whole person and potentiate self-responsibility and self-healing. Nurses may apply their knowledge and skills in a variety of primary, secondary, and tertiary settings. The future of nursing is dependent upon agency and advocacy within the health-care policy arena.

Advanced practice nursing requires the individual to possess a graduate degree in nursing. Advanced practice nurses conduct comprehensive health assessments, demonstrating a high level of autonomy and expert skill in the diagnosis and treatment of complex responses of persons, families, and communities to actual or potential health problems. They formulate clinical decisions to manage acute and chronic illness and promote wellness. Nurses in advanced practice integrate education, research, management, leadership, and consultation into their clinical role. They function in collegial relationships with nursing peers, physicians, professionals, and others who influence the health environment (McLoughlin, 1992).

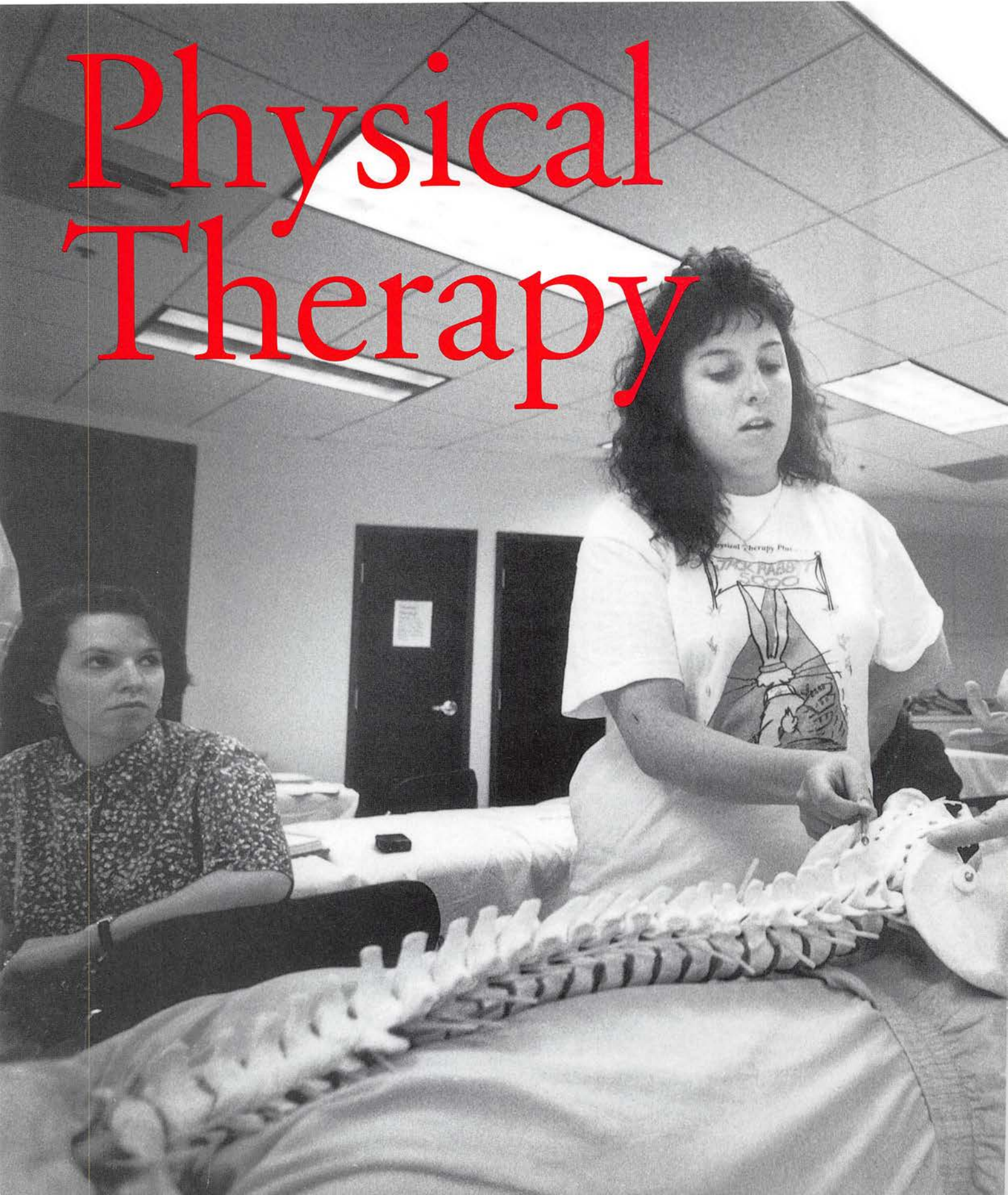
Educational Outcomes

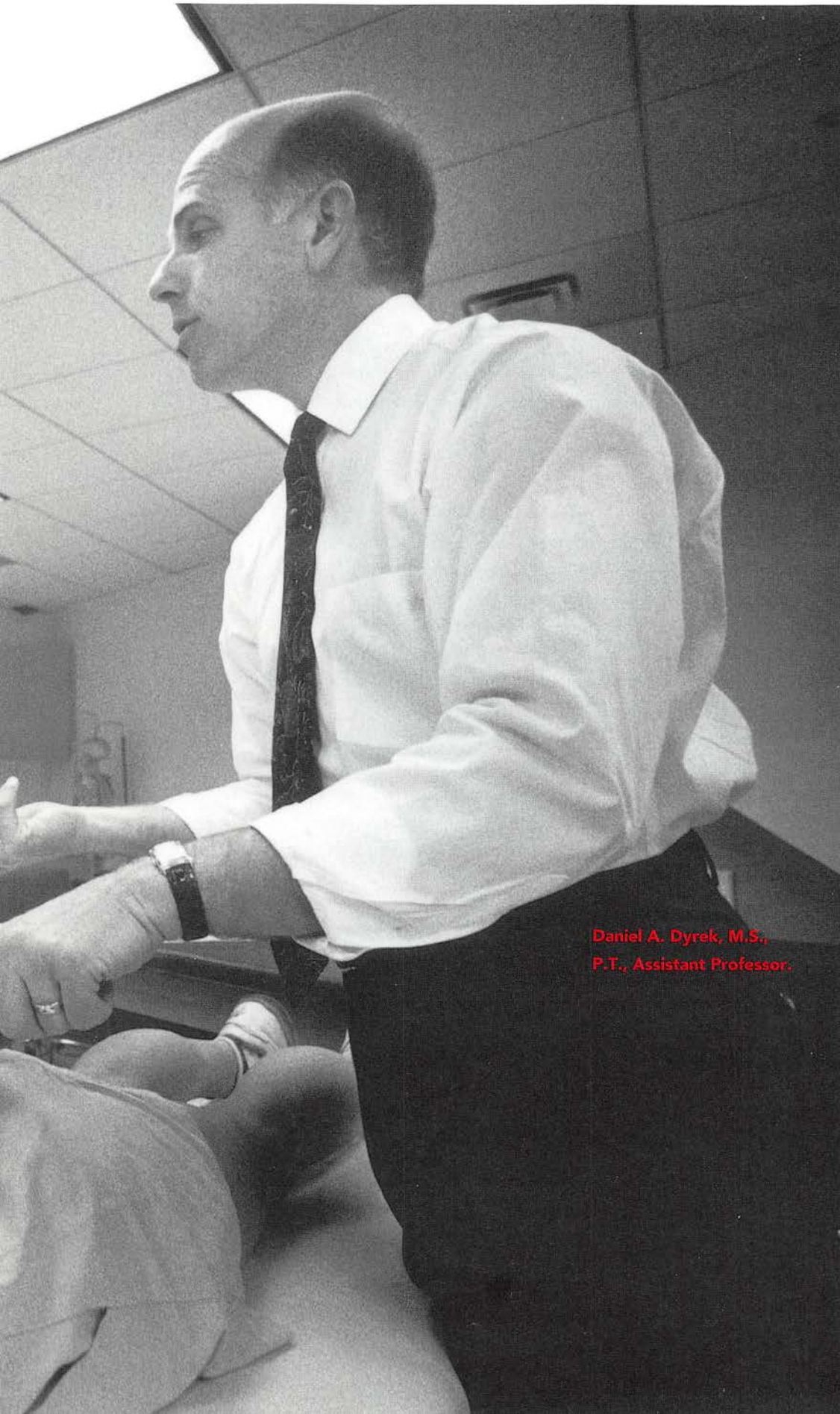
Graduates of the Institute's Program in Nursing are located throughout the United States and in several third world countries. They hold both traditional and newly conceptualized positions in beginning and advanced clinical practice in all health-care environments. They engage in direct care of the advocacy for patients, consultation, patient education, and clinical research.

“Our students are prepared as advanced practice nurses, to contribute in both traditional and new ways to an evolving and expanding health-care system in the twenty-first century.”

Dr. Maureen Groër
Director, Graduate Program in Nursing

Physical Therapy





Daniel A. Dyrek, M.S.,
P.T., Assistant Professor.

The Graduate Program in Physical Therapy offers a Master of Science degree. This is a postprofessional program designed to prepare experienced physical therapists to become advanced clinicians. Students develop a high level of skill in patient evaluation and treatment and gain the theoretical and practical competence needed to participate in the testing, refining, and expansion of the profession's body of knowledge.

The Institute's graduate program provides an opportunity to broaden theoretical knowledge, to become informed consumers of scientific research, and to learn advanced clinical skills. Students complete a core curriculum of essential analytical and methodological courses and select an area of specialization from the following:

- *Cardiopulmonary Physical Therapy*
- *Neurologic Physical Therapy*
- *Orthopaedic-Sports Physical Therapy*
- *Management in Physical Therapy*

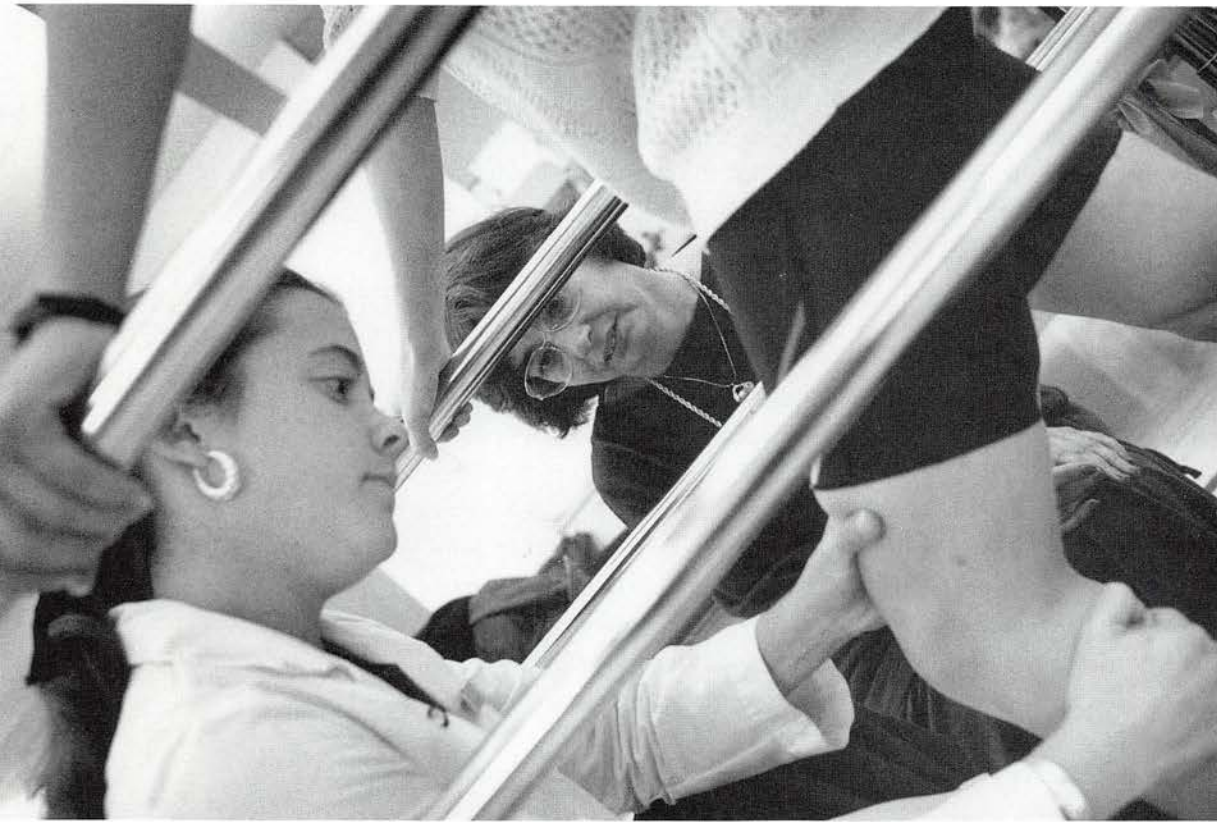
Students also have the option to develop an individualized program of study that crosses specializations to meet unique interests.

In addition to content courses, all students complete an individualized clinical preceptorship that emphasizes advanced clinical skills, a clinical thesis, and electives chosen from the many multidisciplinary courses offered by the Institute.

Program Philosophy

The Graduate Program in Physical Therapy is based on a philosophy that values an interdisciplinary approach to advanced professional education within a framework of clinical specialization. Recent advances in medical science and technology have created a need for advanced clinicians and clinical specialists who can function in diverse practice settings and who have the analytic and clinical skills to assume leadership roles in clinical practice, education, and research. As the health-care environment changes and as priorities in the provision of care evolve, physical therapists will continue to play an important part in the delivery of care and will be influential in affecting health policy. These roles require foundations in decision-making, scientific inquiry, and clinical measurement, in addition to basic and clinical sciences.

The student at the advanced level brings a wealth of experience, knowledge, and curiosity to a graduate program and contributes to the program as an adult learner. The curriculum provides for opportunities to explore individual interest and to engage in independent work, constantly emphasizing the importance of critical thinking and integration of theory as one pursues specific clinical interests.



**Bette Ann Harris,
M.S., P.T., Director of
the Graduate
Program in Physical
Therapy watches a
student work with a
patient.**

Degree Requirements

A minimum of 42 credit hours is required, including the clinical preceptorship and a thesis. The two major components of the curriculum are the core courses, some of which are taken on an multidisciplinary basis, and the specialization courses.

