

School of Allied Health

Karen L. Miller, Dean
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Biometry	61	Master of Occupational Therapy Degree	
Biometry Courses	61	Requirements	67
Clinical Laboratory Sciences	61	Typical Course Sequence	67
Clinical Laboratory Sciences Course	61	Master of Science in Occupational Therapy	68
Communicative Disorders:		General Admission Requirements	68
Intercampus Program	61	M.S. Degree Requirements	68
Hearing & Speech, KU Medical Center	62	Ph.D. in Therapeutic Science	68
Speech-Language-Hearing:		Admission	68
Sciences & Disorders, Lawrence	62	Curriculum	68
Audiology Courses	62	Master of Occupational Therapy Courses	69
Dietetics & Nutrition	62	M.S. in Occupational Therapy Courses	70
Admission	62	Therapeutic Science Courses	70
Dietetics & Nutrition Courses	63	Physical Therapy & Rehabilitation Sciences ..	70
Hearing & Speech	64	Doctor of Physical Therapy	70
Nurse Anesthesia	64	General Admission Requirements	70
Program	64	Degree Requirements: Professional Program	71
Admission Requirements	64	Transitional D.P.T.	71
Degree Requirements	65	Admission Requirements	71
Nurse Anesthesia Courses	65	Degree Requirements	71
Occupational Therapy	67	Ph.D. in Rehabilitation Sciences	71
Master of Occupational Therapy	67	Admission Requirements	71
Admission	67	Degree Requirements	71
		D.P.T./Ph.D. Joint Degree Program	72
		Physical Therapy & Rehabilitation Sciences Courses ..	72

Photo, page 58:
Audiology
students
demonstrate
Otoacoustic
Emissions (OAE)
testing in the
Audiology Clinic
at KUMC.

School of Allied Health

Karen L. Miller, Senior Vice Chancellor for Academic and Student Affairs and Dean

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Academic programs at the University of Kansas Medical Center are offered through the Schools of Allied Health, Medicine, and Nursing. Graduate programs are components of KU's Graduate School. The Office of the Dean of Graduate Studies at KUMC handles matters related to graduate programs in Allied Health, Medicine, and Nursing.

Graduate programs in dietetics and nutrition, hearing and speech, nurse anesthesia, occupational therapy, physical therapy, rehabilitation sciences, and therapeutic science are offered in Kansas City. Graduate programs in hearing and speech are offered cooperatively with the Lawrence campus. The school also offers courses in such supportive and related fields as biometry.

Basic admission requirements are the general requirements of the Graduate School. Individual graduate programs have specific requirements including prerequisite undergraduate courses. These are listed or referenced in program descriptions.

The KU School of Allied Health offers a Dietetic Internship graduate certificate and the following graduate degrees, in cooperation with other academic units:

- Master of Arts
- Master of Occupational Therapy
- Master of Science
- Doctor of Audiology
- Doctor of Philosophy
- Doctor of Physical Therapy

For online information about graduate programs, see www.alliedhealth.kumc.edu.

Biometry

Chair: K. Hassanein
G034 Olathe Pavilion, Mail Stop 3042, KUMC
3901 Rainbow Blvd., Kansas City, KS 66160
www3.kumc.edu/biometry, (913) 588-5566

Professor: K. Hassanein

Professor Emeritus: R. Hassanein

No graduate program is offered in biometry, but the following courses may be taken for graduate credit.

● Biometry Courses

BMTR 800 Special Topics in Biometry: ____ (1-3). Advanced courses on special topics in biometry given as the need arises. IND

BMTR 801 Analysis of Variance (3). Methods for designed experiments including one-way analysis of variance (ANOVA), two-way ANOVA, repeated measures ANOVA, and analysis of covariance are emphasized. Post-ANOVA tests, power and testing assumptions required in ANOVA are discussed and applied. Outlier detection using robust estimators also are incorporated. Boxplots, histograms and scatterplots are used to display data. Prerequisite: PRE 710, PRE 711 or equivalent. Knowledge of statistical software, basic statistical plotting methods, p-value, two-sample t-test and simple linear regression is assumed. Cross listed with NRS 801. LEC

BMTR 811 Principles of Statistical Inference (3). A graduate level introductory course in biostatistics. Measures of central tendency and dispersion; probability distributions: binomial, poisson, normal. Confidence intervals and testing of one and two sample hypotheses. Non-parametric methods, correlation, regression, categorical data analysis and analysis of variance. LEC

BMTR 812 Research Methodology and Statistical Application (3). Research considered from a statistical point of view, including definition and types of research, strengthening nonexperimental hypotheses, and special considerations for clinical studies. Reliability and validity. Vital statistics techniques, hypothesis construction, statistical significance and power. Basic statistical techniques, introduction to multivariate applications: factor analysis, multiple linear and logistic regression; Cox models. Relating research data to computer. Course content available to students via computer-aided instruction. Second part of course involves student presentations of draft research proposals to class, emphasizing research design and statistics. Prerequisite: BMTR 811 or equivalent, or permission of instructor. LEC

Clinical Laboratory Sciences

Chair: Venus Ward
1014 KU Hospital, Mail Stop 4049, KUMC
3901 Rainbow Blvd., Kansas City, KS 66160
www.cls.kumc.edu, (913) 588-5220

The department is seeking approval for an M.S. degree in Molecular Biotechnology. Please contact the department for an update on the status of the degree. The following course can be taken for graduate credit.

● Clinical Laboratory Sciences Course

CLLS 705 Fundamentals of Pathophysiology (3-4). Review of integrative human physiology with an emphasis upon homeostatic mechanisms and etiologies of disease. The interrelationships of function and dysfunction at the molecular, cellular, and tissue level (pathology), organ and systemic level (impairment), and to the total human body (functional limitations) will be applied in each of the body systems. Discussions and applied materials will be tailored to the professional student population. Prerequisite: Admission to the Dietetics and Nutrition Program or Physical Therapy Program or permission of the instructor(s). LEC

Communicative Disorders: Intercampus Program

The Intercampus Program in Communicative Disorders comprises the Department of Speech-Language-Hearing: Sciences and Disorders on the Lawrence campus and the Department of Hearing and Speech on the KU Medical Center campus. Speech-Language Pathology courses are listed under Communicative Disorders: Intercampus Program in the College of

Photo, page 60:
KU's nurse anesthesia program tied for 14th in the nation in the 2006 edition of U.S. News' "America's Best Graduate Schools."

Liberal Arts and Sciences chapter of this catalog. Audiology courses are listed in this chapter.

The intercampus program offers Master of Arts and Doctor of Philosophy degrees in speech-language pathology and audiology, as well as the Doctor of Audiology. The M.A. program in speech-language pathology and the Au.D. program in audiology are fully accredited by the American Speech-Language-Hearing Association.

Hearing and Speech, KU Medical Center:

Chair: John Ferraro, jferraro@kumc.edu
3031 H.C. Miller Building, Mail Stop 3039, KUMC
3901 Rainbow Blvd., Kansas City, KS 66160
www.alliedhealth.kumc.edu/programs/hearing
(913) 588-5937

Speech-Language-Hearing: Sciences and Disorders, Lawrence:

Chair: Hugh Catts, catts@ku.edu
Dole Center, 1000 Sunnyside Ave., Room 3001
Lawrence, KS 66045-7555
www.ku.edu/~splh, (785) 864-0630

Professors: Barlow, J. Brandt, Catts, Ferraro, Fey, Rice, Wilcox

Courtesy Adjunct Professors: Brady, S. Brandt, McCall, McLennan, Steele, Storms

Associate Professors: Carpenter, Chertoff, Jackson, Loeb, Searl, Widen

Clinical Associate Professor: Wegner

Assistant Professors: Auer, Ferguson, Storkel

Clinical Assistant Professors: Bunce, Daniels

Clinical Instructors: Banks, Cuny, Gatts, Haring, Keener, Kieffer, Schroeder

● **Audiology Courses**

For Speech-Language Pathology courses, see Communicative Disorders: Intercampus Program in the College of Liberal Arts and Sciences chapter.

AUD 550 Beginning Clinical Practice in Audiology (1-3).

AUD 697 Audiology I (3).

AUD 803 Communication Problems of the Acoustically Handicapped (3). The development and application of the principles of language learning as they affect the child with a mild to severe hearing loss. LEC

AUD 810 Diagnostic Audiology (4). Audiometric calibration, pure tone and speech testing, analysis of audiograms, middle ear testing. Prerequisite: AUD 697. LAB

AUD 811 Hearing Disorders (3). A study of disorders of the auditory system including anatomical, physiological, perceptual, and audiological manifestations of pathologies affecting hearing. Prerequisite: AUD 810 and AUD 829. LAB

AUD 813 Psychoacoustics and Theories of Hearing (3). A study of relations between common acoustic stimuli and the responses they elicit; consideration of sensory scales, noise phenomena, and speech intelligibility. Prerequisite: AUD 697 and AUD 829. LAB

AUD 814 Hearing Conservation (3). A study of the major components of hearing conservation programs in industrial, educational, and military settings. Forensic audiology issues related to occupational hearing loss are included. Prerequisite: AUD 697 and AUD 829. LAB

AUD 817 Pediatric Audiology (3). Normal and pathological development of the auditory system; pediatric audiometric testing; auditory and communication aspects in the habilitation of hearing-impaired children. Prerequisite: AUD 697 and AUD 810. LAB

AUD 818 Vestibular Systems and Disorders (2). Study of the anatomy and physiology of the normal peripheral and central vestibular system; clinical assessment of vestibular disorders; vestibular rehabilitation. LEC

AUD 819 Hearing Aids I (3). Study of the components, function, fitting, and performance characteristics of hearing aids, applications of amplification in rehabilitative audiology. Prerequisite: AUD 697 and AUD 810. LEC

AUD 820 Rehabilitative Audiology (3). Principles and methods of auditory, communication, and social assessment and intervention with hard of hearing and deaf adults, children, and their families. Prerequisite: AUD 810 and AUD 819 or equivalent. LEC

AUD 821 Hearing Aids II (3). The advanced study of the theoretical bases, techniques, and clinical application of hearing aids and their as-

essment. Participants will review, present, and discuss contemporary issues in hearing aid literature and research. Prerequisite: AUD 819. LEC

AUD 822 Electro-Acoustics and Instrumentation (3). A study of the generation, control and measurement of the simple and complex sounds essential to clinical audiology and hearing research. LAB

AUD 829 Anatomy and Physiology of the Hearing and Vestibular Mechanisms (3). Advanced study of the anatomical and physiological properties of the human hearing and vestibular mechanisms. LEC

AUD 843 Clinical Practice in Audiology (1-6). Supervised clinical work at the University and/or University Medical Center audiology clinics, or affiliated, off-campus practicum sites. Prerequisite: Permission of instructor. FLD

AUD 846 Independent Study in Problems in Audiology (1-10). IND

AUD 848 Seminar in Research Process in Speech Pathology and Audiology (3). This seminar will involve study and discussion of text and journal materials pertaining to the philosophy and methodology of research and their application in the fields of speech pathology and audiology. Students will be required to conduct one or more experiments involving formulation of questions, data gathering, statistical analysis, and report writing. Prerequisite: SPLH 860. LEC

AUD 849 Clinical Practice with the Hearing Impaired (1-3). Students provide rehabilitative services, language, and educational evaluations for children and adults with all types of hearing disorders under the supervision of certified staff. Group and individual conference with staff required. Prerequisite: AUD 793, AUD 842, and permission of instructor. FLD

AUD 851 Auditory Evoked Potentials (3). Theoretical bases, techniques, and clinical applications for auditory evoked potentials including electrocochleography, auditory brainstem response, middle and late latency and cognitive responses. Prerequisite: AUD 810, AUD 822, AUD 829, or permission of instructor. LEC

AUD 899 Thesis (1-10). THE

AUD 940 Seminar in Audiology: _____ (1-4). Advanced study of selected topics in audiology such as (but not limited to): cochlear micro-mechanics and other physiological processes; psychoacoustics, speech perception, cochlear implants, etc. Prerequisite: Enrollment in the Audiology Ph.D. program or permission of instructor. LEC

AUD 944 Advanced Clinical and Experimental Techniques in Audiology (1-6). FLD

AUD 947 Seminar in the Clinical Process in Speech Pathology and Audiology (3). This course will be concerned with the advanced study of the clinical process in the diagnosis and rehabilitation of individuals with speech and hearing problems. The course will focus on the critical evaluation of clinical literature and practices. Prerequisite: SPLH 860. LEC

AUD 999 Doctoral Dissertation (1-12). THE

Dietetics and Nutrition

Chair: Debra Sullivan
4019 Delp Pavilion, Mail Stop 4013, KUMC
3901 Rainbow Blvd., Kansas City, KS 66160
www.dietetics.kumc.edu or sjones.kumc.edu
(913) 588-5355

Graduate Adviser: Pete Beyer, pbeyer@kumc.edu,
4019 Delp Pavilion, (913) 588-5358

Dietetic Internship Director: Rachel Barkley, rbarkley@kumc.edu,
4065 Delp Pavilion, (913) 588-7683

Professor: Carlson

Professor Emeritus: Frakes

Associate Professors: Barkley, Beyer, Sullivan

Assistant Professor: Hise

The department offers two programs. The Dietetic Internship Graduate Certificate Program is fully accredited and includes graduate credit that can be applied to an M.S. degree. The M.S. degree in dietetics and nutrition includes thesis and nonthesis options.