To be eligible for graduation, students must complete the following outline of course work:

<i>Core Courses:</i>	<i>13 credits</i>
<i>Designing Clinical Research</i>	
<i>Statistics for Clinical Research</i>	
<i>Computer Laboratory</i>	
<i>Foundations of Clinical Assessment in Physical Therapy</i>	
<i>Clinical Decision Making</i>	
<i>Clinical Specialization Courses</i>	<i>10 credits</i>
<i>Clinical Preceptorship in Specialization</i>	<i>6 credits</i>
<i>Thesis</i>	<i>6 credits</i>
<i>Electives</i>	<i>7 credits</i>

The program allows students to match the focus of study with personal interests and experience. Course projects and other assignments allow much of the student's work to focus on topics of individual interest. Because entering students are experienced therapists who have developed many advanced skills through practice and independent study, students who pass examinations in required areas of competence may achieve graduate credit without taking some courses.

Part-time or Full-time Study

Program requirements may be completed through either full-time or part-time study. The program offers courses throughout the year, including the fall, spring, and summer. Part-time students may begin work in any term, but full-time students are generally advised to start in September. Part-time students are given special assistance in planning course selection, projects, and schedules to help them integrate graduate study with their work activities and to make sure they can participate in the overall academic and social life of the Institute. Full-time students can complete their degree requirements in four terms of continuous study (approximately 15 months). Students may extend their study if they wish to take courses beyond the minimum requirements or to allow more time for completing the thesis. Part-time students usually require two to three years to complete the program. Courses taken for credit can be applied toward the student's degree at the Institute for a period of up to seven years before the completion of all degree requirements.



**Russell Butler, M.D.,
Associate Professor,
teaching in the
Institute's Physical
Therapy Laboratory.**

Program Advantages

Institutional Affiliations

The Institute's affiliation with the 1,000-bed Massachusetts General Hospital, as well as the 284-bed Spaulding Rehabilitation Hospital, provides access to an exceptional variety of patient care facilities for preceptorship experience and clinical teaching programs. Clinical and research laboratories include the MGH Biomotion Laboratory and the Sports Medicine Unit. The MGH has an active physical therapy department comprised of the cardiopulmonary service, inpatient rehabilitation service, and outpatient service. Physical therapy services are also available in two community health centers, numerous ambulatory clinics, and MGH's Physical Therapy Associates, a private, hospital-based practice. Additional clinical sites include Children's Hospital Medical Center, the Physical Therapy Department of the Beth Israel Hospital, and Braintree Hospital. The program also enjoys a close affiliation with MIT's Newman Laboratory for Biomechanics and Human Rehabilitation and the New England Research Institute.

Faculty

The physical therapy program is composed of nationally recognized faculty. Faculty are jointly appointed with the Hospital or other area medical facilities. This allows them to remain active in clinical practice, research, scholarship, and clinical administration. Faculty are involved in a wide range of research and scholarship including:

- *cardiopulmonary issues in geriatric practice*
- *chest physical therapy following acute respiratory failure*
- *risk factors for falls in the elderly*
- *epidemiology of disability*
- *biomechanical components of gait*
- *assessment of the cardiopulmonary system*
- *assessment and treatment of pain*
- *reliability and validity of muscle performance measures*
- *evaluation of manual therapy techniques*
- *effects of strengthening programs in the aging population*
- *posture and balance in vestibular disease patients*
- *gait assessment in the neurologically impaired*
- *effects of exercise on in vivo hip contact pressures*

Advanced Professional Study for International Physical Therapists

The Graduate Program in Physical Therapy offers two plans for experienced physical therapists who received their basic professional training in education programs outside the United States.

Master of Science Degree Candidate

Admission to this program is competitive. International therapists are only admitted directly to the degree program if the following conditions are met:

- *English is their first language;*
- *they hold a university baccalaureate degree and their university studies have included both social and natural sciences in addition to the professional courses needed for preparation as a therapist;*
- *their professional training and clinical work have been acquired in a country in which the pattern of education and clinical practice in physical therapy resembles that of the United States (Australia, Great Britain, and Canada are examples);*
- *they have at least two (2) years of work experience as a therapist following graduation as a physical therapist;*
- *they will be full-time students in the program and can plan to be at the Institute for at least four full terms of continuous study (15 months).*

International Scholar in Physical Therapy

International students who do not meet the above requirements must apply to the program as an International Scholar in Physical Therapy.

International Scholars may take the same advanced professional courses as degree candidates, but they are not eligible to complete a thesis or a formal clinical preceptorship. Because of visa and licensure restrictions, International Scholars may not be employed while at the Institute. However, their advisor can arrange for them to visit physical therapy departments at many Boston area hospitals.

To qualify for admission as an International Scholar, therapists from abroad should:

- *be graduates of a professional education program in physical therapy that is at least two (2) years in length and is recognized within their own country;*
- *have sufficient skill in written and oral English to take an active part in class discussions and complete assigned readings and written papers without assistance; prior to enrollment candidates should take English classes;*

- *have clearly defined clinical interests based upon at least two (2) years of professional experience as a physical therapist;*
- *be full-time students in the program and plan to be at the Institute for at least two terms (8 months); shorter programs will be arranged only in unusual circumstances.*

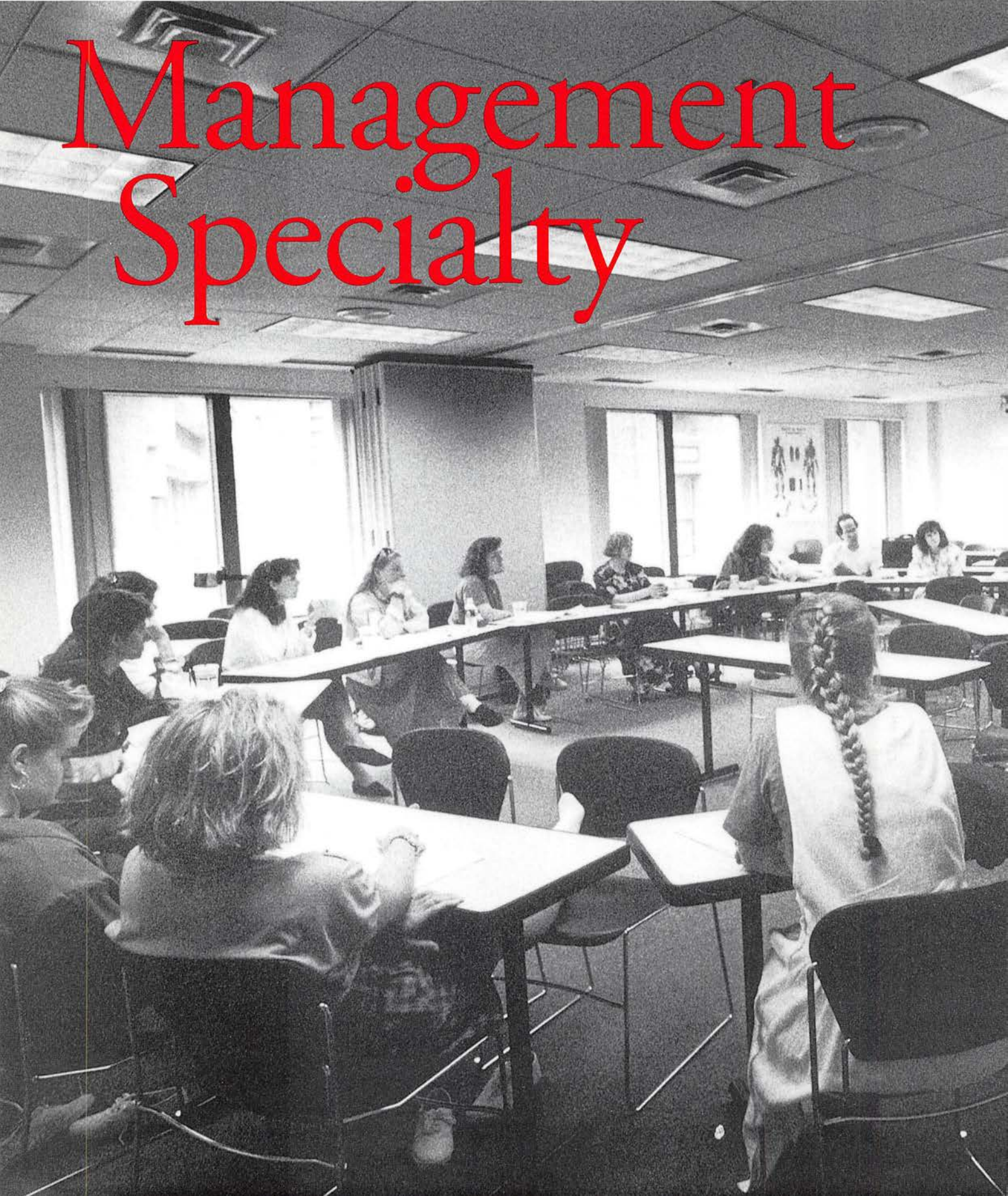
Applicants are required to take the TOEFL exams as part of the admissions process. Scholars experiencing difficulty with English will be required to seek outside language instruction and editorial assistance at their own cost.

International Scholars who complete two or more terms of study at the Institute will receive a formal certificate recognizing this advanced professional study.

Conversion from International Scholar to Master of Science Degree Candidate

Physical therapists trained outside the United States who do not have the qualifications described under the admissions plan for degree candidacy begin their advanced study at the Institute as International Scholars. Application to the degree program may be made after the student has completed at least two terms as a full-time Institute student. At any point after that time, students may formally request the Physical Therapy Program Committee to change their status to that of degree candidate, provided that they have maintained at least a 3.0 cumulative grade point average and have successfully completed a clinical checkout, evaluating their clinical experience. The request for degree candidacy should be submitted in writing to the Physical Therapy Program Committee. If approved, students are then expected to complete all degree requirements. Any courses in which the student has received a grade of B or better while enrolled as an International Scholar may be counted toward degree requirements.

Management Specialty





In response to the demand for clinicians with strong management skills, the MGH Institute of Health Professions has developed a unique specialty opportunity. Employers have recently cited the need for managers to possess not only management and leadership skills, but technical expertise.

"The changing nature of health-care delivery systems will require future health professionals understand the management of health care as well as the specialized knowledge of their chosen profession." Patrick E. McCarthy, President of the MGH Institute of Health Professions.

The mission of the Management Specialty is to prepare health-care professionals with the qualitative and quantitative analytical skills to effectively plan, control, and organize resources and to bring about change. The Management Specialty is open to students in all Institute disciplines. It is designed for students with at least two years of work experience in their professional fields.

The curriculum incorporates courses taken jointly with students in the Master's in Management of Human Services program at the Heller School at Brandeis University, giving students a broad, multidisciplinary perspective. The Institute's clinical courses can be selected in a specific area of interest to strengthen the student's practice base. The heart of the program is a hands-on management practicum with a successful administrative or clinical manager in a health-care setting. This experience provides opportunities for the student to integrate clinical and management skills in an experience with real-world constraints and outcomes. It also provides the student with a mentor to help in developing successful leadership skills. As a concluding experience, students complete a thesis, applying analytical and scientific skills to the solution of a management problem.

The specialty consists of the following educational components:

Core Courses

Specialization Courses

Electives

Advanced Practicum

Research

Specific degree requirements are established by each discipline.

Management specialty course offerings include

At the MGH Institute of Health Professions:

Designing Clinical Research

Statistics for Clinical Research, with Laboratory

Practicum in the Management of Health Care Services

Thesis

At the Heller School, Brandeis University:

Managerial Accounting

Strategic Management

Organizational Behavior

Personnel and Human Resource Management

Operations Management

Advantages

Joint Opportunities: The Best of Two Worlds

While capitalizing on the strengths of the faculties, research expertise, and institutional affiliations at the MGH Institute of Health Professions, students also have access to the resources of the Heller School at Brandeis University. The Heller School's social service orientation complements the offerings of the Institute, while providing students with a supportive peer group of developing managers and leaders.

Opportunity for Part-Time Study

Students with managerial aptitude are frequently unable to leave an existing position for extensive periods of study. The management specialty is tailored for the part-time student. Course work can be taken on a part-time basis over two or three years. Practicums can be designed to meet the specific needs of the student and can be incorporated into an existing work situation, if this works best for the student. Thesis work has a practical orientation and can also be applied to a problem in the student's work place.





Practicum

The practicum was designed after talking with successful health-care managers. They identified this opportunity as the one that contributed the most toward the development of skills they have needed to succeed. It is seldom that managerial decisions are made in the “purity” of an academic setting; managers must know how to accomplish tasks through teamwork and against real-world obstacles and constraints. The practicum is a unique opportunity to watch leaders operate in their environments and to participate in the leadership process.