Admission

In addition to requirements under Admission in General Information, the Graduate Record Examination is required for both programs. The institutional copy of the applicant's scores on the GRE must be submitted to the department. It is recommended that the applicant achieve a combined score of at least 1000 for the

KU's audiology program ranked fifth in the nation in the 2006 edition of U.S. News' "America's Best Graduate Schools."

One of the first methods of teaching deaf children to speak was developed at KU.

For SPLH courses, see the College of Liberal Arts and Sciences chapter of this catalog.

For help finding course descriptions, see the Directory of Courses, pages 5-6.

verbal and quantitative sections of the general test and a score of 3.5 on the analytic section.

An applicant to the dietetic internship must have a bachelor's degree and course work from a didactic program in dietetics approved by the American Dietetic Association. Applicants follow the national computer-matching procedure mandated by the American Dietetic Association for application to internships. Sixteen students are admitted annually. Successful completion of the internship allows the student to take the examination to become a Registered Dietitian.

An applicant to the M.S. program must be a Registered Dietitian, be registry eligible, or have a bachelor's degree from a regionally accredited university or college with at least one 3-credit-hour course each in biochemistry, physiology, and nutrition.

● Dietetics and Nutrition Courses

DN 601 Current Concepts in Clinical Nutrition (2).

DIET 660 Management of Human Resources in Dietetics (6).

DIET 661 Management of Food Processing and Service (6).

DIET 662 Special Problems in Food Service Management (3).

DIET 670 Applied Normal Nutrition (3).

DIET 671 Nutrition in Medical Science (6).

DIET 672 Nutrition Care of Patients (6).

DIET 675 Seminar in Dietetics and Nutrition (1).

DN 796 Social and Cultural Aspects of Dietetics and Nutrition (2-4). A study of the aspects of society, culture and personality related diet, food habits, and nutrition. The role of the community and its agencies will be considered. Includes field work. Prerequisite: Consent of instructor. LEC

DN 800 Selected Topics in Clinical Dietetics: _____ (1-6). A learner-centered, self paced study of topics in applied clinical dietetics. Independent modules are offered to address the science and art of nutritional care relating to specific issues to clinical dietetics. Topics will be grouped in various combinations to provide flexibility of choice. Students may enroll in one or more topics for a total of six credit hours. Prerequisite: By permission of instructor only. LEC

DN 803 Selected Topics in Resource Management for Nutrition Care Delivery Systems (1-3). Topics will address the efficiency and effectiveness of the use of dietetic resources to accomplish organizational objectives. Students may enroll in one or more topics for a total of 3 credit hours. Prerequisite: Consent of instructor. LEC

DN 817 Seminar in Dietetics and Nutrition (1). Seminar designed to promote effectiveness of professional written and oral communication, increase knowledge of research, and review content information in selected topics in dietetics. LEC

DN 822 Nutrition Care Management (2-4). An intermediate level course in which students develop skills involving communication, education, and management related to dietetics and nutrition practice. Students may typically be enrolled in DN 827 Practicum associated with the Dietetic Internship. Consent of instructor is recommended without concurrent enrollment in DN 827. Prerequisite: Undergraduate course work in food service systems, management theory, or commensurate practical experience. Lectures, management experience simulations, student presentations, and tours of food service operations are educational methods used in this course. LEC

DN 826 Applied Clinical Nutrition (1-3). An intermediate level graduate course in which students learn the appropriate processes involved in the assessment and delivery of nutrition care for patients in ambulatory, acute, and long-term care settings. Students also learn current nutrition theory and practices involved in evaluation, prevention and treatment of common health problems such as obesity, heart disease, diabetes, cancer, renal disease, gastrointestinal disease and hypertension. Elements of pathology and biochemistry of the nutrition related problems are integrated into course topics. Students are typically also enrolled in the clinical nutrition component of DN 827 (applied practicum) associated with the dietetic internship. The DN 827 clinical nutrition experience is part of the supervised experience (internship) in which nutrition practitioners guide the student in the nutrition assessment and care of hospitalized patients and ambulatory clients. However, DN 826 may be taken without DN 827 with permission of the instructor. Prerequisite: Undergraduate course work in Nutrition, diet therapy, foods, biochemistry and physiology. LEC

DN 827 Practicum: Process in Clinical Dietetics (1-7). Supervised practice experience for graduate level students to fulfill the requirements for the Dietetic Internship. Experiences take place in hospitals, clinics, community health care agencies, and other practice settings in which dietetics and nutrition services are provided. Prerequisite: Admission to the graduate program, permission of dietetic internship director or course instructor. LEC

DN 828 Clinical Education in Dietetics (2-3). A study of teaching methods appropriate for use in a clinical setting. Emphasis on development of instructional objectives, learning situations, and methods of evaluations to be used in clinical teaching in dietetics. Prerequisite: Consent of instructor. LEC

DN 829 Nutrition and Aging (2). An overview of nutrition and the aging process. Physiological, psychological, and sociological aspects of aging, theories of aging, internal and external factors related to nutrient intake, and nutrient needs will be considered. LEC

DN 830 Food Technology (2-3). Consideration of current food processing methods and the factors affecting the palatability and nutritive values of human foods. Course includes pertinent information regarding the protection of the food supply. LEC

DN 832 Studies in Nutrition Care Program and Facility Design (2). A planning team approach to the structuring of a nutrition care program or food service system. Emphasis is given to decision alternatives regarding space, work patterns, structural features, construction materials, and relationships with other disciplines. Prerequisite: Consent of instructor. LEC

DN 834 Methods of Research in Nutrition (3). A study of basic research terminology and designs commonly used in nutrition research. Topics include: research on animals, tissue culture and human subjects; qualitative, quantitative and outcomes research; ethical issues in research; dissemination of research findings; and appropriate use of research findings. Prerequisite: Consent of instructor. LEC

DN 836 Biochemical, Physiological, and Genetic Aspects of Human Nutrition (1-3). The topics covered will deal with the interrelationships of biochemistry, physiology, genetics, and nutrition. Emphasis will be placed on developing an understanding of how the coordination of structure and function is related to the metabolic needs of the cell and its response to the environment. This integrated approach will form a basis for evaluating nutritional needs in humans. Prerequisite: Consent of instructor. LEC

DN 838 Advanced Clinical Dietetics (2-4). An in-depth study of the pathophysiology of nutritional disease. Those functional disorders which result in nutritional disease or those nutritional diseases which affect physiological function will be explored. The emphasis will be in the following areas: endocrinology, metabolism, gastroenterology, and hematology. Clinical experience will be integrated into the course to provide opportunity for practice in clinical dietetic specialties. Prerequisite: Consent of instructor. LEC

DN 839 Clinical Aspects of Nutrition Support (3). Specialized nutrition assessment and support. Review of energy expenditure and substrate utilization in specific disease states. Current methods for the initiation and management of enteral and parenteral nutrition therapy including access, metabolic and mechanical complications. Evaluation nutrition support methodology in selected disease states. LEC

DN 840 Advanced Topics in Nutrition (1-2). Reading and preparation of a paper and/or oral presentation on a selected subject in nutrition. Prerequisite: Consent of instructor. LEC

DN 841 Public Health Nutrition (1-3). Introduction to public health nutrition concerns, assessment of nutritional status of populations, nutrition education and counseling of individuals and groups, and nutrition services in the community. Discussion of the roles of dietitians, nutritionists, and others in providing community nutrition services. Prerequisite: Consent of instructor. LEC

DN 844 Management of Nutrition Care Personnel (2). A study of the application of management theories and functions to personnel management. Includes a study of the role of professional, technical, and supportive personnel in the dietetic field. Emphasis is placed on actual problems through case study and directed readings. Prerequisite: Consent of instructor. LEC

DN 850 Administration of Nutrition Care Delivery Systems (2-4). The course emphasizes the role and responsibilities of a program department administrator. It focuses on long range planning and policy making which takes into consideration the various legal, political, and economic issues which impact on dietetics. Emphasis will be placed on the role of the dietetic administrator in achievement of department goals in the health care delivery scheme. Prerequisite: DN 822, DN 823, or consent of instructor. LEC

DN 851 Practicum: Administration of Nutrition Care Delivery Systems (1-2). Application of planning, policy making, legal, political, and economic issues is provided the student through active participation in administration of a nutrition care delivery program. Concurrent enrollment in DN 850 is required. Prerequisite: DN 822 and DN 823 or consent of instructor. Corequisite: DN 850. LEC

DN 854 Special Problems in Dietetics and Nutrition (1-4). Directed study of special problems in nutrition or nutrition care. This course provides for the individual or group study of special problems. Through directed readings, investigations, and projects, the student acquires information with reference to questions in dietetics and nutrition not covered in organized courses. LEC

DN 857 Motivational Interviewing in Public Health Settings (1). The course is designed to introduce participants to Motivational Interviewing, its concepts, and to the subsequent skills required for helping people to change. This course will be cross-listed with PRVM 857. LEC

DN 860 Collaboration Strategies in Health Care (1). Persuasion and negotiation techniques: skills to evaluate and promote collaboration and goal achievement in a multidisciplinary health care team; analysis of communication styles and strategies to achieve mutual beneficial outcomes. LEC

Employment opportunities are significantly increasing in all allied health professions.

Programs in the School of Allied Health integrate formal instruction with practical experience.

Some departments do not offer all courses in any one semester. See www.registrar.ku.edu/timetable for current course offerings.

See pages 14 and 15 for admission procedures.

DN 865 Nutrition in Sports and Exercise (3). Exercise physiology and nutrient requirements in sports and exercise: macronutrient, micronutrient and fluid needs of athletes engaged in specific sports, pre/post exercise meals, gender specific requirements, role of ergogenic aids, eating disorders, and role of exercise in weight management and chronic disease. Prerequisite: Biochemistry and/or exercise physiology class or permission of the instructor. LEC

DN 870 Health Behavior Counseling (3). Theoretical and applied issues in health behavior counseling. Students will learn the theories of behavior change and how to apply these to health care issues. Specific health behaviors (i.e., dietary changes, smoking cessation, exercise adherence) will be discussed in the context of chronic disease for children, adults, and the elderly. Effective methods of counseling patients and promoting changes on an individual and small group basis will be presented. LEC

DN 880 Dietary and Herbal Supplements (1-2). Designed to develop the health professional's skills in partnering with patients to make dietary supplement decisions. Students will investigate the use of botanicals and dietary supplements in nutritional support of aging, maternal health, and wellness. Discussions on supplementation in the prevention and treatment of chronic disease will include: arthritis, cancer, cardiovascular, diabetes, digestive, liver and renal disorders, memory deficits, and ophthalmic dysfunctions. Prerequisite is an undergraduate degree. Completion of a course in human physiology is advisable. Lectures, journal readings, web enhanced course work and self study of recommended resources on dietary and herbal supplements are educational methods used in this course. To be eligible for 2 hours credit the student will also complete an investigation of a dietary or herbal supplement and present their findings to classmates on-line or in person. LEC

DN 890 Graduate Research (1-4). Individual investigation of special problems in dietetics and nutrition or hospital dietary administration approved by the student's adviser or advisory committee. Investigation involves original research. RSH

DN 899 Thesis (1-6). Scholarly essay based on research, written under the guidance of the student's adviser. Credit given upon meeting thesis requirements for the master's degree. Prerequisite: Consent of adviser. THE

Hearing and Speech

For a description of master's and doctoral degree programs, see Communicative Disorders: Intercampus Program in the College of Liberal Arts and Sciences chapter of this catalog.