Educational Outcomes

A graduate of the management specialty will:

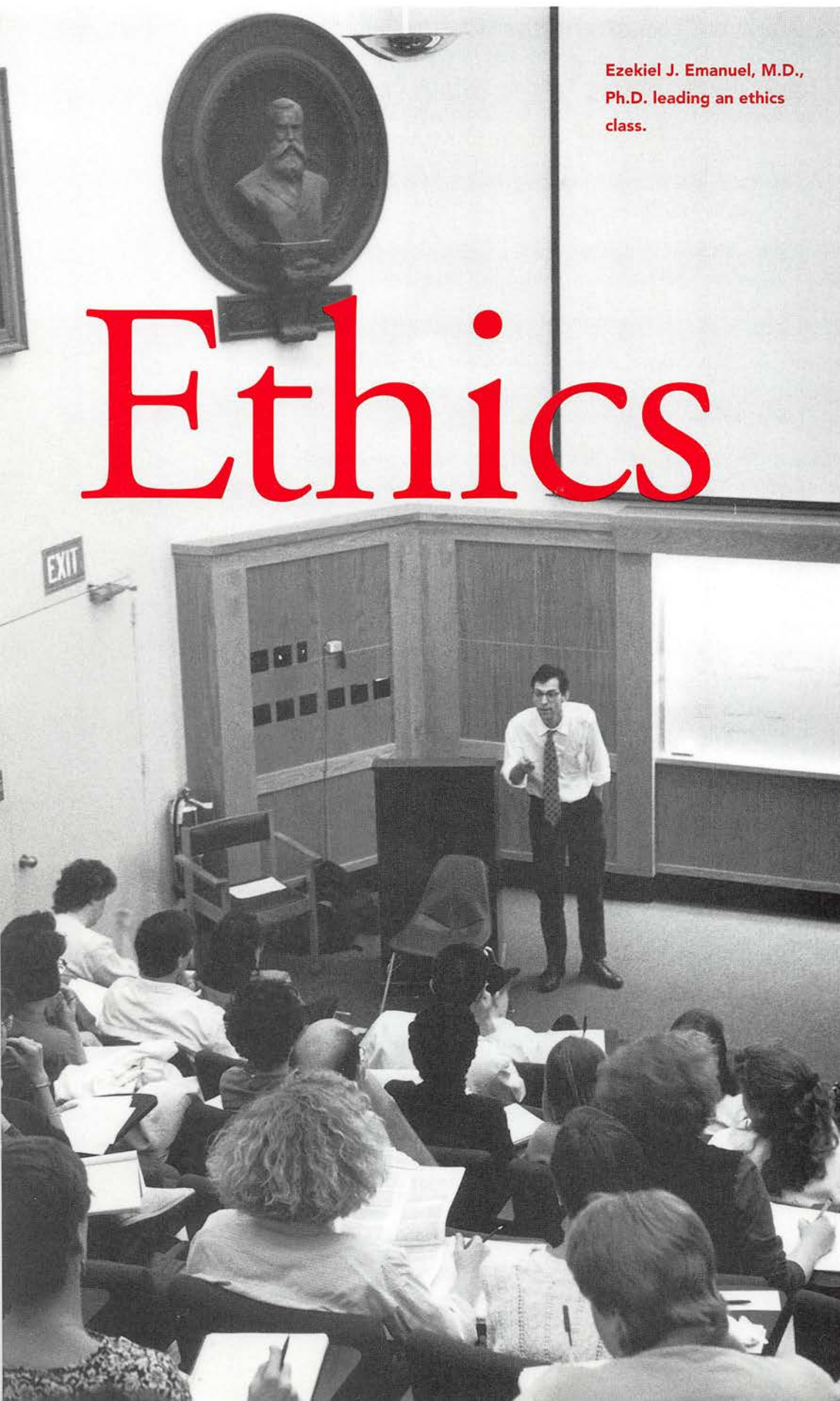
- *effectively manage human, financial, and technical resources;*
- *plan, advocate for, and manage change, recognizing social policy and legislative implications for clinical practice;*
- *possess strong communication, critical thinking, and problem-solving skills;*
- *possess strong quantitative analytical skills;*
- *be a leader who is an asset to the organization.*

Graduates will be prepared to assume jobs as middle- to upper-level managers in health-care organizations. They will have the skills necessary to continue to advance in their careers.

Ezekiel J. Emanuel, M.D.,
Ph.D. leading an ethics
class.

Ethics

Advances in research and technology, evolving political and social values toward health care, a changing demographic picture, and economic concerns are some of the factors causing extraordinary changes in the health-care world. These changes have created pressing ethical issues for health-care professionals and institutions. Health-care leaders must be equipped to address these concerns and future ethical challenges.



The MGH Institute of Health Professions Program in Ethics addresses these changes. Two major gifts to the Institute inaugurated the Program in Ethics and established an endowed professorship in memory of Henry Knox Sherrill, former Presiding Bishop of the Protestant Episcopal Church and former Chair of the MGH Board of Trustees.

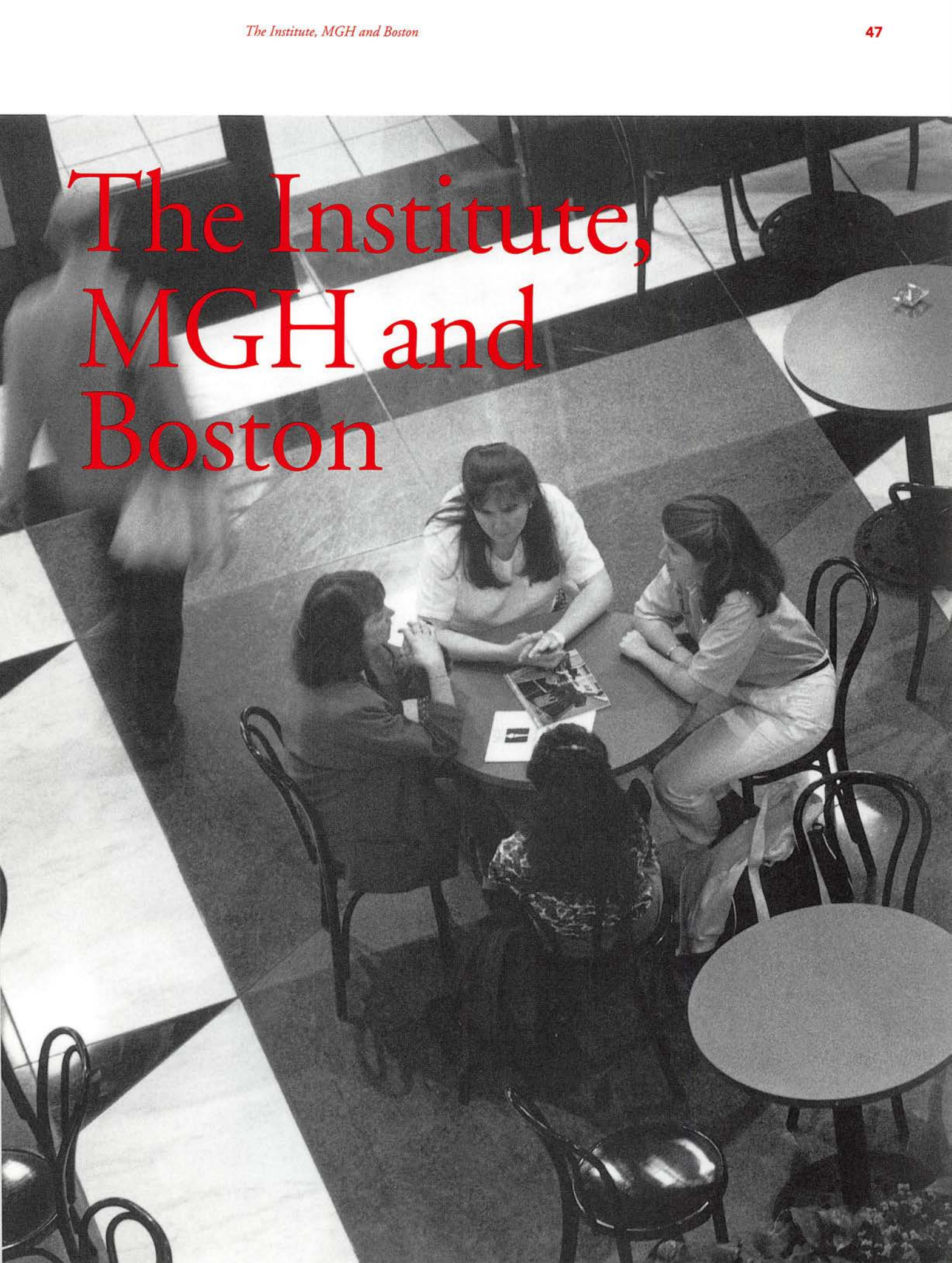
The Program's activities include education, research, and consultation. The purposes of the Program are:

- *to provide ethics education to students, health-care leaders, and other key decision makers who guide health-care practice and policy development;*
- *to conduct research on ethical issues in the clinical environment;*
- *to provide ethics consultation to Massachusetts General Hospital staff who face specific ethical dilemmas and to participate on institutional committees designed to develop and refine policy;*
- *to influence, through publications and special presentations, the development of institutional and public policy concerning ethics issues;*
- *to provide a forum for leaders from a variety of sectors in society to analyze and discuss major ethical issues facing the health-care system.*

An Ethics Fellows Program is planned that will invite a multidisciplinary group of outstanding individuals to the Institute annually to conduct research, take course work, and participate in seminars and an annual conference on leading ethical problems in health care. Participants will have opportunities for substantial collaboration and involvement with key MGH and other health-care personnel.



The Institute, MGH and Boston



Boston and Beyond

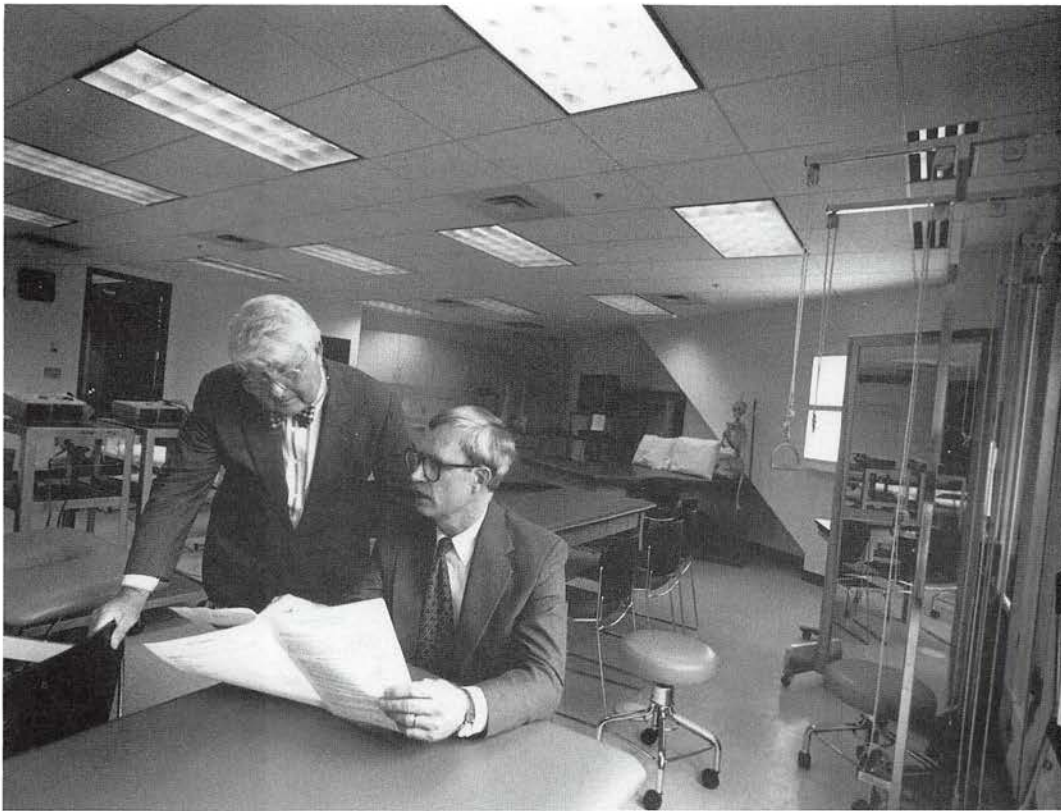
The MGH Institute of Health Professions is located on the campus of the Massachusetts General Hospital in the North End of Boston near historic Beacon Hill. While the North End forms the Institute's base, Boston is its broader campus. This historic city is home to sixty colleges and universities, with a combined student population of more than 200,000 within its metropolitan area. Boston is recognized around the world as a center for medical research and quality health care. Public transportation, subway or commuter rail, is available one block from campus.

Rich in the lore of more than three centuries of history, Boston offers the red-bricked Freedom Trail to guide visitors to landmarks dating from colonial times. Visitors can tour the USS Constitution moored in Boston Harbor, climb Bunker Hill, and visit other sites linked to our nation's struggle for independence. The culturally rich Back Bay section of Boston, which is close to the MGH campus, offers Symphony Hall, the Museum of Fine Arts, the Gardner Museum, and the Boston Public Library. The Charles River Esplanade, the Music Shell, the Museum of Science, and Community Boating are adjacent to MGH.

Boston reveres its past, yet blends this heritage with the exciting sights and sounds of contemporary cosmopolitan life. Theaters, concerts, and the arts flourish. Clubs and restaurants cater to every taste. The Red Sox, Celtics, Patriots, and Bruins provide year-round excitement for sports enthusiasts.

Boston is an exciting city in which to learn, explore, and enjoy, and Institute students quickly discover an exhilarating blend of old and new. Boston is also within a short drive from the lakes and mountains of New Hampshire and Vermont, the rugged beauty of the Maine coast, the Cape Cod National Seashore, and the small towns that comprise the classic landscape of New England.





**Patrick McCarthy,
President, and
Thomas Anderson,
Vice President, in the
new Physical Therapy
Laboratory.**

Institute Facilities

Offices and Classrooms

In 1992 the Institute moved into a newly constructed building and acquired all new, modern equipment and furnishings for our classrooms and laboratories. These new and modern furnishings define a showpiece environment for the education of health-care professionals. Additionally, the Institute is able to draw upon the many clinical and research facilities of the Massachusetts General Hospital and its affiliates. Classrooms, instructional laboratories, computer facilities, faculty offices, and all Institute administrative offices are located in new, modern facilities at 101 Merrimac Street.

Library Facilities

The Institute shares the MGH Health Sciences Library with the Hospital. This major health sciences library contains publications in nursing, allied health, medicine, and basic science. Holdings include 59,000 volumes and 1,000 active journals. The MGH Health Sciences Library subscribes to a number of electronic databases that are available for use to Institute students. Special arrangements have been made for students to use other libraries in the Boston area, including the Countway Medical Library of the Harvard Medical School.

Clinical Facilities

For practicums and clinical research, the Institute has access to the full range of clinical facilities of Massachusetts General Hospital. These include general and specialized inpatient and outpatient facilities at the Hospital and in its affiliated hospitals and neighborhood health centers. Affiliations are also arranged, as appropriate, in other Boston area medical centers and community settings.