For Speech-Language Pathology courses, see Communicative Disorders: Intercampus Program in the College of Liberal Arts and Sciences chapter. For Audiology courses, see Communicative Disorders: Intercampus Program earlier in this chapter.

Nurse Anesthesia

Chair: Carol Elliott, nanesthe@kumc.edu
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3901 Rainbow Blvd., Kansas City, KS 66160
www.na.kumc.edu, (913) 588-6612

Associate Professor: Gordon

Assistant Professors: Elliott, Goodyear-Bruch, Weber

Instructors: Arndt, Nyght

Program

The Master of Science in Nurse Anesthesia prepares the registered nurse to become a Certified Registered Nurse Anesthetist (C.R.N.A.). It is a comprehensive 36-month program that provides students with the most up-to-date knowledge and skills required for success in nurse anesthesia practice. Graduates are able to function independently or in a group practice setting after successful completion of the program.

The program's dedication to excellence is reflected in its ranking among the top nurse anesthesia programs in the country by *U.S. News'* 2006 edition of "America's Best Graduate Schools." The program draws on the extraordinary intellectual and clinical resources offered by the KU Medical Center and several outstanding clinical affiliate sites to enhance the stu-

dent's learning opportunities in all anesthesia techniques. Students have experiences in neurosurgery, orthopedics, urology, ophthalmology, burns, pediatric, regional anesthesia, obstetrics/gynecology, cardiothoracic surgery, otolaryngology, general surgery, outpatient surgery, radiologic procedures, critical care, trauma, and emergency surgery.

The program offers the curriculum in an innovative contemporary education model. The first year consists of basic sciences and the foundations of anesthesia practice with a phased introduction to clinical practice. The second and third years provide extensive clinical practice while continuing didactic education through Web-based classes and research.

The program is offered at three primary clinical sites:

- The University of Kansas Medical Center, Kansas City, Kansas
- Overland Park Regional Medical Center, Overland Park, Kansas
- Mt. Carmel Medical Center, Pittsburg, Kansas

The curriculum is identical at the three sites. Clinical experiences are similar at the three sites, but actual experience depends on the availability of surgical cases.

The application deadline is September 15, and new students begin the program in the summer session.

Upon graduation students receive an M.S. in Nurse Anesthesia degree and are eligible for certification from the Council on Certification of Nurse Anesthetists. The program is fully accredited by the Council on Accreditation of Nurse Anesthesia Educational Programs, the Kansas State Board of Nursing, and the North Central Accrediting Association.

Admission Requirements

Applicants must meet the admission requirements set by the American Association of Nurse Anesthetists' Councils on Accreditation and Certification, the Department of Nurse Anesthesia, and the University of Kansas Graduate School. In full support of university policies, the nurse anesthesiology program seeks a culturally diverse student body and does not discriminate against any group protected by law.

The departmental admission requirements include

1. The applicant must hold a license as a professional Registered Nurse (R.N.) in Kansas and Missouri, or be eligible for licensure in those states.
2. The applicant must hold a bachelor's degree in an appropriate discipline.
3. The applicant must have at least two years of experience as a registered professional nurse with a minimum of one year of recent, full-time experience in an intensive care setting.
4. The following courses or their equivalents must be eligible for transfer to KU as college/university credit. All courses required for admission must have been completed with a minimum grade of C and cannot be credit by examination. A Pass grade is not accepted unless the applicant provides written verification from the university that the Pass designation is equivalent to a grade of C or higher.

Statistics: one course containing both parametric and nonparametric content.

Basic Sciences: the following five science classes are required; an overall grade-point average of 3.0 on a 4.0 scale is required in these courses:

- Chemistry (two courses that have covered the topics of inorganic, organic, and biochemistry)
- Microbiology (one course)
- Anatomy* (one course)

- Physiology* (one course completed within 10 years of program start date with a minimum grade of B)
- *In lieu of separate anatomy and physiology courses, two semesters of a combined Anatomy/Physiology course are acceptable (a minimum grade of B must be attained in both courses, and both courses must be taken within the last 10 years).

5. The applicant must have achieved an overall grade-point average of 3.0 on a 4.0 scale for all cumulative college work.

6. The applicant must have writing skills appropriate to graduate-level education.

7. The applicant must provide three recommendations from individuals who can accurately evaluate the applicant's clinical skills, experience, and ability to pursue graduate study. One reference is required from the applicant's supervisor/nurse manager and two from any of the following: current or former instructor, C.R.N.A., doctor, or peer/coworker.

8. The applicant must submit a one-page typed letter outlining his or her educational and professional goals.

9. Once all application materials have been received, applicants meeting the above criteria are invited to attend a personal interview. Only applicants who attend the personal interview are considered for admission.

10. Before matriculation, all students admitted to the program must:

- Complete ACLS and PALS and maintain their currency throughout the program at the student's expense.
- Submit to a background check at the student's expense.

Degree Requirements

In addition to departmental requirements, the applicant must meet the requirements of the Graduate School and the Council on Accreditation of Nurse Anesthesia Educational Programs, as well as the Council on Certification of Nurse Anesthetists' requirements for eligibility to write the certification examination. Department requirements include satisfactory completion of admission requirements, curriculum requirements, a written comprehensive examination, a thesis or field project with defense, and supervised clinical practicum.

The program curriculum requirement includes

Chemistry/Physics	3
Clinical Anatomy	4
Anesthetic Pharmacology	6
Advanced Physiology	4
Advanced Pathophysiology	2
Basic Principles of Anesthesia	4
Introduction to Clinical Practicum	2
Regional Pain Management	2
Monitoring in Nurse Anesthesia	2
Advanced Theory/Practice I-VI	32
Professionalism: Issues and Roles	4
Introduction to Research	2
Health Care Research	3
Thesis/Field Project	6

● Nurse Anesthesia Courses

NURA 800 Professional Aspects of Anesthesia (3). This course includes orientation to the profession of nurse anesthesia. The student will gain an understanding of the anesthesia department management and organization. The history of anesthesia will be discussed. Ethical, psychological, professional adjustments and legal responsibilities of the nurse anesthetist will be presented. LEC

NURA 801 Introduction to Clinical Practicum (2). Students will engage in clinical practice that involves introduction to basic anesthesia skills. Emphasis is given to patient assessment, anesthetic planning and management of the patient population of low risk categories. The course includes introduction to clinical problem solving and "call" experiences that address the trauma patient and emergency surgical/anesthetic interventions for pathological states. Prerequisite: Permission of instructor. LEC

NURA 805 Clinical Anatomy (4). An intensive study of the major anatomical systems and regions of the body which have clinical significance for anesthetists and others. Particular attention devoted to the respiratory, cardiovascular, and nervous systems. Regional topics include the

anatomy of the head, neck, vertebral column, thorax, axilla, and femoral triangle. Involves both lectures and cadaver dissection, plus appropriate models, x-ray films, and audiovisual materials. Prerequisite: Admission to the Nurse Anesthesia Program or permission of instructor. LEC

NURA 806 Advanced Physiology (4). A course designed to lead to an advanced comprehension of the physiology of organ systems in the human in both cellular and organ processes. Physiology subject matter relevant to clinical health sciences include membrane transport, muscle, cardiovascular, respiratory, renal, water and electrolyte balance, gastrointestinal, and endocrine physiology as well as neurophysiology. Cellular mechanisms include the structure and function of ion channels and pumps, mechanisms of calcium regulation, excitation-coupling processes and mechanisms of oxidative cell damage and apoptosis. Prerequisite: Permission of instructor. LEC

NURA 807 Advanced Pathophysiology (2). This course is an analysis of complex interrelationships and interdependence of organ systems in health and disease. The focus will be on the central concepts of pathophysiology at the cellular, tissue, and system levels. Selected content relating to pulmonary, cardiovascular, renal, gastrointestinal, neurological, immunologic, and endocrine systems is included. Prerequisite: Permission of the instructor. LEC

NURA 810 Foundations of Anesthesia Practice (4). The course introduces the student to the basic foundations of nurse anesthesiology. Principles of anesthesia are integrated with the theories and concepts relative to the art and science of practice. The fundamentals of didactic knowledge as applied to the clinical environment are addressed. The course is designed to provide students with the basic understanding of pathological states that require them to engage in critical thinking to provide safe anesthesia care. Prerequisite: Admission to the program of nurse anesthesia. Corequisite: NURA 801. LEC

NURA 811 Advanced Theory in Anesthesia I (2). This is the first of six courses relative to the didactic study of the art and science of nurse anesthesiology. Students will acquire the knowledge base pertinent to the perioperative anesthetic management of obstetrical and pediatric patients. Students will participate in case scenarios and threaded discussions via the Internet to enhance their critical thinking, problem-solving skills and ability to synthesize didactic information to the clinical environment. Online threaded discussions will be provided, allowing interaction between students, and between students and the instructor in addition, students will be required to engage in analysis of currently published research to identify "best practices" based on research evidence. Prerequisite: Permission of instructor. LEC

NURA 812 Advanced Theory in Anesthesia II (3). This is the second of six courses relative to the study of the art and science of nurse anesthesiology. Students will acquire the knowledge base pertinent to the perioperative anesthetic management of orthopedic procedures along with the fluid and electrolyte needs of patients during surgical interventions. Students will participate in case scenarios and threaded discussions via the internet to enhance their critical thinking, problem-solving skills and ability to synthesize didactic information to the clinical environment. Online threaded discussions will be provided, allowing interaction between students, and between students and the instructor in addition, students will be required to engage in analysis of currently published research to identify "best practices" based on research evidence. Prerequisite: Permission of instructor. LEC

NURA 813 Advanced Theory in Anesthesia III (3). This is the third of six courses relative to the study of the art and science of nurse anesthesiology. Students will acquire the knowledge base pertinent to the perioperative anesthetic management of urological, ophthalmologic and otorhinolaryngology procedures. Students will participate in case scenarios and threaded discussions via the Internet to enhance their critical thinking, problem-solving skills and ability to synthesize didactic information to the clinical environment. Online threaded discussions will be provided, allowing interaction between students, and between students and the instructor. In addition, students will be required to engage in analysis of currently published research to identify "best practices" based on research evidence. Prerequisite: Permission of instructor. LEC

NURA 814 Advanced Theory in Anesthesia IV (2). This is the fourth of six courses relative to the study of the art and science of nurse anesthesiology. Students will acquire the knowledge base pertinent to the perioperative anesthetic management of the geriatric population and patient's with alterations in the endocrine system. Students will participate in case scenarios and threaded discussions via the Internet to enhance their critical thinking, problem-solving skills and ability to synthesize didactic information to the clinical environment. Online threaded discussions will be provided, allowing interaction between students, and between students and the instructor in addition, students will be required to engage in analysis of currently published research to identify "best practices" based on research evidence. Prerequisite: Permission of instructor. LEC

NURA 815 Advanced Theory in Anesthesia V (3). This is the fifth of six courses relative to the study of the art and science of nurse anesthesiology. Students will acquire the knowledge base pertinent to the perioperative anesthetic management of the neurosurgical patient's and the critically ill or injured. Students will participate in case scenarios and threaded discussions via the Internet to enhance their critical thinking, problem-solving skills and ability to synthesize didactic information to

the clinical environment. Online threaded discussions will be provided, allowing interaction between students, and between students and the instructor in addition, students will be required to engage in analysis of currently published research to identify "best practices" based on research evidence. Prerequisite: Permission of instructor. LEC

NURA 816 Advanced Theory in Anesthesia VI (3). This is the sixth of six courses relative to the study of the art and science of nurse anesthesiology. Students will acquire the knowledge base pertinent to the perioperative anesthetic management of cardiothoracic cases and various transplantations. Students will participate in case scenarios and threaded discussions via the Internet to enhance their critical thinking, problem-solving skills and ability to synthesize didactic information to the clinical environment. Online threaded discussions will be provided, allowing interaction between students, and between students and the instructor in addition, students will be required to engage in analysis of currently published research to identify "best practices" based on research evidence. Prerequisite: Permission of instructor. LEC

NURA 821 Advanced Practicum in Anesthesia I (2). This is the first of six courses relative to the application of the art and science of nurse anesthesiology. Each section is designed to address specific surgical categories and the relevant patient care needs and risks. Completion of each course requires acquisition and refinement of clinical skills. Students will demonstrate progression in cognitive, psychomotor and affective skills appropriate to a professional nurse anesthetist. Prerequisite: Permission of instructor. LEC

NURA 822 Advanced Practicum in Anesthesia II (3). This is the second of six courses relative to the application of the art and science of nurse anesthesiology. Each section is designed to address specific surgical categories and the relevant patient care needs and risks. Completion of each course requires acquisition and refinement of clinical skills. Students will demonstrate progression in cognitive, psychomotor and affective skills appropriate to a professional nurse anesthetist. Prerequisite: Permission of instructor. LEC

NURA 823 Advanced Practicum in Anesthesia III (3). This is the third of six courses relative to the application of the art and science of nurse anesthesiology. Each section is designed to address specific surgical categories and the relevant patient care needs and risks. Completion of each course requires acquisition and refinement of clinical skills. Students will demonstrate progression in cognitive, psychomotor, and affective skills appropriate to a professional nurse anesthetist. Prerequisite: Permission of instructor. LEC

NURA 824 Advanced Practicum in Anesthesia IV (2). This is the fourth of six courses relative to the application of the art and science of nurse anesthesiology. Each section is designed to address specific surgical categories and the relevant patient care needs and risks. Completion of each course requires acquisition and refinement of clinical skills. Students will demonstrate progression in cognitive, psychomotor, and affective skills appropriate to a professional nurse anesthetist. Prerequisite: Permission of instructor. LEC

NURA 825 Advanced Practicum in Anesthesia V (3). This is the fifth of six courses relative to the application of the art and science of nurse anesthesiology. Each section is designed to address specific surgical categories and the relevant patient care needs and risks. Completion of each course requires acquisition and refinement of clinical skills. Students will demonstrate progression to cognitive, psychomotor, and affective skills appropriate to a professional nurse anesthetist. Prerequisite: Permission of instructor. LEC

NURA 826 Advanced Practicum in Anesthesia VI (3). This is the sixth of six courses relative to the application of the art and science of nurse anesthesiology. Each section is designed to address specific surgical categories and the relevant patient care needs and risks. Completion of each course requires acquisition and refinement of clinical skills. Students will demonstrate progression in cognitive, psychomotor and affective skills appropriate to a professional nurse anesthetist. Prerequisite: Permission of instructor. LEC

NURA 831 Chemistry and Physics of Anesthesia (3). Chemical and physical principles involved in anesthesia including states and properties of matter, laws governing the behavior of gases, flow and vaporization, oxidation and combustion; principles of electricity and electrical safety; chemical properties and structure-activity relationships for anesthetic accessory and therapeutic drugs. Course will also cover pertinent areas of biochemistry relative to anesthesia practice. Prerequisite: Permission of instructor. LEC

NURA 833 Principles of Anesthesia Practice (4). This course introduces students to the principles and theories of anesthesia practice. Students will develop a conceptual basis for practice of anesthesia by planning care based upon a strong foundation in physical assessment, physiologic monitoring, applications of pharmacology, anesthesia systems and physical/chemical sciences. Prerequisite: Permission of instructor. LEC

NURA 834 Advanced Assessment and Monitoring in Anesthesia and Acute Care (2). Systems approach to advanced assessment, principles of hemodynamic monitoring, electrocardiology, neuromuscular monitoring and neuromuscular in the evaluation patients. Emphasis will be on the cardiovascular, pulmonary, and neurological systems and their

relation to the assessment and monitoring of patients in the acute care or anesthesia setting. Prerequisite: Permission of instructor. LEC

NURA 838 Advanced Principles of Anesthesia Practice (4). Detailed review of disease states of major systems with emphasis on the cardiovascular, respiratory, endocrine, and neuromuscular systems. Lecture format addressing topics relative to specialized or advanced management techniques for specific physiologic and pathologic states encountered in the surgical patient. Prerequisite: NURA 833. LEC

NURA 839 Regional Anesthesia/Pain Management (2). Includes study of conductive anesthesia techniques, pharmacokinetics of local anesthetics, anatomical placement, and physiologic response. The course is inclusive of acute and chronic pain management techniques. LEC

NURA 850 Basic Anesthesia Pharmacology (3). Principles of anesthetic drugs/agents common to clinical practice. Content includes pharmacodynamic and pharmacokinetic study of drugs affecting the autonomic nervous system and central nervous system, theories of anesthesia, uptake and distribution, conductive agents, toxicology and therapeutics of anesthetic accessory drugs. Prerequisite: Permission of instructor. LEC

NURA 851 Advanced Anesthesia Pharmacology (3). General principles, autonomic, cardiovascular, autacoids, pulmonary, renal and gastrointestinal topics, advanced pharmacology with emphasis on anesthetic implications. Web-based course with each section containing the following components: content guided-practice (questions with feedback), clinical cases, and practice exams. On-line threaded discussions will be provided, allowing interaction between students, and between students and the instructor. Prerequisite: NURA 850 or permission of instructor. LEC

NURA 880 Advanced Topics: _____ (1-4). Special study allowing a student to pursue a particular subject through readings, directed assignments, and conferences with a faculty member. Prerequisite: Consent of instructor. LEC

NURA 890 Graduate Research (1-3). Research leading to the submission of a master's thesis or master's field project for the Master of Science in Nurse Anesthesia. Independent scientific investigation in nurse anesthesia. Must be approved by and under the supervision of the student's research adviser. In partial fulfillment of the requirements for the degree. Prerequisite: Consent of adviser. LEC

NURA 891 Introduction to Research (2). Students are introduced to thesis development. The student will become increasingly competent in the reading and critical analysis of anesthesia research literature. Considerable attention is placed upon study design and execution relative to the question at hand. Outside readings, student presentations and class discussion are utilized in achieving course objectives. LEC

NURA 892 Research Seminar II (1). This is the second of five (5) consecutive semester courses. The student will become increasingly competent in the reading and critical analysis of the anesthesia research literature. Considerable attention is placed upon study design and execution relative to the question at hand. Each semester case studies, outside readings, student presentations, and class discussion are utilized in achieving course objectives. LEC

NURA 893 Research Seminar III (1). This is the third of five (5) consecutive semester courses. The student will become increasingly competent in the reading and critical analysis of the anesthesia research literature. Considerable attention is placed upon study design and execution relative to the question at hand. Each semester case studies, outside readings, student presentations, and class discussion are utilized in achieving course objectives. LEC

NURA 894 Research Seminar IV (1). This is the fourth of five (5) consecutive semester courses. The student will become increasingly competent in the reading and critical analysis of the anesthesia research literature. Considerable attention is placed upon study design and execution relative to the question at hand. Each semester case studies, outside readings, student presentations, and class discussion are utilized in achieving course objectives. LEC

NURA 895 Research Seminar V (1). This is the fifth of five (5) consecutive semester courses. The student will become increasingly competent in the reading and critical analysis of the anesthesia research literature. Considerable attention is placed upon study design and execution relative to the question at hand. Each semester case studies, outside readings, student presentations, and class discussion are utilized in achieving course objectives. LEC

NURA 896 Field Project (1-3). Restricted to the writing of a research project, usually based on applied research associated with field experience in nurse anesthesia. In partial fulfillment of requirement for the Master of Science in Nurse Anesthesia. Graduate training in practice methods, issues or techniques of anesthesia summarized as a major field research project in lieu of thesis. Projects must be defended prior to degree completion. Prerequisite: Consent of adviser. LEC

NURA 899 Thesis (1-3). Restricted to the writing, preparation of the formal thesis, based upon independent research and in partial fulfillment of the requirements for the Master of Science in Nurse Anesthesia. Thesis must be defended prior to degree completion. Prerequisite: Consent of adviser and NURA 890. THE

The Master of Occupational Therapy is an entry-level professional degree. During the first year, students enroll in undergraduate courses to earn a B.S. in Occupational Studies. During the second and third years, students take graduate-level courses that lead to the M.O.T.

The Master of Science degree in Occupational Therapy is for professionals interested in disability issues.

Occupational Therapy

Chair: Winifred W. Dunn, otprogram@kumc.edu

Graduate Adviser: Jeff Radel

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Professors: Dunn, McDowd

Associate Professors: Brown, Radel

Assistant Professors: Ahmad, Grobe

Master of Occupational Therapy

www.ot.kumc.edu/mot

The Master of Occupational Therapy is an entry-level professional degree for occupational therapists. Occupational therapists use occupation (i.e., purposeful activity that is meaningful to the person and is aimed at achieving a goal) to support people to develop or regain skills they need to learn, play, earn a living, and take care of themselves and others. The occupational therapist provides services to persons of all ages who want and need to participate as active members of society, but for whom physical, developmental, cognitive, or emotional issues interfere. Occupational therapists also provide services to well populations, communities, and individuals to facilitate maximum health and quality of life and to prevent injury and disability. Occupational therapy maximizes the quality of life for the individual, the family, and caregivers and keeps health care costs down. Occupational therapists are employed in schools, mental health facilities, hospitals, rehabilitation centers, home health agencies, government and community agencies, private practices, and industry. They may provide direct intervention services; act as consultants, administrators, researchers; teach at a college or university; or any combination of these.

The program is accredited by the Accreditation Council for Occupational Therapy Education of the American Occupational Therapy Association, 4720 Montgomery Lane, P.O. Box 31220, Bethesda, MD 20824-1220, (301) 652-AOTA. Graduates may sit for the national certification examination for occupational therapists administered by the National Board for Certification in Occupational Therapy. After completion of this examination, the individual is an Occupational Therapist, Registered. Most states require licensure to practice. Initial state licensure is based on the successful completion of the NBCOT certification examination.

Admission. Students are eligible for admission after completing a minimum of 90 credit hours of preparatory course work, which may be taken on the Lawrence campus or at another university; up to 64 hours can be taken at a community college. Students must earn a minimum grade-point average of 3.0 on a 4.0 scale in prerequisites. Contact the OT education program office at KU Medical Center for information on other eligibility requirements and for current information.

Eligible students should begin the application process by submitting the School of Allied Health application and fee on or before December 15. Complete the application process by submitting other application forms (available from the OT office) and two official college transcripts on or before February 1. If accepted, the student begins the three-year program in the summer at KUMC.

The occupational therapy admission committee reviews applications. Students who meet all eligibility criteria by the deadlines are invited to complete an interview and writing sample. Selection is based on the applicant's strength in eligibility criteria as well as performance in the interview and writing sample.

Students for whom English is a second language should contact the department for additional information about scores on the Test of English as a Foreign Language or the Lawrence campus Applied English Center's English Language Proficiency Test or both.

All prospective students should obtain advising from the OT education program office at KUMC or should schedule an appointment through the Freshman-Sophomore Advising Center to meet with an OT adviser on the Lawrence campus.

Application procedures are subject to change. Check the Web site or contact the department for updates.

An introductory course open to all students, OT 101, is offered on the Lawrence campus to acquaint students with the profession.

Master of Occupational Therapy Degree Requirements.

The Master of Occupational Therapy is a three-year, full-time program starting each summer session. During the first year, students enroll in undergraduate courses focusing on occupational studies. Students who successfully complete these courses earn a B.S. in Occupational Studies. During the second and third years, students take graduate-level courses that lead to the M.O.T. Completion of both levels allows the individual to sit for the national certification examination. Courses include basic science, occupational therapy theory and application, clinical reasoning, and practice. The student must complete a research project carried out with a group of students and a faculty mentor. Students must complete

- 90 credit hours of prerequisite course work.
- 39 hours of undergraduate academic courses and part-time practica in the occupational therapy department.
- 44-51 graduate hours in occupational therapy courses and fieldwork. The academic portion of the program is punctuated with full time Level II fieldwork experiences, giving students ample opportunity to integrate practical experience with classroom learning.
- 12 hours of Fieldwork Level II.