Massachusetts General Hospital provides facilities for inpatient and ambulatory care, as well as for teaching and research, on a ten-acre site in downtown Boston. It also operates the Chelsea, Bunker Hill, and Revere Community Health Centers and the Logan Medical Station. Its affiliate institutions include McLean Hospital in nearby Belmont and Spaulding Rehabilitation Hospital, also in downtown Boston.

In recent years, the Hospital has recorded approximately 30,000 admissions annually, more than 80,000 Emergency Ward visits, and well over 300,000 clinic visits. The Hospital provides primary and specialty care to residents of greater Boston and serves as a referral center for patients throughout the region and from around the world. Its clinical facilities are an extraordinary resource for the education of health-care professionals.

Biomotion Laboratory

The Biomotion Laboratory is a joint effort of the Institute and the Massachusetts General Hospital Department of Orthopaedics. It is available for technologically sophisticated research utilizing the Selspot system with real time EMG, Kinematic, and Kinetic data analysis. The focus of the lab is on student/fellow and faculty research and education, as well as clinical fee-for-service locomotion analysis.

Computer Laboratory

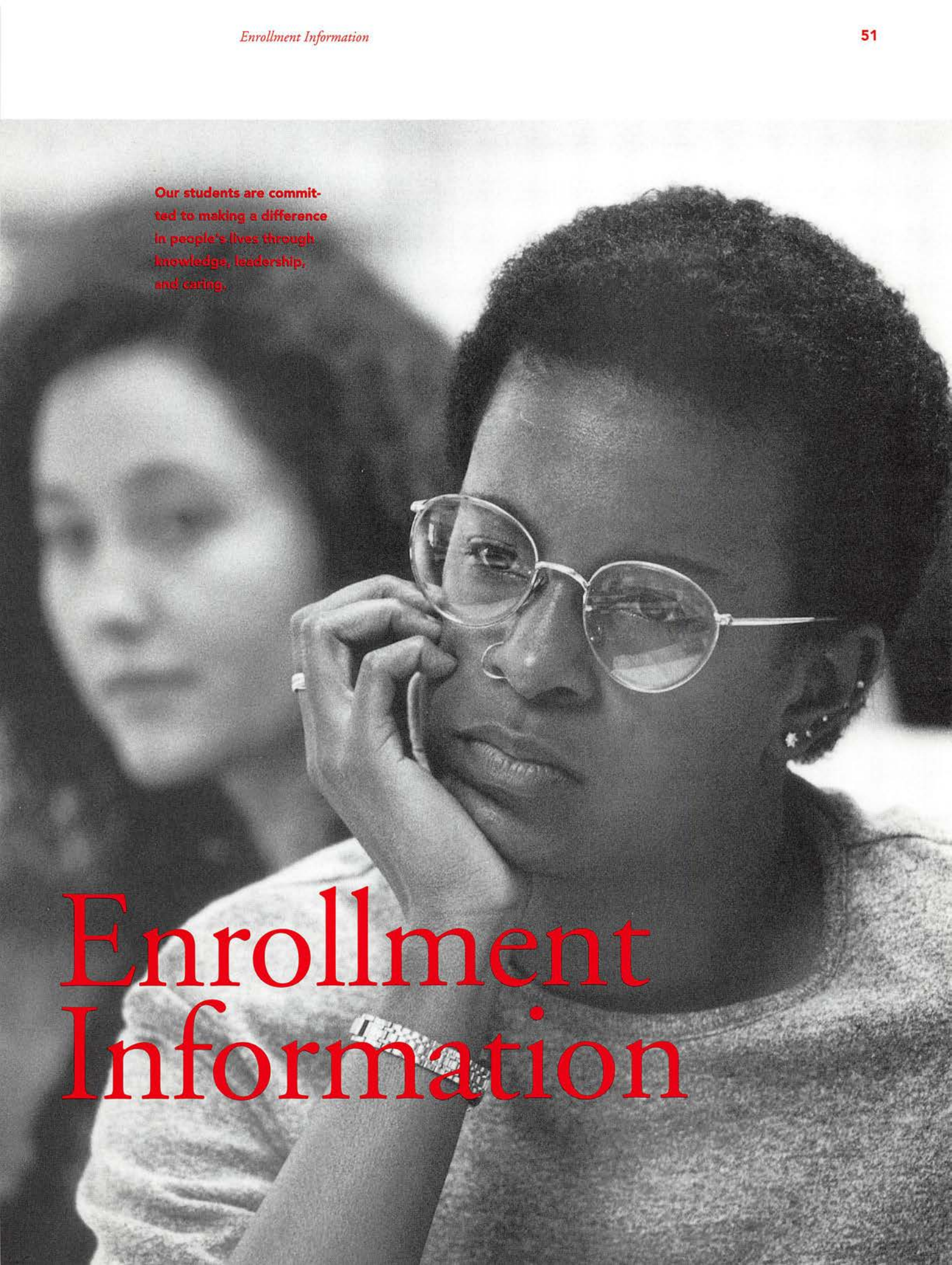
A new, modern microcomputer laboratory is available on site for student use 24 hours a day and seven days a week. The lab offers many software packages to support student research activities, statistical analysis, and word processing.

Housing

Students are responsible for making their own housing arrangements and are encouraged to do so as early as possible. Most leases in the Boston area begin in September to accommodate the large student population. Students who look for housing in June and July usually have the most success in securing affordable and convenient housing in the competitive rental market.

Our students are committed to making a difference in people's lives through knowledge, leadership, and caring.

Enrollment Information



Admissions Requirements

Communication Sciences and Disorders

The Graduate Program in Communication Sciences and Disorders is open to individuals with a bachelor's degree in the field. The program also is open to students with undergraduate majors in psychology, linguistics, the biological sciences, or a related field who have taken, or have the opportunity to take, some coursework in communication disorders prior to enrolling at the Institute. (Students in this category are asked to contact the Program Director regarding their candidacy and any prerequisite coursework that may be needed.) All applicants must submit scores from the Verbal and Quantitative Aptitude Tests of the Graduate Record Examination (GRE). An undergraduate grade point average of 3.0 on the basis of a four-point scale is required. For students from undergraduate schools with a pass/fail system, school evaluations will be reviewed and an assessment of comparability will be made.

Dietetics

The Graduate Program in Dietetics is open to registered dietitians or individuals who are eligible for registration. Professional registration must be achieved prior to enrollment in practicum (clinical) courses or within 12 months of entering the program, whichever comes first. Applicants must submit scores from the Verbal and Quantitative Aptitude Tests of the Graduate Record Examination (GRE). An undergraduate grade point average of 3.0 on the basis of a four-point scale is required. The grade-point-average requirement may be qualified by the dietetics program admissions review committee based on other exceptional qualifications of the applicant such as professional performance, time since undergraduate enrollment, and references. For students from undergraduate schools with a pass/fail system, school evaluations will be reviewed and an assessment of comparability will be made.

Nursing

Entering students may be non-nurse graduates of baccalaureate programs or registered professional nurses who hold baccalaureate degrees in nursing or related disciplines. Applicants must submit scores from the Verbal and Quantitative Aptitude Tests of the Graduate Record Examination (GRE). An undergraduate grade point average of 3.0 on the basis of a four-point scale is required. For students from undergraduate schools with a pass/fail system, school evaluations will be reviewed and an assessment of comparability will be made.



Physical Therapy

Applicants must be graduates of an approved program of physical therapy* and have a minimum of two years of work experience as a professional physical therapist.

Applicants who have been trained outside the United States must have completed an educational program that, by credentials evaluation, is determined to be equivalent to an entry-level physical therapist education in the United States. Applicants trained outside the United States seeking admission as matriculants in the Master of Science degree program must also have minimum of two (2) years of work experience as a professional physical therapist prior to enrollment. Those seeking admission as International Scholars must have a minimum of two (2) years of work experience as a professional physical therapist prior to enrollment.

When evaluating applications, the admissions review committee considers all of the following factors: 1) undergraduate academic performance and scores on the Graduate Record Examination (GRE) aptitude test; 2) professional experience and achievements; and 3) clarity of reasons for attending graduate school and the ability of the MGH Institute programs to help students achieve their goals.

**Such a physical therapy curriculum has been approved by (1) the APTA from 1927 to 1936, or (2) the Council on Medical Education and Hospitals of the American Medical Association from 1936 to 1960, or (3) an agency recognized by the U.S. Commissioner of Education and/or the Council on Postsecondary Accreditation from 1960 to 1980, or (4) from an agency recognized by the U.S. Department of Education and/or Council on Postsecondary Accreditation from 1980 on.*

Application Procedures

Admissions packets are available by telephoning or writing to the Office of Student Affairs at the following address:

*Office of Student Affairs
MGH Institute of Health Professions
101 Merrimac Street - 10th Floor
Boston, MA 02114
Telephone (617) 726-3140
FAX (617) 726-8010*

Applications for the Program in Communication Sciences and Disorders, the Program in Dietetics, and the Program in Physical Therapy are reviewed on a rolling basis, and you will receive notification of your admission decision after a review of your application is completed. You may apply to begin your studies in the Graduate Program in Dietetics and the Graduate Program in Physical Therapy at the start of any term during the academic year. Admission to the Graduate Program in Communication Sciences and Disorders is available only for September of each year.



Non-nurse graduates of baccalaureate programs are accepted only for September admission to the Program in Nursing. Completed applications and supporting materials must be received by March 15. Applicants should receive written notification of their admission decision by May 1.

Registered nurses who have a four-year degree may apply for late afternoon and evening study. Registered nurses who wish to study part-time may apply to begin their studies at the beginning of any academic term.

Materials to be submitted for all programs include:

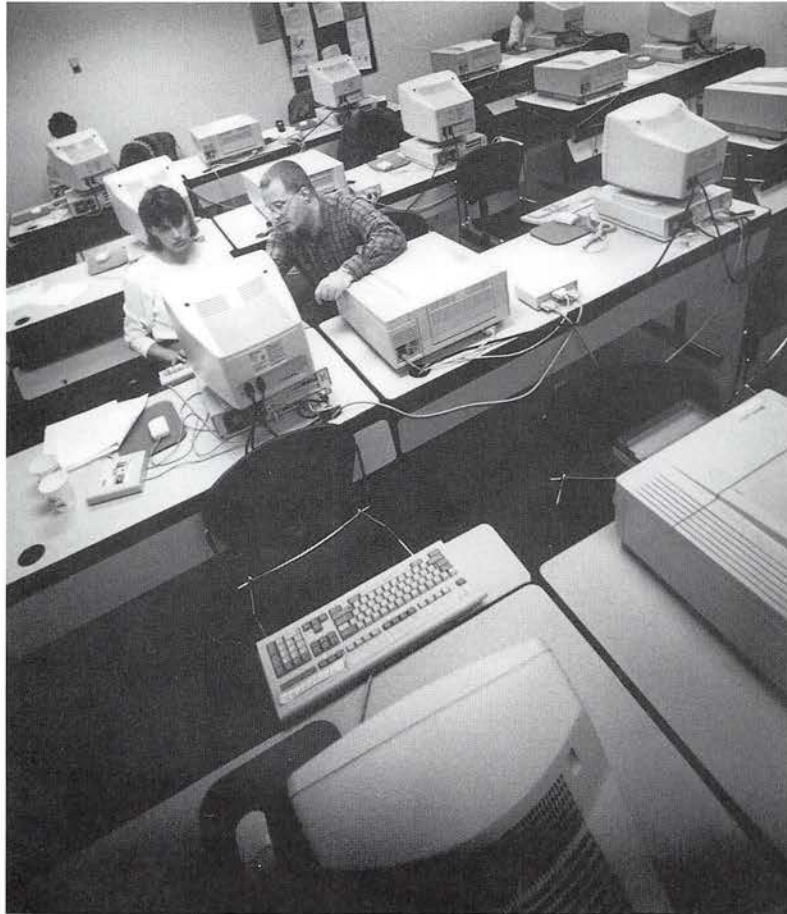
1. A completed application form.
2. A \$35 non-refundable application fee.
3. Statement of philosophy, qualifications, and career objectives.
4. A current resume.
5. Official transcripts from all colleges and universities attended.
6. Three letters of reference.
7. Scores from the Verbal and Quantitative Aptitude Tests of the Graduate Record Examination (GRE), taken within the last five years. To obtain a GRE application booklet that includes information and sample questions contact:

*Graduate Record Examination
Educational Testing Service
P.O. Box 6000
Princeton, NJ 08541-6000
(609) 771-7670*

The MGH Institute's GRE institutional identification code is 3513.

8. International students whose native language is not English are required to take the Test of English as a Foreign Language (TOEFL). For a Bulletin of Information for TOEFL contact:

*TOEFL/TSE Services
P.O. Box 6151
Princeton, NJ 08541-6151
(609) 951-1100*



The Institute's student microcomputer laboratory.

Special Student Status

Dietitians, physical therapists, speech-language pathologists, bachelor's-prepared nurses, and other health-care professionals with at least a bachelor's degree, and who are not degree candidates at the MGH Institute of Health Professions, may enroll as special students in selected courses on a space-available basis. Special students can:

- *take individual courses in topics relevant to their clinical practice;*
- *enhance their professional development;*
- *develop specialized clinical education and research skills;*
- *begin to accrue graduate academic credits;*
- *sample the Institute's courses before deciding whether to apply for a degree-granting graduate program.*

A special student brochure is published by the Institute prior to the beginning of each academic term. It includes an application form and a description of courses open to special students. A brochure and application can be obtained by contacting the Institute as follows:

*Office of Student Affairs
MGH Institute of Health Professions
101 Merrimac Street - 10th Floor
Boston, MA 02114
(617) 726-3140
(617) 726-8010 (FAX)*

International Students

The MGH Institute of Health Professions welcomes study by international students and is authorized under Federal law to enroll non-immigrant alien students. International students are advised to apply at least six months before the term they wish to enter, to accommodate overseas mail, visa procedures, and evaluation of the need for English language instruction.

When students are notified of acceptance, they also receive information regarding visa procedures, an expense budget, and a questionnaire that must be completed and returned so that the Institute can file appropriate visa forms. Before the Institute can complete the I-20 form allowing entry into the United States or school transfer, students must show that they have sufficient funds to maintain themselves for one year in the United States. At least one-third of the year's funds must be on deposit in the United States.