Fieldwork Level II. FW II is a vital part of an occupational therapy education and a degree requirement. FW II courses are full-time practicum experiences carried out in service delivery settings. Students take FW II during the Spring 2a and Fall 3b semesters. An optional FW II experience may be scheduled during the Fall 3a semester. At least one FW II experience is to be completed in Kansas but outside the greater Kansas City area (as defined by the OT education department.) FW II may only be scheduled and arranged through the academic fieldwork coordinator or the fieldwork assistant. Students are responsible for transportation to and from fieldwork centers, living arrangements and expenses, tuition and fees for 12 to 18 credit hours, and any other expenses. Both undergraduate and graduate courses for the entry-level M.O.T. degree are outlined below.

Typical Course Sequence

Summer 1 (9 credit hours)

OCTH 388 Human Anatomy 6

OCTH 395 Orientation to the Occupational Therapy Profession 3

Fall 1 (16 credit hours)

OCTH 401 Theory and Practice in Occupational Therapy 2

OCTH 415 Communication and Professional Relations 1

OCTH 422 Analysis and Adaptation of Occupations I	4
OCTH 430 Practicum I	2
OCTH 435 Lifespan Development from an Occupational Perspective	4
OCTH 455 Neuroscience Analysis of Occupational Performance	3
Spring 1 (14 credit hours)	
OCTH 445 Contexts of Occupations	2
OCTH 462 Physical Considerations in Facilitating Occupational Performance	3
OCTH 468 Facilitating Physical Performance Lab	1
OCTH 470 Practicum II	1
OCTH 472 Psychiatric Considerations in Facilitating Occupational Performance	3
OCTH 482 Analysis and Adaptation of Occupations II	2
OCTH 490 Evaluation and Assessment of Occupational Performance	2
Fall 2 (14 credit hours)	
OCTH 704 Planning and Intervention in Occupational Therapy	2
OCTH 710 Service Management: Delivery Systems	1
OCTH 720 Occupational Therapy Practice Models	7
OCTH 730 Practicum III	2
OCTH 783 Evidence-based Practice	2
Spring 2a (6 credit hours—January through March)	
OCTH 770 Level II Fieldwork, Part 1	6
Spring 2b (5-6 credit hours—April and May)	
OCTH 715 Supervision, Team Relations, and Management Communication	1
OCTH 725 The Research Process	1
OCTH 738 Special Topics in Practice	1-2
OCTH 750 Case-based Clinical Reasoning	2
Fall 3a (6 credit hours—July through September)	
OCTH 780 Elective Level II Fieldwork, Special Topics (optional)	6
Fall 3b (6 credit hours—October through December)	
OCTH 775 Level II Fieldwork, Part 2	6
Spring 3 (12 credit hours)	
OCTH 727 Professional and Technical Writing	2
OCTH 755 Issues and Trends Seminar	1
OCTH 760 Professional Development and Leadership in Service Management	3
OCTH 765 Family and Community Service Systems	2
OCTH 776 Population-based Health Care	2
OCTH 790 Research Practicum	2

KU's occupational therapy program is tied for fourth in the nation in the 2006 edition of U.S. News' "America's Best Graduate Schools."

The Therapeutic Science doctoral program is for students whose interests in disability and quality of life require an integrated, interdisciplinary course of study.

Master of Science in Occupational Therapy

www.ot.kumc.edu/msot

This program is for professionals interested in disability issues. These professionals include, but are not limited to, practicing occupational therapists. The curriculum recognizes the importance of interdisciplinary dialogue in the development of research, teaching, and administrative skills and knowledge of relevant theory. Most course work is offered in the evenings for the convenience of those who hold jobs.

General Admission Requirements. Applicants must meet Graduate School general entrance requirements. Departmental admission requirements include

1. The applicant must have a bachelor's degree.
2. Three letters of recommendation are required.
3. The applicant must submit a brief statement of career goals and research interests (100 to 300 words).
4. Preference is given to applicants who can document a history of professional leadership.
5. Application materials must be received by April 1 for fall admission.

M.S. Degree Requirements. The student must complete a minimum of 12 hours of core course work related to theory and disability issues, a 3-hour graduate neuroscience course, 12 hours of research courses (including thesis hours), and 9 elective hours, with an overall grade-point average of 3.0 or higher on a 4.0 scale. The student must pass a final oral examination that includes defense of the thesis.

Core Courses Offered in the M.S. in Occupational Therapy Program	
OTMS 701 Professional Development	3
OTMS 705 Multidisciplinary Theoretical Perspectives	3

OTMS 735 Practice Models for Applied Science	3
OTMS 800 Research Proseminar	1
OTMS 801 Applied Neuroscience	3
OTMS 835 Interpreting Research for Applied Science	3
OTMS 880 Special Topics in Occupational Therapy	1-6
(requires consent of faculty member)	
OTMS 890 Graduate Research	1-6
(requires consent of faculty member)	
OTMS 899 Thesis (requires consent of faculty member)	1-6

Elective Options. Each student selects three, 3-credit-hour general graduate-level elective courses to complement his or her program. These selections must be approved by the student's adviser.

Ph.D. in Therapeutic Science

www.ot.kumc.edu/therapeutic

The Therapeutic Science doctoral program is designed for students whose interests in disability and quality of life require an integrated, interdisciplinary course of study that cannot be provided by existing programs. The program attracts students who may already have obtained academic or professional master's degrees and have a professional credential or identity (e.g., occupational therapist, speech-language pathologist, licensed clinical social worker, clinical psychologist, special educator). Many who are already working with disability issues may wish to generate knowledge for understanding disability and improving quality of life for individuals with disabilities.

Admission. Only students seeking the Ph.D. degree are admitted. The interdisciplinary program committee reviews each applicant's preparation. Acceptable preparation must include basic training in statistics and design and completion of an empirical research study or thesis. If an applicant does not have adequate preparation for doctoral-level work, he or she must develop satisfactory research skills before formally entering the program. The program committee may recommend a range of options, from requiring the student to take at least 6 hours of basic statistics and methods courses and complete an independent research project, to requiring the student to obtain a master's degree.

The admission review also considers the fit between the student's research interests and the design and goals of the program. Applicants who qualify for admission must investigate discipline-specific programs with which their interests intersect and submit a rationale for why their research and career goals can only be met by this program. The applicant's leadership experience and potential to contribute to knowledge generation and transfer through research, teaching, or service and the extent to which the applicants' interests and goals correspond to those of available faculty also are considered. All applicants must submit a personal statement of career goals and professional development, three letters of recommendation, and two copies of all graduate and undergraduate transcripts. Application materials must be received by March 1 for fall admission.

Curriculum. The program includes a core curriculum for all students and also gives each student the opportunity to create a course of study to meet her or his professional objectives. Students receive a foundation of basic knowledge as well as multidisciplinary perspectives on issues and problems related to individuals with disabilities. On completion of this program, students are prepared for academic, research, and leadership careers with institutions and agencies serving individuals with disabilities and their families.

Core Courses Offered in the Therapeutic Science Ph.D. Program

TS 800 Research Proseminar	1
TS 805 Multidisciplinary Theoretical Perspectives	3
TS 850 From Beliefs to Evidence	1
TS 900 Evolving Interdisciplinary Views of Disablement	1-2
(may be taken more than once for a total of 2 credit hours)	
TS 950 Designing Effective Knowledge Transfer	1-2
(may be taken more than once for a total of 2 credit hours)	
TS 980 Advanced Study in Therapeutic Science	1-6
(may be repeated until work is completed; requires consent of faculty member)	
TS 990 Dissertation in Therapeutic Science	1-9
(requires consent of faculty member)	

● Master of Occupational Therapy Courses**OCTH 704 Planning and Intervention in Occupational Therapy (2).**

Using a problem based clinical reasoning approach this course examines the impact of common medical conditions on occupational performance with individuals of all ages. Students will practice developing plans and interventions for occupational performance problems presented by varying medical conditions. LEC

OCTH 710 Service Management: Delivery Systems (1). This course is designed to provide the student with an understanding of how the systems in which service occurs impact practice. Financial, regulatory, and personnel issues across a variety of systems will be addressed. LEC

OCTH 715 Supervision, Team Relations, and Management Communication (1). This course emphasizes entry level skills related to supervision, teamwork, and communication within practice environments. LEC

OCTH 720 Occupational Therapy Practice Models (7). In a series of modules this course introduces the student to selected occupational therapy practice models. Theoretical background, assessments, and interventions approaches common to each model are described. The lab component of this class consists of two parts: 1) learning of assessment and intervention techniques specific to different practice models and 2) practice in selecting and applying appropriate practice models for different occupational performance problems. LEC

OCTH 725 The Research Process (1-2). An introduction to the research process including research design, methods, sampling, measurement, and research ethics. Qualitative and quantitative research are discussed. Research consumer skills are emphasized. LEC

OCTH 727 Professional and Technical Writing (2). Students will achieve competency in scientific writing and use of the American Psychological Association (APA) style. LEC

OCTH 730 Practicum III (2). Selected field experiences provide opportunities for critical thinking and problem solving in a variety of contexts and service provision models where occupational therapy is provided to persons with disabilities. Students will have opportunities to provide assessment and intervention to at least one individual with a psychosocial dysfunction and one individual with a physical disability under the supervision of an occupational therapy mentor. Students will determine the relevant variables for intervention, work collaboratively with others within the setting and analyze and reflect upon their experience. LEC

OCTH 738 Special Topics in Practice (1-2). Focused study of theory application, professional topics and skills, and emerging practice questions. Learning experiences may be in the form of guided readings and discussion, directed projects, seminars, or community/clinical experience with focus on advanced supplemental or exploratory learning. Specific topics and formats will vary as they are generated by student interest and faculty expertise. LEC

OCTH 745 Seminar I: _____ (3). This course will address areas of special interest in occupational therapy. Issues and trends relative to advanced application of theory, assessment, and intervention will be presented in lecture and discussion. Special projects will emphasize the students' special interests. Although faculty directed, student presentations will be emphasized. LEC

OCTH 750 Case-based Clinical Reasoning (2). Student will apply the clinical reasoning process to individuals with occupational performance needs. Cases will be presented from the student's Level II fieldwork experience. In a problem solving format, student will evaluate services received by the individual and discuss alternatives given a variety of situations. LEC

OCTH 755 Issues and Trends Seminar (1). Students will analyze key professional, political, and cultural issues and trends that impact service provision and the populations served by occupational therapists. LEC

OCTH 756 Interdisciplinary Wellness Promotion for People with Psychiatric Disabilities (2). Emphasizes development of wellness programs built on recovery philosophy and health promotion models. Factors relevant to the adoption of healthy behaviors in individuals with psychiatric disabilities are explored. Students have the opportunity to partner with interdisciplinary groups including students with psychiatric disabilities in designing health promotion programs that meet the needs of the population. Graduate students will be expected to act as discussion leaders while undergraduates will not. (same as NRS 556). LEC

OCTH 760 Professional Development and Leadership in Service Management (3).

Exploration of professional responsibilities, professional career development opportunities, and preparations for employment. Service management content will build on previous service management courses, and will develop an understanding of leadership, administration, and management of occupational therapy services. LEC

OCTH 765 Family and Community Service Systems (2). Through lecture and a community project, student will examine various systems that impact service delivery with individuals. Students will complete a semester long project with an individual centered on facilitating occupational performance needs. LEC

OCTH 770 Level II Fieldwork, Part 1 (6). A required full-time, three-month supervised experience in a facility meeting specified criteria. Qualified occupational therapists supervise the experience. Students will be exposed to a variety of age ranges and disabilities within different service delivery systems. Prerequisite: Satisfactory completion of required academic course work. LEC

OCTH 774 Promoting Wellness: Community Experience with People with Psychiatric Disabilities: (1). Implement and evaluate an interdisciplinary health promotion module for persons with psychiatric disabilities in a community mental health setting. Course includes training in developing a collaborative approach with consumers and professionals from other disciplines. Prerequisite: Interdisciplinary Wellness Promotion for People with Psychiatric Disabilities. (same as NRS 576). LEC

OCTH 775 Level II Fieldwork, Part 2 (6). A required full-time, three-month supervised experience in a facility meeting specified criteria. Qualified occupational therapists will supervise this experience. Students will be exposed to a variety of age ranges and disabilities within different service delivery systems. Ages, disabilities, and service provision systems for this course will differ from the student's prior fieldwork experience. Prerequisite: Satisfactory completion of required academic course work. LEC

OCTH 776 Population-based Health Care (2). Concepts and theories related to providing health care to complex systems and aggregates in the community, state, nation and world are explored. Emphasis is placed on the promotion, maintenance and restoration of health and wellness and the prevention of disease. Internal and external environmental components which include historical, political, social, cultural and economic factors are presented. The role of the health care provider in identifying, prioritizing and meeting the health and life participation needs of aggregates is discussed. LEC

OCTH 780 Elective Level II Fieldwork, Special Topics (6). An elective (optional) full-time, three month, supervised experience in a facility meeting specific criteria. Qualified occupational therapist will supervise this experience. This fieldwork would allow students to pursue areas of special interest. Prerequisite: Satisfactory completion of required academic course work. LEC

OCTH 783 Evidence-based Practice (2). This course will address the parameters and criteria for evidence-based practice. Students will evaluate the status, beliefs, and practice of the profession, and will develop skills at synthesizing and presenting evidence to service recipients. Students will also formulate a decision-making paradigm for their future practice decisions. LEC

OCTH 790 Research Practicum (2). Students in this course will carry out a research project with the guidance of a faculty mentor, and write a research paper reporting the results of their study. LEC

OCTH 801 Applied Neuroscience (3). This course will address the major functions of the systems within the central nervous system and how they interact to produce responses to environmental demands. Sensory input, central processing, and output mechanisms will be analyzed. The student will then appraise human behavior in relation to function and dysfunction of the nervous system, both in formulating potential behavioral signs when a specific neurological site is presented, and in hypothesizing about neurological involvement when analyzing a particular individual's problems. Prerequisite: Undergraduate neuroscience course or permission of instructor. LEC

OCTH 810 Kinesiology (3). This course is designed to move beyond the clinical application of biomechanical principles in evaluation and treatment to the analysis of particular movement problems and to creative problem solving. Following core content of advanced kinesiology and exercise physiology, students will select a particular kinesiological issue or problem for more in depth guided study. Prerequisite: Permission of instructor. LEC

OCTH 845 Advanced Study in: _____ (3). This course will focus on directed readings, discussion, and the interpretation of data based literature in an identified specialty area. Although faculty directed, student presentations will be emphasized. Student directed research topics will be explored. Prerequisite: OCTH 745 or equivalent course work with permission of instructor. LEC

OCTH 890 Graduate Research (1-6). Students investigate an empirical question relevant to occupational therapy and write a literature review and a research proposal under the guidance of a faculty adviser. Pending approval of the proposal, the student will carry out initial phases of the project, including materials preparation and data collection. LEC

A three-year Doctor of Physical Therapy degree is replacing the current two-year M.S. degree. Please check with the department about the status of this program.

The Ph.D. degree in rehabilitation science prepares leaders in research and academia.

KU's physical therapy graduate program was tied for 10th in the nation in the 2006 edition of U.S. News' "America's Best Graduate Schools."

● M.S. in Occupational Therapy Courses

OTMS 699 Special Projects (1-6).

OTMS 701 Professional Development (3). With an emphasis on leadership skills and professionalism, this course will include mentoring, supervising, managing, organizing presentations, and teaching, writing, and contributing through professional organizations (interdisciplinary and occupational therapy). Students professionalism on issues of concern to administrators, staff therapists, educators, or those in private practice. Prerequisite: Permission of instructor. LEC

OTMS 705 Multidisciplinary Theoretical Perspectives (3). Students will identify and explore the key theories in occupational therapy and those more specific to their emphasis area with an emphasis on those currently influencing clinical reasoning. Students will demonstrate an understanding of contemporary theories and be able to compare and contrast key theories. Students will develop rationales for theory guided interventions. Furthermore, they will develop an impact summary in their identified area of emphasis. Prerequisite: Permission of instructor. LEC

OTMS 735 Practice Models for Applied Science (3). Issues and trends relative to advanced application of theory, assessment and intervention with emphasis on pediatrics will be presented in lecture and discussion. Special projects will emphasize the student's special interests. Although faculty directed, student presentation will be emphasized. LEC

OTMS 800 Research Proseminar (1). A proseminar conducted by the core graduate faculty in Occupational Therapy and Therapeutic Science. Twice-monthly meeting will involve student and faculty presentations of their current research, as well as provide more opportunities to obtain feedback on research proposals. May be taken more than once for a total of four credits. Cross-listed with TS 800. RSH

OTMS 801 Applied Neuroscience (3). The course will address the major functions of the systems within the central nervous system and how they interact to produce responses to environmental demands. Sensory input, central processing, and output mechanisms will be analyzed. The student will then appraise human behavior in relation to function and dysfunction of the nervous system, both in formulating potential behavioral signs when a specific neurological site is presented, and in hypothesizing about neurological involvement when analyzing a particular individuals problems. Prerequisite: Undergraduate neuroscience course or permission of instructor. LEC

OTMS 835 Interpreting Research for Applied Science (3). Research relevant to therapeutic intervention comes from a variety of disciplines involving varied research designs and analysis strategies. Students in this course will examine selected research studies and gain skill in analyzing methods and results as well as in applying research findings to practical problems. Students will also design their own research project reflecting their area of interest. LEC

OTMS 880 Special Topics in Occupational Therapy (1-6). This course will focus on directed readings, discussion, and the interpretation of data-based literature with a targeted emphasis as determined by the student and the faculty mentor(s) together. Although faculty will participate in the mentoring process, student presentations will be emphasized and student-directed research topics explored. LEC

OTMS 890 Graduate Research (1-6). Students investigate an empirical question relevant to occupational therapy and write a literature review and a research proposal under the guidance of a faculty adviser. Pending approval of the proposal, the student will carry out initial phases of the project, including materials preparation and data collection. RSH

OTMS 899 Thesis (1-6). Course requires data analyses, interpretation, and scholarly writing based on individual original research carried out under the guidance of the student's adviser. These activities, along with an oral presentation of research, must meet with approval of the student's advisory committee to complete thesis requirements. Prerequisite: OTMS 890. THE

● Therapeutic Science Courses

TS 800 Research Proseminar (1). A proseminar conducted by the core graduate faculty in Occupational Therapy and Therapeutic Science. Twice-monthly meetings will involve student and faculty presentations of their current research, as well as provide more opportunities to obtain feedback on research proposals. May be taken more than once for a total of four credits. (Same as OPTH 800.) LEC

TS 805 Multidisciplinary Theoretical Perspectives (3). Students will identify and explore key theories in behavioral and social science with an emphasis on those currently influencing clinical reasoning. Students will demonstrate an understanding of contemporary theories and be able to compare and contrast key theories, while also developing knowledge about theory guided research and interventions. (Same as OPTH 705.) LEC

TS 850 From Beliefs to Evidence (1). Analysis of the role of beliefs about practice in professional culture and how beliefs are affected by the accumulation of research evidence. Topics include the nature of science and beliefs, the nature of evidence, and the debate over evidence-based practice. Students will use topics from their own professional interests for class presentations and written assignments. May be taken more than once for a total of two credits. LEC

TS 880 Special Topics (1-6). (1-6) An elective course to allow student investigation of special issues or problems relevant to applied research and/or practice, under the direction of a faculty member chosen by the student. Systematic coverage of current issues may include a research investigation or study related to pertinent sociocultural trends, practice factors, or emerging issues in service provision. Students will complete special projects such as oral presentations, written papers, or case analysis as negotiate with the faculty member. May be repeated for credit. Prerequisite: Permission of instructor. IND

TS 900 Evolving Interdisciplinary Views of Disablement (1). Assessment of how our social and cultural context defines notions of disability and disablement in our society. Topics include historical constructs of disability, public policy related to disability, and social paradigms of disability. Students will evaluate views of disablement from the perspective of their own discipline. May be taken more than once for a total of two credits. LEC

TS 950 Designing Effective Knowledge Transfer (1). Examination of the principles of knowledge transfer and diffusion of innovation as they relate to practices in therapeutic professions. Topics include the diffusion process, change agents, innovation adoption, and current diffusion methods. Students will evaluate diffusion processes that have occurred within their own professions. May be taken more than once for a total of two credits. LEC

TS 980 Advanced Study in Therapeutic Science (1-6). Students engage in advanced study of a topic of their interest, guided by an appropriate mentor. Methods include directed readings, interpretation of evidence, discussions, and written syntheses of existing literature. Course culminates in a written proposal for original research and an oral defense of that proposal. Credit is given only after the dissertation proposal is accepted by the student's advisory committee. Prerequisite: Permission of instructor. SEM

TS 990 Dissertation in Therapeutic Science (1-9). Research experience leading to dissertation for doctoral students in Therapeutic Science. LEC

Physical Therapy and Rehabilitation Sciences

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Associate Professors: Loudon, Pohl, Stehno-Bittel
Assistant Professors: Boyd, Kluding, Liu, Searls, Smirnova
The department offers four programs: (1) a professional Doctor of Physical Therapy degree for students who plan to become physical therapists; (2) a Doctor of Philosophy degree in rehabilitation science to prepare qualified individuals for university teaching, research, service, and leadership positions in rehabilitation; (3) a rapid-transition D.P.T./Ph.D. joint degree for students with B.S. degrees in health-related sciences who wish to become physical therapists and Ph.D.-educated rehabilitation scientists; and (4) a transitional D.P.T. for physical therapists who wish to update their education and work toward the Doctor of Physical Therapy degree.

Doctor of Physical Therapy

The Doctor of Physical Therapy program provides opportunities for students to learn the application of basic science principles to the practice of physical therapy. The practice of physical therapy includes delivery of clinical physical therapy services, consumer education on wellness, research, and management.

The graduate may apply for licensure or registration to the state in which he or she will be working. The program is accredited by the Commission on Accreditation in Physical Therapy Education.

General Admission Requirements. To be admitted to the professional degree program in physical therapy, an applicant must meet the general entrance requirements of the Graduate School. Departmental admis-

sion requirements must be completed by May 31 of the year of intended matriculation. These include

1. A baccalaureate degree from an approved college or university.

*2. The following academic prerequisites:

Humanities

2 courses in English composition
1 course in speech

Social Sciences

1 course in general psychology
1 course in advanced psychology
1 course in sociology
1 course in normal development

Basic Sciences

2 semesters or equivalent of chemistry with laboratory
2 semesters or equivalent of physics with laboratory
2 semesters or equivalent of biology with laboratory
1 semester or equivalent of anatomy with laboratory (may be human or mammalian)
1 semester or equivalent of human physiology with laboratory

Mathematics

1 course in college algebra and trigonometry or precalculus mathematics or calculus
1 course in statistics

Recommended

Computer literacy
1 course in ethics
1 semester or equivalent of exercise physiology
1 semester or equivalent of kinesiology

*A course may only be used once toward fulfillment of prerequisites. The only possible exception would be a combined anatomy/ physiology lecture and laboratory course of 6 semester credit hours or more.

3. Three letters of recommendation.

4. Grade-point average of 3.0 or higher on a 4.0 scale in each of the following:

- Required mathematics and science courses
- All prerequisite courses
- Overall grade-point average

Note: All science prerequisites must have been taken within 10 years of application deadline. For prerequisite courses taken more than once (within the last 10 years), an average of all grades received will be used for grade-point average calculation.

5. Graduate Record Examination scores.

6. Clinical experience in physical therapy. A minimum of 32 hours in observation, volunteer, or work under the supervision of a physical therapist. Sixteen of those hours must be in a hospital setting.

7. For international applicants, a satisfactory score on the Test of English as a Foreign Language.

Degree Requirements: Professional Program. The professional program is a 36-month, full-time program beginning each summer session. Courses include basic science, clinical science, clinical procedures, and clinical practica. Additionally, the student must complete a comprehensive examination and a research project.

Transitional D.P.T.

The transitional Doctor of Physical therapy degree gives practicing physical therapists the opportunity to advance their knowledge in physical therapy. The program focuses on differential diagnosis, medical imaging, and evidence-based practice. Students choose one of three specialty tracts (orthopedics, neurology, or administration).