International students are eligible for limited financial assistance from the Institute and can apply by completing the Institute's Financial Aid Application Form. Financial aid is awarded on the basis of demonstrated need. Students who are in the United States on a F-1 visa are not permitted to work unless the work is related to degree requirements. Students may not work during their first year in the U.S. International applicants are encouraged to pursue additional sources of financial assistance for international study, including the International Education Office in their home country.

Tuition and Fees

The tuition for full-time study in the academic year 1994-1995 is \$13,969. Part-time and special students are charged a prorated amount per credit. A student fee of \$2 per course credit value is assessed for all degree and special students. Matriculating students are charged a \$35 orientation fee for their first semester of study.

Health Insurance

All full-time students and those part-time students who participate in at least 75 percent of the academic requirements for full-time students are required by Massachusetts law to carry personal health insurance. Part-time students who participate in less than 75 percent of the academic requirements for full-time students are encouraged, but not required, to carry personal health insurance.

Financial Aid

Planning the financing of a professional education is as important as planning a career. Students should estimate how much their entire education will cost and determine the financial resources necessary to support graduate study. For students who need financial assistance, the Institute offers a number of programs to help meet the cost of graduate education.

Purpose

The Institute's financial aid program is designed to help students meet their educational expenses. More than 90 percent of the Institute's full-time students receive some form of financial assistance. Approximately 50 percent of the students receive grant support from the Institute. The Office of Student Affairs is available to advise applicants about financial aid and to help them develop appropriate financial strategies for their educational program.

Application Process

Information on and application for financial assistance may be obtained by contacting the Institute as follows:

*Office of Student Affairs
MGH Institute of Health Professions
101 Merrimac Street - 10th Floor
Boston, Massachusetts 02114
(617) 726-3140
(617) 726-8010 (FAX)*





First-time applicants should initiate their financial aid application at the same time as their application for admission, or as soon as materials become available. To be considered for financial aid, you must complete the Institute's Financial Aid Application process. You are encouraged to submit your application as early as possible after January 1 if you want to be considered for a grant, since grants are awarded only while funds last.

Financial aid award decisions are made following acceptance to the Institute and are announced in the late spring. Awards are made annually on the basis of documented financial need. Financial aid policies are available as part of the aid application packet.

Types of Financial Assistance

Three types of financial assistance are available to students: grants, graduate assistantships, and loans. Students who complete the financial aid application will automatically be considered for each type of assistance.

Grants are awarded on the basis of financial need and do not carry a repayment or work obligation. The Institute awarded more than \$450,000 in grants to its matriculating students during the 1992-93 academic year. The total volume of grant awards may vary from year to year, depending on the performance of the Institute's endowment funds.

Graduate assistantships permit eligible students to work in one of a number of positions that may involve research, teaching, or administrative support. These opportunities are flexible to accommodate students' class schedules, professional interests, and skills. Graduate assistantships enable students to apply up to \$1,440 per year toward the tuition cost of their study. In 1992-93, the Institute awarded approximately \$30,000 in assistantship funds.

Employment opportunities are also available at the Massachusetts General Hospital and its affiliates, Spaulding Rehabilitation Hospital and McLean Psychiatric Hospital. These include clinical, clerical, and general positions, full-time and part-time, as well as weekend and evening shifts.

Students may need to borrow from one of several educational loan programs that are available to matriculating graduate students. The primary loan program for graduate students is the Federal Stafford Loan Program. Questions about this program and others including the Federal Student Supplemental Loans for Students (SLS), the Graduate Education Loan Program (GEL) sponsored by the Massachusetts Educational Financing Authority (MEFA), and the Professional Education Plan (PEP) offered by The Education Resources Institute (TERI) may be directed to the Office of Student Affairs.

Institute Grant Funds

Through the generosity of those who are friends and supporters of the MGH Institute of Health Professions a number of scholarship funds have been created. The following are named funds whose proceeds are designated to support students at the Institute:

The John Hilton Knowles Memorial Fellowship provides assistance to students in all of the Institute's degree programs. The fund was established by The Rockefeller Foundation to honor Dr. John Hilton Knowles, who was President of the Rockefeller Foundation from 1972 to 1979. Dr. Knowles served as General Director of the Massachusetts General Hospital and was responsible for the initial planning of the MGH Institute of Health Professions. The Institute also benefits from the John Hilton Knowles Program Endowment Fund, which has been very important to the school's development.

The Amelia Peabody Scholarship Fund was established by a gift in the memory of the late Amelia Peabody of Boston to provide scholarship assistance to needy students enrolled in the graduate programs of the Institute.

The William C. and Jessie B. Cox Scholarship Fund was established to support promising nursing students enrolled in the Institute.

The Sybilla Orth Young Memorial Scholarship Fund was established in memory of the late Sybilla Orth Young, a graduate of the MGH School of Nursing, to provide scholarship assistance to Institute students with demonstrated financial need.

The Elizabeth Fundus Scholarship provides assistance to nursing students enrolled in the Institute.

The Memorial Scholarship Fund of the MGH School of Nursing, which assists students in the nursing program, was established in memory of the following alumnae and friends of the School: Anna M. Crotty (Class of 1930), Natalie McLean Keller, Lotte Potts Leland (1910), Harriet Willoughby Merriam (1970), Nancy C. Mitchell (1967), Dorothy Dayton Morgan (1945) and Jessie M. Stewart (1935).

The Herbert Farnsworth Trust Fund is an endowed fund established in memory of the late Herbert Farnsworth by his family to provide scholarship assistance to students of the Institute.

The Louise Hatch Award, named to honor the former Director of the Department of Dietetics of the Massachusetts General Hospital, is awarded annually to dietetics students and interns to provide tuition assistance at the Institute.

The Virginia Delaware Zahka Scholarship is awarded annually to a nursing student at the Institute.

The Adams Scholarship Fund was established by Ms. Barbara Adams to support students pursuing graduate education in physical therapy at the Institute.

The Mary Hammond Taylor Nursing Scholarship Fund assists qualified students enrolled in the Graduate Program in Nursing who have demonstrated contributions to school life or community effort. Preference is given to students from the greater Boston area.

The Morris F. Darling Student Loan Fund provides loans to returning students with unmet financial need.

The James C. Melvin Scholarship provides assistance for needy students living in the Commonwealth of Massachusetts.

The Olive Lightell Hunter Memorial Scholarship assists students in the Institute's nursing program.

The Abbot and Dorothy H. Stevens Graduate Assistantship Fund provides paid assistantships for students enrolled in a graduate program at the Institute.

The Marjorie K. Ionta Fund, named in honor of the former head of the Physical Therapy Department at the Massachusetts General Hospital, provides assistance to students enrolled in the Graduate Program in Physical Therapy.

The Nancy M. Fraser Fund was established to assist nursing students. Nancy M. Fraser was a member of the MGH School of Nursing Class of 1914.

The Mary Mankin Prize, named in honor of the mother of Dr. Henry J. Mankin, Chief of Orthopaedics at the Massachusetts General Hospital, provides an award for excellence in thesis research to a deserving physical therapy student at the Institute.

The Wetherill Award Fund, established in memory of Marion Wetherill and her mother, provides scholarship assistance to students enrolled in the Graduate Program in Nursing.

The Lucretia Brigham Scholarship Fund, established in memory of Mrs. Elizabeth Copeland Newton and Mrs. Emerline Newton Brewer, provides scholarship assistance to students enrolled in the Institute's graduate programs.

The Financial Assistance Grant Fund is a general scholarship fund that is generated and maintained by a number of donors in support of graduate education at the Institute.

Kemper Scholarships, provided by the Kemper Insurance Foundation, help nursing students who have demonstrated academic excellence.

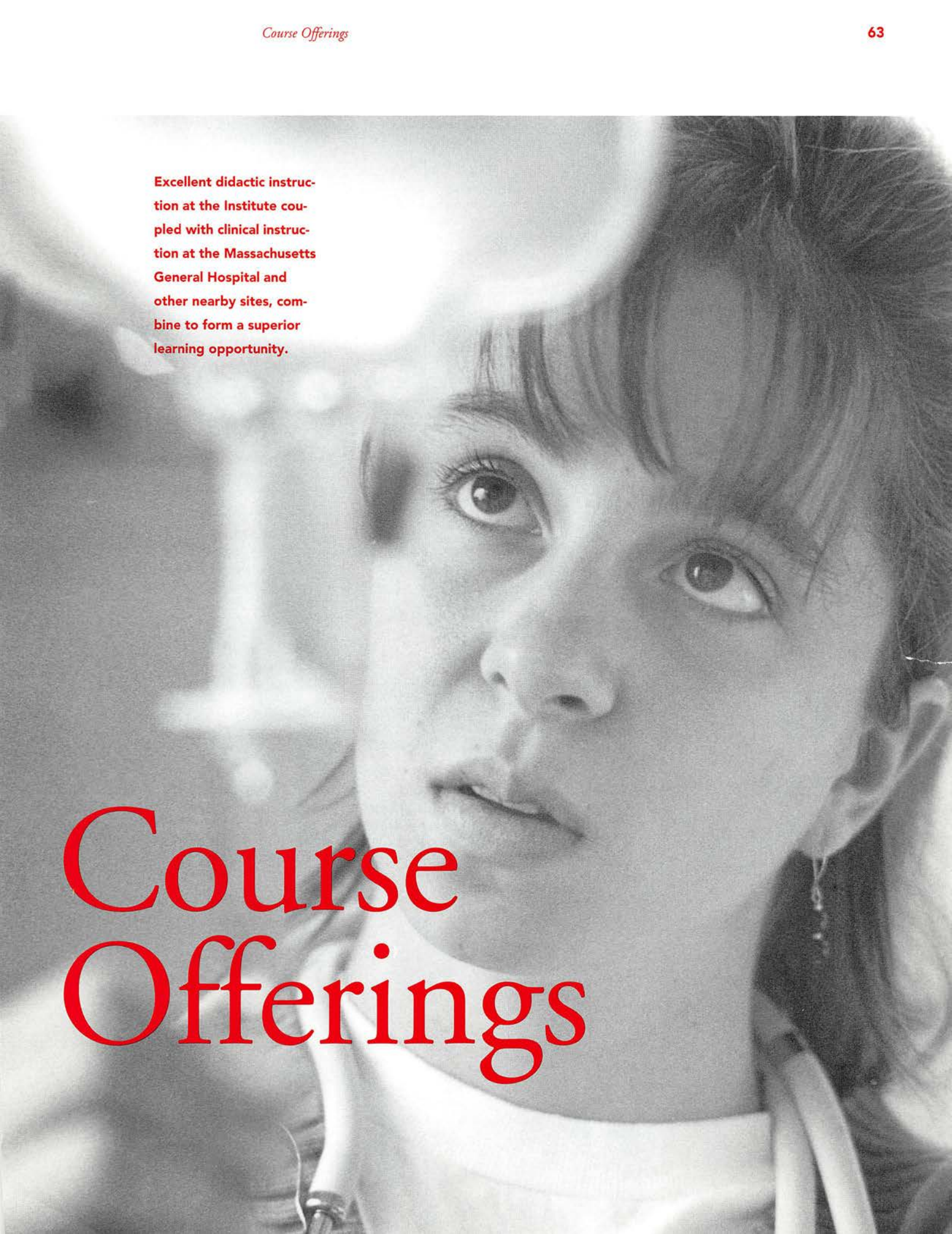
Student Loans

Educational loans remain an important component in graduate education financing. Several loan programs are available to students at the Institute. Information may be obtained from:

*The Office of Student Affairs
MGH Institute of Health Professions
101 Merrimac Street - 10th Floor
Boston, MA 02114
(617) 726-3140
(617)726-8010 (FAX)*

Excellent didactic instruction at the Institute coupled with clinical instruction at the Massachusetts General Hospital and other nearby sites, combine to form a superior learning opportunity.

Course Offerings



Interdisciplinary Courses

DH 730 BIOCHEMICAL AND PHYSIOLOGICAL ASPECTS OF NUTRITION

The course presents coordination of cell structure and function related to metabolic needs and response to the environment. Emphasis is on energy and structural needs and the interrelationships of catalysts and regulatory mechanisms controlling metabolism and, thus, nutrient requirements. *6 credits*

DH 840 ADVANCES IN NUTRITION AND CHRONIC DISEASES

Students pursue advanced study of the nutritional implications of chronic diseases. The relationships of food, metabolic processes, and social/environmental factors to the preventive and therapeutic nutritional care of individuals with chronic diseases are covered. *3 credits*

DH 841 ADVANCES IN NUTRITION AND METABOLIC DISORDERS

This course provides in-depth study of the nutritional implications of metabolic disorders. The relationships of food, metabolic processes, and social/environmental factors to the nutritional care of individuals with metabolic disorders are presented. *3 credits*

DH 842 ADVANCES IN NUTRITION AND THE CRITICALLY ILL

Students study the role of nutrition for the critically-ill patient. Advanced nutrition support theories and practice in various disease states of the critically ill are presented. *3 credits*

DH 843 ISSUES IN AMBULATORY CARE NUTRITION

The social and economic forces that are shaping the modes of practice for the dietetic practitioner in the ambulatory setting are explored. *2 or 3 credits*

HP 601 HUMAN ANATOMY & PHYSIOLOGY

This course provides a comprehensive overview of human anatomy through the use of computer simulations. Physiology and anatomy of all organ systems are covered in depth. This course is a prerequisite to the first semester of the nursing program. Equivalent course work may be acceptable to meet these requirements. *6 credits*

HP 602 INTEGRATED SCIENCE MODULES

These one-credit modules in chemistry, nutrition and microbiology provide essential content necessary to the understanding and application of nursing science. A variety of individualized and computer-assisted instructional options are available for the completion of these modules. These courses are prerequisites to the first semester of the nursing program. Equivalent course work may be acceptable to meet these requirements. *1 credit each*

HP 603 COMPUTER COMPETENCY

This course introduces students who are unfamiliar with computers to the basic operating systems, word-processing, graphics and analysis systems available on the microcomputer. This course is a prerequisite to the first semester of the nursing program. Equivalent course work may be acceptable to meet these requirements. *1 credit*

HP 621 PATHOPHYSIOLOGY

This course focuses on the holistic interconnectedness of body, mind and spirit in human illness states. Common pathophysiological processes will be explored and applied to a variety of common acute and chronic diseases. *3 credits*

HP 622 PHARMACOLOGY

The course considers current research, theory, and practices in pharmacology as a base for the safe administration of drugs. It provides a foundation for understanding the actions, effects, and nursing responsibilities regarding drug therapy in the practice courses. *3 credits*

HP 703 INTERDISCIPLINARY APPROACHES TO PAIN MANAGEMENT

The basis of understanding the clinical symptom of pain is discussed from physiological, anatomic, pathologic, and psychological perspectives. Syndromes of acute and chronic pain are described. Evaluation and management strategies are presented. Examples of how health professionals from many disciplines can work together to assess and treat pain are examined through case studies. *3 credits*

HP 705 MANAGEMENT FOR HEALTH CARE PROFESSIONALS

This course provides the student with an overview of management. Principal areas to be addressed include concepts and execution of professional practice; personal and institutional planning models; supervision; organizational behavior; resource allocation, and the concept of service. Case studies from a variety of health-care disciplines serve as the foundation for teaching and learning. *3 credits*

HP 710 TEACHING SKILLS FOR HEALTH PROFESSIONALS

This course emphasizes practical skills needed to teach in four situations: patient education, staff training, clinical supervision of students, and classroom teaching. Major topics include: setting objectives, planning student activities, selecting a teaching method, evaluating performance and giving feedback, improving motivation, and adapting instruction to match individual needs and style. Course assignments allow students to develop lesson plans they can use in future teaching situations. *2 credits*

HP 720 DESIGNING CLINICAL RESEARCH

This course is a basic introduction to the use of scientific methods in clinical contexts. At the end of the course students should be able to analyze critically research in their field, formulate researchable clinical questions, and apply a variety of research designs to answer clinical questions. Examples are chosen from research in dietetics, nursing, physical therapy, and medicine. *3 credits*

HP 721 STATISTICS FOR CLINICAL RESEARCH

This is a basic course in statistics for graduate students in the health professions. Topics include descriptive statistics (measures of central tendency and dispersion, probability) and inferential statistics (hypothesis testing, chi square, analysis of variance, regression, correlation, student's *t* test, etc.). Course material is oriented to the application of statistical methodology to clinical research questions. *3 credits*

HP 731 STATISTICS FOR CLINICAL RESEARCH COMPUTER LABORATORY

The laboratory addresses the computer applications of material covered in Statistics for Clinical Research and provides a general introduction to computer concepts. The hands-on laboratory sessions are designed to teach the concrete skills needed to create a dataset and to perform and interpret descriptive and inferential statistical analyses. *1 credit*

HP 760 CLINICAL NEUROANATOMY AND NEUROPHYSIOLOGY

The emphasis of the course is on neuroanatomy and pathology, membrane physiology and diseases, membrane channels and pharmacology, synapses, peripheral/cranial nerves, neuropathic processes, autonomic nervous system, spinal cord/column anatomy and disorders and reflex physiology and disorders. The laboratory sessions emphasize basic gross anatomy and surface anatomy of the nervous system, pathologic reactions and plasticity of the nervous system, electrophysiology and conduction velocities, and clinical examination of peripheral nerves. *3 credits*

HP 761 CLINICAL NEUROLOGY

This course examines the clinical problems of disorders of the motor system, sensory integration, cognitive functions of language and praxis, and the neurologic issues of aging, seizures, attention, memory and learning. The laboratory consists of examination of neuropsychological testing, clinical testing, electroencephalography, and neuroradiological techniques and findings. *3 credits*

HP 820 ETHICAL ISSUES IN HEALTH CARE

This course introduces students to basic ethical theory combined with a problem-solving approach to ethical issues commonly confronting health professionals. Selected issues to be examined include life and death decisions, information-sharing (confidentiality, truth-telling, and informed consent), peer relationships (team work, peer review, blowing the whistle on unethical colleagues), and the relationship of the health professional to institutions (health policy, quality assurance, distributive justice in everyday decisions). Lectures and discussions are supported by readings from health professions and lay literature. *2-3 credits*

HP 831 ORGANIZATIONAL PERSPECTIVES: THEORY AND ACTION

This interdisciplinary course surveys theoretical approaches to the study of organizations. Macro and micro views of human systems are compared and contrasted. Students learn how to analyze and intervene in organizations. *3 credits*

HP 896-899 INDEPENDENT STUDY

Students are given the opportunity to develop with a faculty member an area of study that focuses on a particular interest within the health professions. *Variable credits*

NH 730 HEALTH-CARE POLICY AND POLITICS

This course provides a forum for the discussion of public policy related to health care by students aspiring to leadership roles in health-care settings. The focus is on the inter-relationships among the process of policy development and implementation, the role of health-care professionals in this process, and the delivery of health-care. Students analyze health-care policy from socioeconomic, legal, ethical, political, and historical perspectives. Students develop skills in policy analysis and strategic planning for the improvement of health care and the advancement of health-care professions. The class considers the effect of current laws, regulations and standards on professional practice and debates health-care reform. *3 credits*

PH 740 MANAGEMENT OF PATIENTS WITH CARDIOPULMONARY DYSFUNCTION FROM THE ICU TO HOME CARE

Students will be given the fundamental principles and skills of cardiopulmonary techniques applied to all types of patients. Evaluation methods, including ventilation, respiratory muscle function, functional performance, hemodynamic responses, and aerobic capacity for critical care, as well as rehabilitation settings, will be presented. Treatment techniques, focused on maximizing whole body performance through optimal use of systems supporting ventilation and cardiovascular conditioning will be emphasized. Critical analysis of current theories and practices in cardiopulmonary care will be done, and cases representing multi-system involvement will be discussed. *3 credits*

PH 742 CLINICAL APPLICATIONS IN EXERCISE PHYSIOLOGY

This course provides an overview of normal and abnormal adjustments to exercise, including the influence of aging, and of various diseases. Students are acquainted with pulmonary and cardiovascular responses, the oxygen transport system, muscle components and mechanical characteristics of muscle contractions, energy nutritional requirements, and long-term adaptations of all systems to training. Exercise as a therapeutic modality and a means to safeguard good health throughout life is emphasized. Laboratory experiences include measurement of oxygen consumption and cardiopulmonary responses. Well known speakers in specific areas acquaint students with current research issues and laboratory procedures. Prerequisite: collegiate level course in human physiology. Audit by consent of instructor. *3 credits*

PH 771 ANATOMICAL BASIS OF KINESIOLOGY

This course provides advanced study of the structure and function of the musculoskeletal system. Both lecture material presented by physicians and physical therapists and detailed dissection of cadaver specimens provide the basis for discussion of orthopaedic dysfunction. The course consists of one lecture and two dissection laboratories weekly. Labs include surface anatomy, specific dissection of the extremities and spine, and demonstration of selected surgical procedures. *3 credits*

PH 772 SPORTS INJURIES: PREVENTION AND TRIAGE

The course introduces the student to the issues of prevention, triage, and immediate management of sports injuries. Lectures given by physical therapists and athletic trainers emphasize the principles underlying the issues. The laboratory practice sessions expose students to actual methodology and sports situations. Content includes the principles and practice of conditioning; pre-, in-, and off-season training; pre-season screening; weight evaluation and management; equipment and environmental assessment and control; on-site triage; and immediate management for various sporting activities. *2 credits*

PH 774 BASIC ORTHOPAEDIC RADIOLOGICAL ASSESSMENT

Students are introduced to radiological imaging principles and techniques as applied to orthopaedic physical therapy. Lectures are provided by radiologists and orthopaedic surgeons. Standard radiography techniques and radiologic anatomy, common normal variants, and pathological and traumatic conditions are emphasized. Other imaging techniques, such as CT scan, nuclear medicine, angiography, magnetic resonance imaging, and arthrogram, are addressed. The course is organized according to body regions, i.e., spine, pelvis, thorax, upper and lower extremities. Case studies illustrate the selection of imaging techniques and integration of radiographic information with patient management. *2 credits*

Communication Sciences and Disorders Courses

(Students with an undergraduate degree in a field other than communication sciences and disorders are required to take CD 600 and CD 601, or their equivalent, prior to starting their studies at the Institute. The Institute offers both of these graduate-level courses during the summer as an option for newly admitted students.)

CD 600 INTRODUCTION TO COMMUNICATION SCIENCES AND DISORDERS

Students are exposed to the range of oral and written communication disorders that are evaluated, treated, and studied by professionals in the field, and oriented to clinical philosophies and processes. Includes guided opportunities to observe and interpret actual clinical interactions. Observation experiences, which are prerequisite for enrollment in clinical practica, are included in the course. *3 credits*

CD 601 INTRODUCTION TO PHONETIC SCIENCE

This course introduces students to the study of speech production and perception; includes phonetic, acoustic, and physiologic considerations. Training in phonetic transcription and analysis is included. *3 credits*

CD 700 CLINICAL LAB AND PRACTICUM

This seminar provides initial orientation and training, as well as ongoing practical support and guidance for students assigned to the Language Laboratory. The lab addresses either preschool (preliterate) or school age (literate) issues, depending on the student's placement. Presentations and discussions help students to draw connections between their academic coursework in CD 743, 744, and 745 and their clinical experiences. Performance is formally evaluated and graded on a pass-fail basis. *3 credits*

CD 720 ONTOGENY OF SPOKEN LANGUAGE

This course addresses development of the capacity to learn and use language. Students examine the genetic and neurological foundations of language and consider the perceptual, motor, social, and cognitive aspects of linguistic development. *3 credits*

CD 721 SPEECH SCIENCE

This course deals with theory and laboratory methods associated with speech science and experimental phonetics. Students are exposed to basic vocal tract anatomy and physiology, the acoustic analysis of speech, and contemporary theories of speech processing and phonological representation. *3 credits*

CD 722 NEUROLOGY OF LANGUAGE AND COGNITION

This course deals with the development of brain function, including genetics and embryology, and the neural processes by which the brain produces and responds to behavior. Neural models of cognitive, social and motor functions are presented and evaluated. *3 credits*

CD 723 LANGUAGE, CULTURE, AND COGNITION

This course takes up models of language and cognition, including cultural implications. Attention is devoted to the various levels of language, including phonology, morphology, syntax, semantics, and pragmatics. Students are exposed to cognitive operations associated with language processing, including perception, memory, word recognition and retrieval, and sentence planning and comprehension. *3 credits*

CD 730 FOUNDATIONS OF COGNITIVE SCIENCE

This course offers a selective introduction to aspects of cognitive science that have redefined our understanding of the organization of human mental processes. Topics include sensory neurophysiology, perception, cognitive and perceptual development, psycholinguistics, cognitive psychology, linguistics and cognitive neuropsychology. *3 credits*

CD 731 LINGUISTIC THEORY

Any adequate account of the development, use or disorders of language must be based on an effective understanding of its formal properties. Linguistics is the discipline that provides formal analyses of the components of the language faculty. This course presents a broad introduction to contemporary linguistic theory. Particular emphasis will be placed on the implications of this theory for cognitive models of language development and language use and their associated pathologies. *3 credits*

CD 740 CONTEMPORARY ISSUES IN SPEECH-LANGUAGE PATHOLOGY

The health-care setting is a unique site for the practice of a speech-language pathologist. In this course, students are exposed to the multiplicity of factors affecting the delivery of care, including: third party regulations, accrediting agencies, documentation requirements, the role of the speech-language pathologist as a member of an interdisciplinary team, management of interpersonal/inter-departmental conflicts, organization of programs in various health care settings - acute hospital and active rehabilitation. *2 credits*

CD 742 CHILD LANGUAGE DISORDERS

This course prepares students to understand, evaluate and treat developmental disorders of spoken language. Students are exposed to current research and clinical practice at all levels of language disorder, including the lexicon and semantics, phonology, morphology and syntax. *3 credits*

CD 743 DIAGNOSIS AND REMEDIATION OF LANGUAGE DISORDERS I

This course introduces students to the fundamental theoretical and practical considerations for diagnosing and remediating communication disorders. Selected conventional approaches—formal and informal—are examined and then critiqued in view of current theory and practice. Coursework is designed in part to complement students' concurrent participation in the Clinical Lab and Practicum. *3 credits*

CD 744 DIAGNOSIS AND REMEDIATION OF LANGUAGE DISORDERS II

This course introduces students to theory and practice associated with the diagnosis and remediation of spoken language disorders related to atypical neurological, cognitive and social development. *3 credits*

CD 745 DIAGNOSIS AND REMEDIATION OF LANGUAGE DISORDERS III

This course will focus on clinical and cognitive neuropsychological approaches to diagnosis and remediation of language and related cognition. Topics to be covered include psychoeducational and intellectual testing, advanced diagnostics of spoken and written language disorders, and model-based cognitive remediation. *3 credits*

CD 750 DISORDERS OF THE AUDITORY PATHWAY

This course will focus on disorders of hearing, diagnosis of the diseases that cause them, and clinical methods for measuring and describing hearing loss. Specific testing techniques and operation of clinical instruments taught in laboratory sessions will prepare students for clinical practica. *3 credits*

CD 751 AURAL REHABILITATION

Hearing loss is frequently found in patients with speech and language disorders. Students will learn about the effects of hearing loss on speech and language processes. The principles of operation of aural prostheses will be covered in lecture and laboratory sessions. Study of the theories and techniques for education and rehabilitation of the hearing impaired will prepare students for clinical practica. Current issues associated with deaf culture, and its impact on education, will be discussed. *3 credits*

CD 760 VOCAL PATHOLOGIES

Students are presented with current research and theory in regard to evaluation and management of voice disorders, including conditions affecting laryngeal function, vocal resonance and prosody. Special attention is devoted to phonatory disorders associated with laryngectomy. *3 credits*

CD 761 DYSPHAGIA

This course addresses current research, theory and practice in swallowing and associated problems. Attention is devoted to neurogenic and post-surgical cases. Students are instructed in principles of evaluation and management. *3 credits*