Admission Requirements. The applicant must meet the general entrance requirements of the Graduate School. Departmental admission requirements include

1. A baccalaureate or master's degree in physical therapy.
2. A résumé detailing work history, formal education, continuing education, professional organizations, honors and awards, publications and presentations.
3. Three letters of recommendation.
4. A personal essay.

Degree Requirements. In addition to the general requirements of the Graduate School, the basic requirements for the transitional D.P.T. degree include successful completion of 27 credit hours of studies, including 18 hours of core courses, 6 hours of advanced core courses from a specialty area, and 3 hours of elective.

Ph.D. in Rehabilitation Sciences

The Ph.D. degree in rehabilitation sciences prepares qualified individuals for leadership positions in research and academia. The program focuses on advancing the science of medical rehabilitation and elucidating the scientific basis for the procedures and processes used in clinical practice. Research includes human and animal studies that promote an understanding of the pathophysiology of injury, disease, functional impairment, and associated disabilities and espouse the rationale for therapies that alleviate impaired human function and related physical and mental disabilities.

Admission Requirements. The program is open to students with the B.S. degree or its equivalent in any of the relevant sciences. Applicants do not have to be physical therapists; however, each candidate is encouraged to have a broad background in the biological sciences (including anatomy, physiology, neuroscience, organic chemistry, biochemistry, microbiology, genetics, and molecular biology), calculus, and statistics. Other admission requirements include

1. A minimum grade-point average of 3.0 on a 4.0 scale in the last 60 credit hours of course work.
2. A satisfactory score on the Graduate Record Examination within the previous five years.
3. For international applicants, a satisfactory score on the Test of English as a Foreign Language within the previous two years.
4. Three letters of reference from persons familiar with the applicant's professional and academic abilities.
5. A *curriculum vitae* detailing work history, formal education, continuing education, licensing and certification, professional organizations, honors, and awards, publications, presentations, and grants, etc.
6. Transcripts from all colleges attended.
7. A written educational plan describing the applicant's goals and objectives.

Degree Requirements. In addition to the general requirements of the Graduate School, the basic requirements for the Ph.D. degree include

1. Successful completion of a minimum of 51 credit hours of studies, comprising at least 21 hours of core courses, 8 hours of research tools, one course in a Foreign Language or Other Research Skills (FLORS), 12 hours of doctoral dissertation research, and 6 hours of cognate-elective courses.
2. Demonstration of competence in the core areas of study and FLORS, by successfully completing the comprehensive examination that qualifies the student for candidacy for the Ph.D.
3. Satisfactory completion of a dissertation based on original research.
4. Successful oral presentation and defense of the dissertation.

It is expected that the equivalent of at least three years of full-time study will be needed to fulfill these requirements.

D.P.T./Ph.D. Joint Degree Program

The joint degree program integrates the professional D.P.T. degree in physical therapy with the Ph.D. degree in rehabilitation sciences and clinical work experience. It offers outstanding nonclinician applicants the opportunity to pursue both degrees simultaneously. This accelerated program prepares highly motivated individuals for leadership positions in research and academia. Qualified students must declare their desire to be considered for the joint degree during the admission process. To receive both degrees, students must meet the requirements for each degree. Credit hours earned in the professional D.P.T. degree program cannot be transferred toward requirements for the Ph.D. degree, although satisfactory performance in some Ph.D. courses may be recognized and credited in formulating the student's professional D.P.T. curriculum. It is expected that the equivalent of four to five years of full-time study will be needed to fulfill the requirements for both degrees.

● Physical Therapy and Rehabilitation Sciences Courses

PTRS 701 Professional Interactions (1). Introduces the student to the physical therapy profession and professional role expectations. The history of physical therapy as it relates to the professionalization process, including ethical and legal obligations, as well as student responsibilities. It also addresses the development of effective communication and interpersonal skills and appreciation for individual and cultural differences within clinical settings. Professional responsibilities in physical therapy are introduced, including codes of ethical conduct and awareness of appropriate professional behaviors directed by organizational and legislative regulations. The development of medical terminology recall and recognition skills is also covered in the course. Prerequisite: Admission into the DPT program or permission of instructor. LEC

PTRS 702 Physical Therapy Documentation (1). Emphasizes the development of effective documentation skills, including exposure to a variety of documentation formats and implications for proper reimbursement. Disablement classification models, behavioral objectives, and functional outcome concepts are applied to organize patient data and identify treatment goals. With an emphasis on physical therapy practice, delivery of health care, various team structures used in providing health care, and the roles of the physical therapist assistant are provided. This course includes multiple homework assignments to develop both hand-written and electronic documentation skills in the student. Prerequisite: Successful completion of semester 1 of the DPT curriculum or permission of instructor. LEC

PTRS 703 Physical Therapy Tests and Measures (2). Students will be introduced to some of the tests and measures that physical therapists use as a means to gather information about the patient/client. The tests and measures covered include: vital signs, goniometry, manual muscle testing, sensory testing, reflex testing and palpation of surface anatomy. Learning opportunities include: lecture, laboratory, demonstration and patient interaction. Prerequisite: Admission into the DPT program or permission of instructor. LEC

PTRS 704 Basics of Acute Care Physical Therapy (3). Skills required by the physical therapist in the generalist acute care environment. A series of patient care related lectures, demonstrations, videotapes and laboratories are integrated to teach proper body mechanics, infection control and sterile technique, basic assessment, transfers, positioning, tubes, ostomies, clinic safety procedures, tilt table usage, prescribing proper WC, applying proper therapeutic ROM exercises, and using appropriate assistive devices for gait and transfers. Prerequisite: Successful completion of 1 semester of the DPT curriculum or permission of instructor. LEC

PTRS 705 Physical Therapy Interventions (4). Students will apply the skills obtained in Physical Therapy Test and Measures. Physical Therapy Documentation, Basics of Acute Care Physical Therapy and begin clinical problem-solving using common physical therapy treatment interventions. Topics include integumentary management with an emphasis on wound healing interventions, therapeutic modalities with an emphasis on the healing process and the electrical modalities. Learning opportunities include lecture, laboratory, demonstration and patient interaction. Prerequisite: Successful completion of 2 semesters of the DPT curriculum or permission of the instructor. LEC

PTRS 710 Advanced Human Anatomy (5). The student will obtain a basic understanding of human gross anatomy with specific knowledge of upper and lower extremities, head and neck, and back. At the end of this course the student will be able to apply this knowledge of anatomy to functional and clinical situations. Prerequisite: Admission into the

DPT program, Department of Physical Therapy and Rehabilitation Sciences or permission of instructor. LEC

PTRS 711 Applied Kinesiology and Biomechanics (4). The course involves a study of joint structure, joint function, and the biomechanical principles underlying the kinetics and kinematics of human motion, including normal gait and selected pathological gait patterns. Emphasis is placed on the interaction between biomechanical and physiological factors in musculoskeletal and neuromuscular function, and the application of kinesiological principles to clinical physical therapy situations. Prerequisite: Successful completion of one semester of the DPT curriculum or permission of the instructor. LEC

PTRS 712 Pathophysiology and the Physical Therapy Diagnosis (4). Review of integrative human physiology and pathophysiology with an emphasis upon homeostatic mechanisms and etiologies of disease. The interrelationships of function and dysfunction at the molecular, cellular and tissue level (pathology), organ and systemic level (impairment) and to the total human body (functional limitations) will be applied in each of the body systems. Discussions and applied materials will be tailored to the physical therapist with an emphasis on PT-specific diagnoses. Prerequisite: Successful completion of semester 1 of the DPT curriculum or permission of instructor. LEC

PTRS 715 Applied Musculoskeletal Anatomy (3). This course involves a study of joint structure, joint function, and the biomechanical principles underlying human motion. All major peripheral joints and the spine will be studied. Application of functional anatomy to clinical physical therapy situations will be emphasized. LEC

PTRS 720 Clinical Education I (1.50). Comprised of a three week clinical practicum at an assigned facility. Students will be exposed to a clinical setting and preliminary opportunities for application of didactic course work. Emphasis will be placed on the development of communication and interpersonal skills in the clinical setting, as well as documentation and physical therapy skills and procedures that have been introduced in classes. Prerequisite: Admission into the DPT program and successful completion of semester one of the curriculum. LEC

PTRS 730 Clinical Education II (1.50). This course is comprised of a three week clinical practicum at an assigned facility. Students will be exposed to a clinical setting and continuing opportunities for application of didactic course work. Emphasis will continue to be placed on the development of communication and interpersonal skills in the clinical setting, as well as documentation and physical therapy skills and procedures that have been introduced in classes. Prerequisite: Successful completion of two semesters of the physical therapy curriculum (including Clinical Education I) or permission of instructor. CLN

PTRS 740 Evidence-based Orthopedic Rehab (3). Students will apply the concepts taught in Applied Musculoskeletal Anatomy and skills obtained in their individual clinical practice. This course will include discussion related to musculoskeletal dysfunctions affecting peripheral and spinal joints. The course activities include review of the current evidence-based scientific literature related to orthopedic conditions, web-based discussion related to individual patient case scenario and lab activities related to assessment and treatment techniques including mobilization/manipulation. LEC

PTRS 745 Musculoskeletal Physical Therapy I (4). Builds on the foundation laid with PTRS 710: Advanced Human Anatomy, PTRS 703: Physical Therapy Tests and Measures, PTRS 711: Applied Kinesiology and Biomechanics. Examination skills and treatment interventions that apply specifically to the musculoskeletal system are provided. Basic examination skills for all peripheral joints, abnormal gait, and therapeutic exercise are discussed and reviewed. A problem-solving wrap-up session, guided by a local clinician will allow small groups of students to perform an evaluation of a patient with a musculoskeletal disorder. Prerequisites: Successful completion of semesters 1 and 2 of the DPT curriculum or permission of instructor. LEC

PTRS 746 Orthopedic Medicine (3). Mastery of physical therapy subjective and objective examination and treatment intervention for patients of all ages who present with a musculoskeletal problem with emphasis on amputation, prosthetics, upper and lower extremity orthoses, fracture management and connective tissue disorders. Emphasis will be placed on the most common clinical problems and physical therapy diagnoses. Prerequisite: Successful completion of semesters 1 and 2 of the DPT curriculum or permission of instructor. LEC

PTRS 750 Research in Evidence-based Physical Therapy Practice (3). An introduction to research in the evidence-based physical therapy practice including the Scientific Method, library and multimedia resources, research process, measurement theory (reliability and validity), research designs, experimental design principles, research ethics, critical review and analysis of research publications, statistical concepts, and writing of a research report and/or research proposal. Throughout, emphasis is placed on clinical research pertinent to physical therapy. Prerequisites: Successful completion of semesters one and two of the DPT curriculum or permission of instructor. LEC

PTRS 760 Introduction to Matlab Programming (1). Introduction: matlab windows, input-output, file types, general commands; interactive computation; matrices and vectors, matrix and array operations, scripts and functions applications, graphics. Prerequisite: None LEC

New PTRS courses will be introduced in spring and fall 2006. Please check with the department for details.

A joint D.P.T./Ph.D. degree in physical therapy and rehabilitation science is offered.

The Archie R. Dykes Library for Health Sciences provides a comprehensive health sciences collection of more than 170,000 books, journals, and microforms, www.library.kumc.edu.