CD 820 DEVELOPMENTAL DISORDERS OF WRITTEN LANGUAGE

This course offers a comprehensive survey of research bearing on the biological and cognitive origins of literacy and the disorders that befall it. A primary goal of the course will be to integrate findings from the neurosciences, cognition and education into a coherent framework for understanding the normal acquisition of written language competence and the specific failures of that development. We will also assess the clinical implications of these research findings. *3 credits*

CD 821 THE COGNITIVE PSYCHOLOGY OF WRITTEN LANGUAGE

The focus of this course will be the cognitive mechanisms that support fluent adult reading, how those mechanisms develop and how they are disrupted by focal brain injury. We will build on concepts and models presented in CD 820. *3 credits*

CD 841 FLUENCY DISORDERS

This course addresses disorders of speech fluency from a broad neurogenic and neuropsychological perspective. Students are exposed to a range of dysfluent behaviors and are instructed in principles of evaluation and treatment. *3 credits*

CD 850 ACQUIRED NEUROLINGUISTIC PATHOLOGIES

This course exposes students to current theory in clinical neurolinguistics and addresses the diagnosis and treatment of aphasia, neuromotor speech disorders, and related problems. Several different approaches will be considered, including the more classical paradigms of speech pathology and behavioral neurology as well as genitive psychological and neuropsychological theory. *3 credits*

CD 851 SPECIAL TOPICS IN COGNITIVE NEUROPSYCHOLOGY

In this seminar we will discuss a broad range of topics from a cognitive neuropsychological perspective. Current investigations into such areas as spoken language processing, reading and writing, face recognition, visual and spatial abilities, attention, and memory will be evaluated. *3 credits*

CD 855 LANGUAGE-BASED DISORDERS IN COGNITIVE NEUROPSYCHOLOGY

This seminar approaches acquired language disorders from a cognitive neuropsychological perspective. Areas to be covered include spoken word recognition, spoken word production, reading, spelling, and numeric processing. Research will be discussed with regard to current cognitive models of these communicative skills. *3 credits*

CD 860 RESEARCH IN COMMUNICATION SCIENCES AND DISORDERS

In this seminar, students sharpen their ability to think scientifically about specific problems in clinical neurolinguistics and other areas, and to develop their own thesis research plans and proposals. *3 credits*

CD 800 CLINICAL PRACTICUM

Provides opportunities for students to receive supervised clinical practicum in the Massachusetts General Hospital, the Spaulding Rehabilitation Hospital, and other affiliated training sites. Students register each semester in which they expect to engage in supervised practice. Formal evaluation and pass-fail grading. *3 credits*

**CD 880 THESIS RESEARCH I
CD 881 THESIS RESEARCH II
CD 882 THESIS RESEARCH III**

With faculty supervision, students conduct an original research project and write a scientific report of their findings. Theses may involve descriptive or experimental studies and also may include rigorous analyses of theoretically informative clinical cases. *2 credits*

CD 896-899 INDEPENDENT STUDY IN COMMUNICATION SCIENCES AND DISORDERS

On an individual basis, students work with a faculty member to develop further their knowledge of a particular topic. The format of these interactions may take the form of directed readings and discussions, a tutorial experience, or the conduct of a minor research project. *3 credits*

Dietetics Courses**DP 620 CLINICAL NUTRITION**

Nutrition principles are applied to selected disease states in medical and surgical patients. Students integrate absorption and metabolism of nutrients, anatomy, physiology, and pharmacology in order to assess patients and provide nutrition care. Skills necessary for clinical competency are discussed. Lectures, case studies, discussions, and readings examine current practices in nutrition care management. *3 credits*

DP 621 MANAGEMENT AND ORGANIZATION OF FOODSERVICE SYSTEMS

The course offers a comprehensive survey of management functions and their related tasks and responsibilities in a foodservice system. Topics include facilities and organization planning; menu planning and merchandizing; food procurement, receiving, storage, delivery, preparation, transportation, and service; budgeting and cost accounting. Lectures, case studies, and problem-solving exercises are applied to develop knowledge and skills for management practice. *3 credits*

DP 731 ADVANCED SEMINAR IN DIETETICS

This course follows a seminar format with the introductory sessions focusing on how to make presentations in various settings. This is followed by classes that focus around a theme of current interest. Each participant conducts one session on a topic of his/her choice related to the theme. *1 credit*

DP 850 PRACTICUM IN NUTRITION AND CHRONIC DISEASES

This practicum develops advanced skill in the prevention of chronic diseases and in the nutritional care of clients with chronic disorders. *2-4 credits*

DP 851 PRACTICUM IN NUTRITION AND METABOLIC DISORDERS

Students develop skill in the nutritional care of individuals with metabolic disorders. The primary setting is the clinical research center. *2-4 credits*

DP 852 PRACTICUM IN NUTRITION AND THE CRITICALLY ILL

This practicum provides advanced skill development in providing nutritional care to the critically ill. Primary emphasis is on the modalities of nutritional support. *2-4 credits*

DP 853 PRACTICUM IN NUTRITION AND HEALTH PROMOTION

This practicum develops advanced skill in the promotion of good health and in the marketing of nutrition services to the public or specified population groups. *2-4 credits*

**DP 880 THESIS RESEARCH I
DP 881 THESIS RESEARCH II**

These courses provide registration for a student's work with assigned thesis readers on planning and implementing the research study and preparing the written thesis report. *3 credits each*

**DP 896-899 INDEPENDENT STUDY IN DIETETICS
DP 796-799**

Students study special problems in clinical dietetics or foodservice systems management. They acquire information and skills through directed readings, investigations, and projects that are not covered in organized courses. *Variable credits*

Nursing Courses

NS 620 NURSING PRACTICE: PROCESS AND SKILLS

This course introduces students to the advanced practice role in nursing. Emphasis is on scientific inquiry, critical thinking, and the clinical judgement process in a variety of clinical settings. Students utilize in-depth assessments of individuals across the life cycle in beginning problem identification, outcome evaluation, intervention and evaluation. Specific psychomotor skills are integrated in the clinical setting. Clinical practice is provided. (Co-requisite: NS 623) *3 credits didactic, 3 credits clinical*

NS 621 NURSING PRACTICE: COMMON PROBLEMS IN ADULT HEALTH

This course integrates theory, practice, and research in the care of adults with acute and chronic health problems. Patient care models are used to examine common nursing diagnoses across the health-illness continuum. Emphasis is on the nurse's role in advanced practice in health maintenance and restoration and in the management of patient and family responses to acute and chronic illness. Clinical practice is provided. (Prerequisites: NS 620, 624; Co-requisite: HP 622) *3 credits didactic, 3 credits clinical*

NS 623 HEALTH PROMOTION AND WELLNESS ASSESSMENT

This course will examine epidemiological indices of morbidity and mortality, build upon the objectives in health promotion as identified in Healthy People 2000, and explore the concepts of holism, wellness, and diversity. Beginning comprehensive assessment of individuals, families and communities will be taught. *2 credits didactic, 1 credit clinical*

NS 624 BIOBEHAVIORAL PRINCIPLES AND THEORIES

This course explores a variety of theoretical positions which support holistic nursing practice. The interrelationship of body-mind-spirit in achievement of mental health is examined from historical, philosophical, psychosocial, and scientific perspectives. The clinical component provides the opportunity to apply theory to practice in selected patient care settings. *3 credits didactic, 1 credit clinical*

NS 625 COMMUNITY PRINCIPLES AND THEORIES

This course introduces students to community as a nursing client. Concepts, theories, and models of community health are discussed in relation to nursing process application to a community. Students will assess the health needs of a community and analyze a selected health problem, using epidemiological principles. Students will participate in a community health promotion activity and explore principles of program planning and evaluation, as well as community organizing. Clinical practice is required. (Prerequisites: NS 623, 621, or R.N. status) *3 credits didactic, 1 credit clinical*

NS 727 MATERNAL CHILD NURSING

This course uses a family-centered framework to offer the knowledge and skills necessary for nursing care of childbearing women and children from infancy through adolescence in wellness and illness. Biobehavioral, developmental, cultural, and psychosocial factors influencing the health and well-being of women, children, and their families are examined in the context of community and acute care settings. Clinical practice with women, infants, children, and families is required. (Prerequisite: NS 621) *3 credits didactic, 3 credits clinical*

NS 737 THE HISTORY OF NURSING IDEAS

This course focuses on the contributions of nursing history, nursing theory, and contemporary issues in the social evolution of nursing as a profession. The nature of nursing theory and the relationship between philosophy, theory, and science are explored. The evolution of nursing ideas within the social context of history is emphasized. *3 credits didactic*

NS 738 ADVANCED ASSESSMENT AND DIAGNOSTIC REASONING

This course builds upon the fundamental assessment skills learned in the first year. Students will perform comprehensive wellness-oriented, screening and symptom driven exams with appreciation of normal adult life cycle variations. Emphasis is placed on mastery of interviewing and psychomotor assessment skills, differential diagnosis of common problems and exploration of treatment options. The course is taught within the context of holism and cultural diversity, and includes the client, family, and community in the assessment, treatment and evaluation process. Clinical practicums are offered with adult clients in a variety of inpatient and outpatient settings. (Prerequisites: NS 623, 624, 625) *3 credits didactic, 3 credits clinical*

NS 739 ADVANCED PHARMACOLOGY

Building on basic knowledge of pharmacology, this course provides the knowledge necessary for advanced practice nursing. Commonly used drugs, drug interactions and pharmacotherapeutics will be explored. The course is designed to meet requirements for prescription writing by advanced practice nurses. (Prerequisite: HP 622) *3 credits didactic*

NS 820 NURSING MANAGEMENT OF THE ADULT: PRIMARY CARE I

This is the first of two primary care courses that prepare students for advanced practice as Adult Nurse Practitioners. Theoretical and clinical content emphasize critical thinking and diagnostic reasoning skills in culturally and developmentally sensitive, holistic assessment and management of health problems. The focus is on early detection of disease, prevention, teaching, health maintenance, and prenatal care. Primary prevention is emphasized. Students have clinical practice experience in a variety of primary care settings. (Prerequisites: NS 738, NS 739) *3 credits didactic, 3 credits clinical*

NS 821 NURSING MANAGEMENT OF THE CHILD: PRIMARY CARE I

This is one of two primary care courses that prepare students for advanced practice as Pediatric Nurse Practitioners. Theoretical and clinical content emphasize critical thinking and diagnostic reasoning skills in the culturally and developmentally sensitive, holistic assessment, health maintenance, and health education of children and families along the wellness continuum. Students have clinical practice experiences in a variety of primary care settings. (Prerequisites: NS 738, NS 739) *3 credits didactic, 3 credits clinical*

NS 822 NURSING MANAGEMENT OF THE ADULT: PRIMARY CARE II

This is the second of two primary care courses that prepare students for advanced practice as Adult Nurse Practitioners. Content continues to refine critical thinking and diagnostic reasoning skills in the culturally and developmentally sensitive, holistic assessment and management of common episodic and chronic health problems of adults. The focus is on health restoration. The relationship between chronic illness and aging is explored. Students have clinical practice experiences in primary care settings. (Prerequisite: NS 820) *3 credits didactic, 3 credits clinical*

NS 823 NURSING MANAGEMENT OF THE CHILD: PRIMARY CARE II

This is the second of two primary care courses that prepare students for advanced practice as Pediatric Nurse Practitioners. Content continues to refine critical thinking and diagnostic reasoning skills in the culturally and developmentally sensitive holistic assessment and management of common episodic and chronic health problems of children. Students have clinical practice experiences in primary care settings. (Prerequisite: NS 821) *3 credits didactic, 3 credits clinical*

NS 839 PROFESSIONAL ISSUES

This course focuses on the issues facing health care and the advanced practice nurse. *1 credit didactic*

NS 855 NURSING ADMINISTRATION PRACTICUM

This course is required for students majoring in nursing management and is field experience under the preceptorship of experienced nurse executives and managers. *3 credits didactic*

**NS 880 THESIS RESEARCH I
NS 881 THESIS RESEARCH II**

These courses provide registration for the student's work with assigned thesis readers on planning and implementing the thesis study and preparing the written thesis. *3 credits each didactic*

**NS 882 SCHOLARLY PROJECT I
NS 883 SCHOLARLY PROJECT II**

This required, culminating, scholarly experience is an opportunity to integrate research, clinical, and theoretical knowledge bases in a rigorous, faculty guided project. In-depth critical thinking, analysis and synthesis frame projects which may include empirical research studies, philosophical, theoretical, or clinical papers submitted for publication in refereed journals, competitive presentations in national or international scholarly society meetings, operationalization and analysis of innovative disciplinary or interdisciplinary approaches to clinical problems, and development of creative, research-based strategies to improve health care. Project proposals require faculty approval, and faculty provide tutelage and supervision throughout the project. The project is the synthesis experience for the advanced practice nurse, and highest academic standards are applied to the evaluation of the project. (Prerequisites: HP 721, HP 720)
3 credits each didactic

NP 800-899 ADVANCED NURSING PRACTICE MODULES

There are five 3-credit Advanced Practice modules (15 credits). Modules can be courses, self-study units, and clinical practice. All students must take a minimum of six clinical practice credits. The other modules complement a student's focus area. (Prerequisites: NS 738, NS 739)

Physical Therapy Courses**PT 600-605 U.S. HOSPITAL PRACTICE SYSTEMS**

This course is intended to serve as an introduction to practice customs and settings in physical therapy for those who have not practiced physical therapy in the United States, and who are unfamiliar with health-care systems in this country. Individualized experiences will be developed to familiarize the student with admission procedures, medical records, treatment protocols, discharge procedures, and general department policies and procedures. Communication skills will be emphasized, including interaction with patients, families, health professionals, and support staff. Opportunities will be provided for observation of patient care in different environments. *Variable credits not to exceed 3 credits per term nor a maximum of 6 total credits.*

PT 720 FOUNDATIONS OF CLINICAL ASSESSMENT IN PHYSICAL THERAPY

This is the first of two clinical theory courses required of all students in the program. It includes: analysis of the nature of evaluation and its relationship to clinical judgment and treatment planning; study of the basic principles of sound measurement and how new methods of measurement can be developed and tested; critical review of the variety of techniques commonly used by physical therapists to evaluate their patients; an introduction to assessment of general health problems and to methods for making patient referrals. Students develop and test a measurement procedure as a course project. *3 credits*