PTRS 805 Seminar in Rehabilitation Research (0.50-3). Students will be instructed in the planning and presentation of a 45 minute scientific seminar on topics outside their thesis area and on their thesis work. Students will learn how to design and produce effective poster presentations. Prerequisite: Entry in the Ph.D. program in Rehabilitation Science or consent of instructor. SEM

PTRS 810 Case Studies in PT Diagnosis (2). This course will provide students with the applied knowledge to medically screen patients for symptoms and signs that require the expertise of other health care professionals. Patient cases currently treated by the practicing physical therapist will be used to compare diagnostic tests and values. The course will focus on comorbidities and their implications in diagnosis and treatment. The course will be delivered via the web. Prerequisite includes admission into the DPT program or approval by the instructor. LEC

PTRS 815 Case Studies in Pathophysiology (2). Physical therapists need skills to relate human pathophysiology to its clinical presentation. The interrelationships of function and dysfunction at the molecular, cellular and tissue level (pathology), organ and systemic level (impairment) and to the total human body (functional limitations) will be applied in each of the body systems. Discussions and applied materials will be tailored to the patient population served by the therapist. LEC

PTRS 820 Clinical Education III (2). Comprised of a four week clinical practicum at an assigned facility. Students will be exposed to a clinical setting and continuing opportunities for application of didactic course work. Emphasis will be placed on the development of communication and interpersonal skills (701), the application of general physical therapy evaluation and treatment skills (711, 712, 745, 756, 750, 855, 785), preliminary documentation (702), differential diagnosis of general medical conditions (880), evidence based physical therapy practice (750) and basic physical therapy skills and procedures in the clinical setting (703, 704, 705). Prerequisite: Successful completion of three semesters of the physical therapy curriculum (including Clinical Education I & II). LEC

PTRS 825 Exercise Physiology (3). This course will provide entry-level DPT students with the knowledge of the physiological functions and adaptations of the human body with exercise. Emphasis will be placed on familiarizing students with sound medical rationale and the basis for treatment considering the immediate and long-term effects of exercise. Prerequisite: Acceptance in the the DPT program or permission of the instructor. LEC

PTRS 830 Clinical Education IV (1.5). This course is comprised of a four week clinical practicum at an assigned facility. Students will be exposed to a clinical setting and continuing opportunities for application of didactic course work. Emphasis will be placed on the development of communication and interpersonal skills (701), the application of general physical therapy evaluation and treatment skills (711, 712, 745, 746, 750, 855, 785), preliminary documentation (702), differential diagnosis of general medical conditions (880), evidence based physical therapy practice (750) and basic physical therapy skills and procedures in the clinical setting (703, 704, 705). Prerequisite: Successful completion of the first 4 semesters of the DPT curriculum including Clinical Education I, II and III. LEC

PTRS 832 Health Promotion through the Life Span (3). Focuses on the role of the physical therapist in health promotion across the lifespan. Emphasis is placed on familiarizing the students with the concept of wellness, health/fitness screening methods, nutrition, education health promotion programs in the community and the overall role wellness plays in a person's long term well being. Prerequisite: Successful completion of 5 semesters of the DPT curriculum or permission of instructor. LEC

PTRS 840 Clinical Education V (2). This course is comprised of a four week clinical practicum at an assigned facility. Students will be exposed to a clinical setting and continuing opportunities for application of didactic course work. Emphasis will be placed on the development of communication and interpersonal skills (701), the application of general physical therapy evaluation and treatment skills (711, 712, 745, 746, 750, 855, 785), preliminary documentation (702), differential diagnosis of general medical conditions (880), evidence based physical therapy practice (750) and basic physical therapy skills and procedures in the clinical setting (703, 704, 705). LEC

Prerequisite: Successful completion of the first 6 semesters of the DPT curriculum including Clinical Education I, II, III and IV. CLN

PTRS 845 Musculoskeletal Physical Therapy II (2). Incorporates concepts from PTRS 710: Advanced Human Anatomy, PTRS 703: Physical Therapy Tests and Measures, PTRS 711: Applied Kinesiology and Biomechanics and PTRS: Musculoskeletal Physical Therapy I. Terminology, examination, evaluation, development of a treatment plan, treatment techniques and basic differential diagnosis skills for the spine are taught through lecture, demonstration and student participation. Prerequisites: Successful completion of 3 semesters of the DPT curriculum of permission of instructor. LEC

PTRS 846 Musculoskeletal Physical Therapy III (4). Incorporates concepts from PTRS 710: Advanced Human Anatomy, PTRS 703: Physical Therapy Tests and Measures, PTRS 711: Applied Kinesiology and Biomechanics and PTRS: Musculoskeletal Physical Therapy I. Terminology, examination, evaluation, development of a treatment plan,

treatment techniques and advanced differential diagnosis skills for the Temporomandibular Joint (TMJ) complex and complex peripheral and/or spinal disorders are taught through lecture, demonstration and student participation. Prerequisites: Successful completion of 4 semesters of the DPT curriculum of permission of instructor. LEC

PTRS 850 Neuroscience (3). This course will introduce the principles of neuroscience and describe their application as relevant to rehabilitation scientists. The course will begin with the terminology of the nervous system, then cover the major functions of the peripheral, autonomic and central nervous systems. The manner with which these systems interact to produce appropriate responses to external demands will be discussed. The behavioral consequences of damage to each systems will be integrated throughout. Particular emphasis will be placed on the sensorimotor role in perception and the control of movement. Lecture and Lab. Prerequisite: Successful completion of 3 semesters of the DPT curriculum or permission of the instructor. LEC

PTRS 851 Control of Human Movement (4). Will combine the physiological, neurological and psychological factors that contribute to the control of voluntary movement and the learning of motor skills. Changes over the life span as well as changes secondary to pathology will be covered with the emphasis on the effects of brain damage. The development of the control of movement, neuroplasticity and the effects of practice will be discussed. The course will focus on the relationship of our scientific knowledge in motor control and motor learning to the practice of physical therapy. Prerequisite: Successful completion of 4 semesters of the DPT curriculum or permission of instructor. LEC

PTRS 852 Neurologic Physical Therapy I (4). Will integrate neurophysiology and neuroanatomy into the clinical presentation of adults with neurologic pathology. Students will learn the etiology, epidemiology signs and symptoms of selected neurological conditions. The medical management of patients with central and peripheral nervous system disorders will be presented in relationship to the practice of physical therapy. The course will introduce examination and treatment of impairments for persons with neuromuscular pathologies. Students will be presented with simple case studies and progress to more complex patient problems. Prerequisite: Successful completion of the first 5 semesters of the DPT curriculum or permission of instructor. LEC

PTRS 853 Neurologic Physical Therapy II (4). This course will explore functional mobility deficits in patients with neurologic pathology. Building upon previous coursework, students will acquire the skills to hypothesize about the relationship of pathology, impairments and involvement of other systems to functional deficits for adults with neurologic pathology. Contemporary motor control and motor learning theories and research evidence will be emphasized in the development of appropriate intervention programs. Psychosocial factors will also be considered in the discussion of complex patient cases. Prerequisite: Successful completion of 6 semesters of the DPT curriculum or permission of instructor. LEC

PTRS 855 Pharmacology for Physical Therapists (1). Pharmacological background for the clinical treatment of patients referred to physical therapy. Fundamentals of the actions of drugs including mechanisms of therapeutic and adverse effects. Prerequisites: Successful completion of 3 semesters of the DPT program or permission of instructor. LEC

PTRS 858 Evidence-based Rehabilitation of Patients Post-CVA (3). This course will provide students with the applied knowledge to medically screen patients for symptoms and signs that require the expertise of other health care professionals. Patient cases currently treated by the practicing physical therapist will be used to compare diagnostic tests and values. The course will focus on comorbidities and their implications in diagnosis and treatment. The course will be delivered through the web. Prerequisite includes admission into the DPT program or approval of the instructor. LEC

PTRS 860 Evidence-based Research Practicum I (1). Supervised and directed experiences in conducting evidence-based research activities. The research activities involved in this course are broadly defined with emphasis on the enhancement of evidence-based physical therapy practice. The student will be supervised by a member of the faculty. This is a two-semester course. Prerequisite: Successful completion of the first 5 semesters of the DPT curriculum or permission of instructor. RSH

PTRS 862 Pathobiology of Human Function I (4). The study of the biology of pathological processes that impair human function with emphasis on 1) the mechanisms by which cells repair and adapt following injury, 2) skeletal and cardiac muscle pathobiology, including skeletal muscle adaptation in health and disease and congenital muscle abnormalities, 3) pathophysiology of skin, tendons, ligaments, cartilage, and other connective tissues, 4) bone pathology, including osteoporosis, osteoarthritis, and fractures, 5) pathophysiology of cardiorespiratory function. Emphasis will be placed on the functional impairments resulting from the pathological condition. Prerequisite: Entry in the Ph.D. program in Rehabilitation Science or the consent of the instructor. LEC

PTRS 863 Pathobiology of Human Function II (4). A study of biology and pathological processes that impair human function with emphasis on neuromuscular diseases, injury and diseases of the central and peripheral nervous systems, and neurological disorders associated with

development and aging. Prerequisite: Entry in the Ph.D. program in Rehabilitation Science or the consent of the instructor. LEC

PTRS 865 Independent Study in Physical Therapy (1-3). Individually negotiated learning experiences appropriate to the interests and background of the student. The student will be supervised by a PT faculty member. Prerequisite: Admission to the Post-Professional Program or permission of instructor. IND

PTRS 870 Teaching Practicum (1-3). Directed experiences in a planned instructional activity. Student will write course objectives, plan and deliver lectures, produce practical and written exams and assign grades. Prerequisite: Entry in the Ph.D. program in Rehabilitation Science or consent of instructor. LEC

PTRS 873 Research Practicum (1-3). This course is designed to provide supervised research experience in various laboratories in the department. Prerequisite: Entry in the Ph.D. program in Rehabilitation Sciences or consent of instructor. RSH

PTRS 875 Clinical Practicum (1-3). Specialized clinical training in a highly specific area of specialization. The primary purpose of this course is for the student to develop advanced clinical skills in his/her area of specialization. Prerequisite: Admission to the post professional program or consent of instructor. CLN

PTRS 880 Differential Diagnosis of General Medical Conditions (3). Designed to provide students with the knowledge and clinical tools to medically screen patients for the presence of symptoms and signs that require the expertise of other health care professionals. It will focus on diagnoses that are not covered by common PT practice including diseases of the endocrine system, the immune system, GI system, and neoplasias. Prerequisite: Successful completion of the first 3 semesters of the DPT curriculum or permission of instructor. LEC

PTRS 899 Master's Thesis (1-3). Preparation of the formal thesis based on independent research and in partial fulfillment of the requirements for the Master's degree. THE

PTRS 920 Clinical Education VI (9). Eighteen weeks of clinical practice in either of two different practice settings for nine weeks, or three different practice settings for six weeks. During these clinical rotations the student will have the opportunity to develop the patient care skills

needed for successful practice as a physical therapist. The student will work under the supervision of an experienced physical therapist in clinical settings affiliated with the program. Prerequisite: Successful completion of 7 semesters of the DPT program including Clinical Education I, II, III, IV and V. LEC

PTRS 960 Advanced Studies in Musculoskeletal Rehabilitation (3). The student will study the biomechanical principles related to normal human joint motion. The factors that predispose abnormal motion will be evaluated. Current scientific literature will be investigated to determine the optimal rehabilitation techniques for functional musculoskeletal rehabilitation. Prerequisite: Entry in the Ph.D. program in Rehabilitation Science or the consent of the instructor. LEC

PTRS 961 Advanced Studies in Neurorehabilitation (3). Rehabilitation of adults with brain damage rests on the premise that new skills can be learned despite central nervous system pathology. This course will explore the science of neurorehabilitation. We will investigate the literature concerning the following questions: can rehabilitation affect change that leads to skill learning, who will benefit from rehabilitation, how should outcomes be evaluated, what optimizes rehabilitation success, when should rehabilitation be undertaken, and how much rehabilitation is necessary to facilitate skill learning? Prerequisite: Entry in the Ph.D. program in Rehabilitation Science or the consent of the instructor. LEC

PTRS 970 Instrumentational Analysis of Human Function (3). An in-depth study that provides critical analysis of equipment and other resources used in analyzing human motion, balance, strength, electrophysiological responses, and cardiorespiratory function. Students will be required to conduct a preliminary study, including design, methodology and data collection using one or more of these instruments. Prerequisite: Entry in the Ph.D. program in Rehabilitation Science or the consent of the instructor. LEC

PTRS 980 Graduate Research (1-10). Original Laboratory investigation conducted under the supervision of a senior staff member. Prerequisite: Consent of instructor. RSH

PTRS 990 Dissertation in Rehabilitation Research (1-10). For students in advanced standing enrolled in the doctoral program in Rehabilitation Science. THE

Some form of health insurance is required for students on the KU Medical Center campus.

For online information about graduate programs in Allied Health, see www.alliedhealth.kumc.edu/programs.html.