PT 760 THEORETICAL FOUNDATIONS OF NEUROREHABILITATION

This survey course examines the theoretical foundations of rehabilitative models for the evaluation and treatment of persons with neurological impairments, from past to present. We will examine how the reflex, hierarchical, and systems models have evolved, and how they have impacted the practice of physical therapy, particularly in regard to methods designed to evaluate and treat the neurologically impaired client. The focus of the course will be on more recent advances, and how they may alter our views of the cause of dysfunction in patients with neurological impairments. Topics will include current issues in motor control, open and closed loop, feedback, feedforward and anticipatory control mechanisms, motor program theory, regulation of posture and balance, role of vision in movement control, and an introduction to dynamical systems, ecological perception, and spatial orientation theories. Readings will draw from recently published works such as the Proceedings of the II STEP Conference, the Movement Science series in Physical Therapy, and other relevant texts and periodicals. *3 credits*

PT 761 SEMINAR ON TREATMENT APPROACHES TO THE NEUROLOGICALLY IMPAIRED

This course critically analyzes and compares physical therapy treatment approaches for the neurologically impaired by addressing three questions: What specific impairments are we addressing during treatment? Why do we choose particular techniques over others? Are our treatments effective? The focus is on the neurophysiological and kinesiological basis of a variety of treatment interventions based on current concepts of motor control, motor learning and motor development. Seminar sessions involve interactive discussions of treatments used currently in the clinic, the theories underlying these treatment approaches, and evidence to support the validity of these theories. Critical review of recent literature provides a basis for examining the effectiveness/ineffectiveness of the various treatment techniques. Case studies are used to facilitate integrating new ideas for treatment into actual clinical practice. *3 credits*

PT 763 THERAPEUTIC EXERCISE: ADVANCED PRINCIPLES AND PRACTICE

This course presents a process for choosing appropriate exercise procedures for the intervention of patients with musculoskeletal and neurological involvement and emphasizes the practice of these procedures in laboratory sessions. The structure of the course follows the Intervention Model, a schema for organizing treatment from the evaluation findings. Procedures will be analyzed according to their biomechanical, neurophysiological and motor control factors and the treatment goals that can be achieved. Patient impairments will be classified according to motor control sequences and matched to treatment techniques designed for that involvement. In addition, to determine the progression of procedures, consideration of the intensity, frequency and duration of the procedures are discussed relative to motor learning, tissue reactivity and exercise capacity factors. Case studies are used to demonstrate clinical applicability. *3 credits*

PT 770 CONCEPTS OF ORTHOPAEDIC PHYSICAL THERAPY

This course presents a model of neuromusculoskeletal dysfunction as a basis for discussion of current orthopaedic physical therapy practice. Dysfunction of contractile and non-contractile soft tissue and articulations are related to clinical examination and treatment techniques. Generic treatment goals and strategies are discussed. The course provides a framework for evaluation of various hypotheses for treatment of the patient with soft tissue and articular lesions. Case studies are used throughout the course to enhance clinical relevance. Related topics discussed include: tissue mechanics and clinical tissue provocation, pathokinesiology of joint contracture, articular neurophysiology, inflammation and tissue healing, muscle dysfunction, and pain. This course is a prerequisite to all manual therapy courses and is required for all students in the orthopaedic/sports specialization. *2 credits*

PT 772 ORTHOPAEDIC PHYSICAL EXAMINATION

Through lectures and supervised laboratory sessions, participants develop advanced skills in the planning and execution of examination strategies for musculoskeletal dysfunction. Extensive use is made of videotape examination sessions to facilitate evaluation of the therapists skills and present case analysis. Stressed within the course are 1) analysis of the clinical theory governing examination procedures; 2) planning, sequencing and prioritizing components of the history and physical examination of the patient to facilitate efficiency and obtaining pertinent information; 3) correlation of history with physical findings; 4) application of information presented in PT 770 Concepts of Orthopaedic Physical Therapy. This course is meant to be taken in conjunction with PT 770 and prepares students for other courses on musculoskeletal dysfunction. *2 credits*

PT 773 BIOANALYSIS OF HUMAN MOVEMENT

The course focuses on the study and measurement of movement from a bioinstrumentation perspective. Application of instrumentation to evaluate muscle and movement systems are explored, as well as the theory and clinical analysis of force systems under static and dynamic conditions. Laboratory sessions will clarify the principles of bioelectric and mechanical measurement techniques, including electromyography, electrogoniometry, video analysis, force transducers, posture platform, vestibular and eye movement measures and isokinetic dynamometry. Research literature will be used to develop a framework for interpretation of these data in relation to motor skills, fatigue, balance, posture strength and gait. *3 credits*

PT 775 SPORTS INJURIES: EXAMINATION AND MANAGEMENT

This course focuses on the sport specific injuries and activities. Areas emphasized during the course are the epidemiologic characteristics, biomechanics, evaluative and diagnostic considerations, decision making regarding surgical or conservative intervention, post operative rehabilitation and return to sport criteria of sport specific injuries. The decision making progress and a review of current literature is stressed through lecture, seminar and case presentation. *3 credits*

PT 821 CLINICAL DECISION MAKING

This clinical theory foundations course is a core requirement for all students in the Physical Therapy Program. Through lectures and class exercises, clinicians will have the opportunity to examine the basis of clinical decision making as it relates to all aspects of patient care. Generic models as well as those from different specializations will be presented with the goal of enabling students to formulate a strategy for the sound management of clinical problems. *3 credits*

PT 822 DIAGNOSTIC SCREENING FOR PHYSICAL THERAPISTS: WHEN TO TREAT? WHEN TO REFER?

Specialists from major medical areas present lectures and labs with case examples to illustrate how pathologies can cause confusing or nonspecific symptoms, and how interviews techniques and physical examination can help screen for different medical entities. Selected case examples are presented to exemplify the process of gathering relevant clinical information necessary to screen for disease, and for impairments, and a series of key questions leading to an algorithm describing the decision making process will be offered for each case example. Students will select a case to use for the same kind of analysis with a group oral discussion and an individual list of questions and an algorithm to accompany the case. *3 credits*

PT 839 CLINICAL PRECEPTORSHIP IN PHYSICAL THERAPY

Advanced clinical practice is offered under the direction of a preceptor in the student's area of specialization. The practicum, designed to meet individual needs, provides a variety of clinical experiences to develop expertise in physical therapy evaluation and treatment techniques. Patient demonstrations, clinical practice, case conferences, and special seminars expand the student's ability to plan and implement integrated treatment approaches, and to formulate critical questions and analyses related to physical therapy practice. Areas of concentration available to the clinician include: orthopaedics, sports, neurologic, cardiac, pulmonary, geriatric and pediatric physical therapy. Depending on the students prior clinical experience in their chosen specialty area and with consent from the preceptor specialty coordinator, additional objectives for the preceptorship may include acquiring skill in the areas of teaching and/or clinical research. *3 or 6 credits*

PT 870 MANUAL THERAPY: EXTREMITIES

Examination and manual treatment techniques of joint mobilization as a component of orthopaedic physical therapy practice are introduced. The basic tenets of joint dysfunction and mobilization as discussed in Concepts of Orthopaedic Physical Therapy are integrated into the lecture and laboratory sessions. The relationship of regional arthrokinematics to osteokinematics for joints of the upper and lower extremities is discussed. Various methods and concepts of joint mobilization are reviewed to determine their common characteristics. Related topics are addressed, such as methods to document examination and treatment findings, clinical arthrokinematics of "parallel" bones, principles of extremity joint manipulation, and self-mobilization. Laboratory sessions provide instruction and supervision in the practice of manual joint mobilization techniques. Case studies and a student project are used to integrate joint mobilization with other aspects of orthopaedic physical therapy in the clinical sequence. Concepts of Orthopaedic Physical Therapy is a prerequisite to taking this course. *3 credits*

PT 871 MANUAL THERAPY: LUMBOPELVIC REGION

This course introduces students to examination and treatment strategies and techniques for lumbopelvic pain and dysfunction. The soft tissue, joint, and peripheral neural components of the lumbopelvic region are reviewed. The anatomy, kinesiology, and pathokinesiology of the regions pertinent to the clinical management of the patient are presented. Physical signs and symptoms of spinal dysfunction are discussed as a basis for formulating a strategy for the examination process. The student is introduced to the decision process for determining a biomechanical diagnosis of the patient's condition. Criteria for establishing specific treatment programs are presented. The implications of examination findings on the development of an independent therapeutic exercise program are addressed. Laboratory sessions provide instruction and supervision in practice of the physical therapy examination and treatment measures using manual therapy and independent therapeutic exercise. Concepts of Orthopaedic Physical Therapy (PT 770) is a prerequisite for taking this course. *3 credits*

PT 872 MANUAL THERAPY: CERVICOTHORACIC AND CRANIOMANDIBULAR REGION

This course introduces the student to examination and manual therapy treatment techniques for the temporomandibular joint, cervical spine, and thoracic spine. Significant anatomy, kinesiology, and pathokinesiology of each region will be presented. The clinical significance of normal and abnormal examination findings will be discussed. Interpretation of examination findings will be correlated with possible etiologies of dysfunction. A framework for formulating treatment strategies will be developed based on the biomechanics of the region. Treatment techniques such as stretching, joint and soft tissue mobilization, exercise, traction, and patient education will be presented. Concepts of Orthopaedic Physical Therapy is a prerequisite for taking this course. *2 credits*

**PT 880 THESIS RESEARCH I
PT 881 THESIS RESEARCH II
PT 882 THESIS RESEARCH III**

These courses provide registration for the student's work with assigned thesis readers on planning and implementing the thesis study and preparing the written thesis. *2 credits each*

PT 896-899 INDEPENDENT STUDY IN PHYSICAL THERAPY

This course allows students to study special problems in physical therapy. Individually planned work guided by a member of the faculty may include directed readings, investigations, or projects in areas not currently covered by the Institute's formal courses. *Variable credits*

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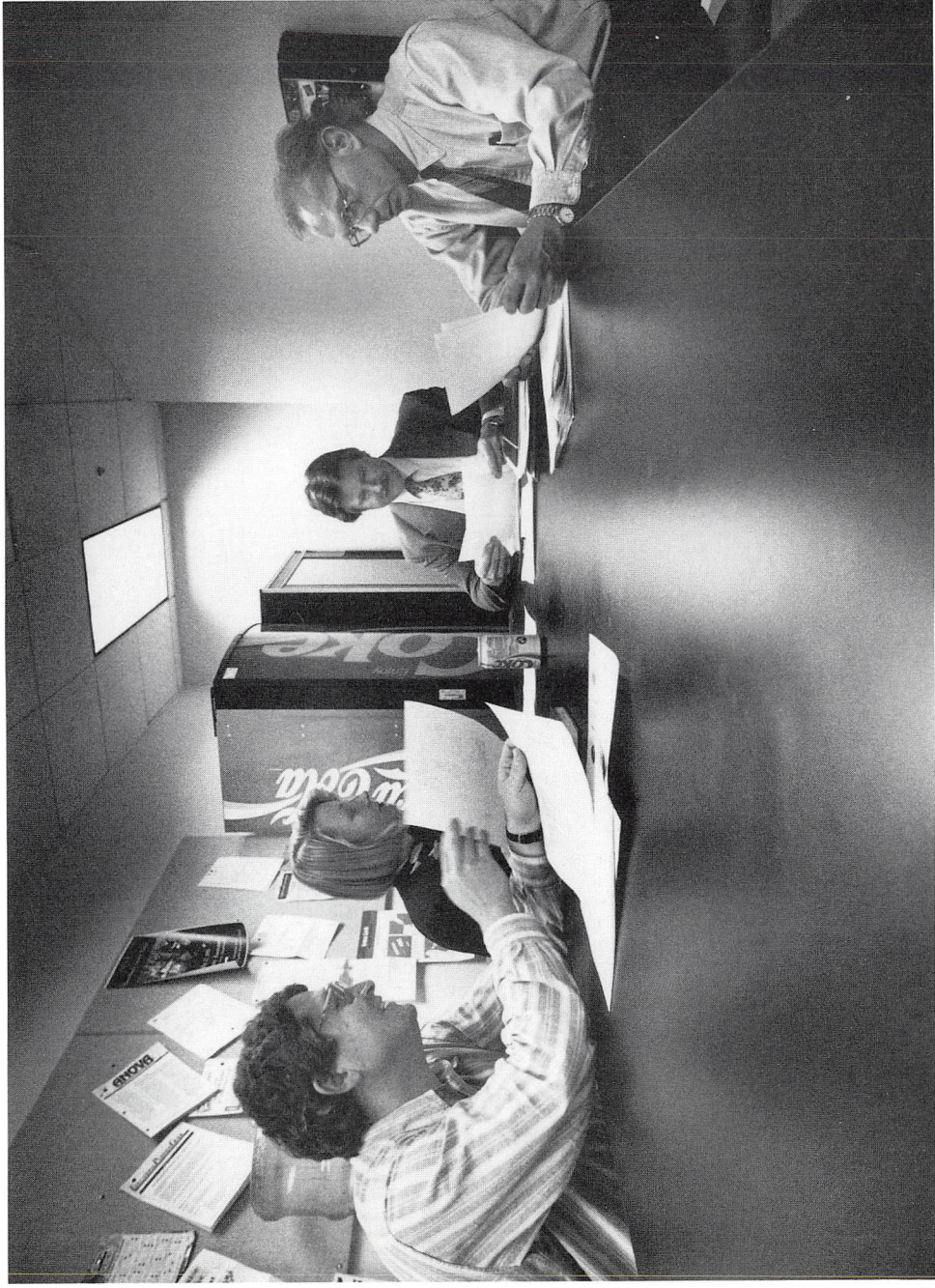
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John Locke, Ph.D.,
Director of the
Graduate Program in
Communication
Sciences and
Disorders, has an
informal meeting with
Professors Macaruso,
Maxwell, and Smith.



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