

College of Natural, Applied and Health Sciences

The mission of the College of Natural, Applied and Health Sciences is consistent with the overall mission of the University. The College of NAHS has strong, quality program offerings in the sciences and health professions. The faculty and staff are committed to providing relevant education and services to a diverse student population. The goal is to prepare students to think critically and creatively so that they can adapt to changing social, economic and technological conditions. Building external collaborations with major technological corporations and the health care industry is an integral part of the colleges outreach mission, which enables it to provide valuable services to the community as well as increased opportunities for students.

We are proud to have been designated the Flagship State University for the Health Professions. Our graduates can be found practicing in hospitals and other health care agencies across New Jersey. Also, our programs in the Sciences have a long distinguished record of service to this region. So, whether you are looking to study in the Natural and Physical Sciences, Health Care, Mathematics, Technology, or Computer Science, you will gain a strong foundation at the College of Natural, Applied and Health Sciences.

Interim Dean, Pablo Zafra

Assistant to the Dean, Lourdes F. Prieto

B-104, (908) 737-3600

ACADEMIC DEGREES, PROGRAMS

B.A. in Biology

- General Option
- Honors Option
- Teacher Certification Option
- Teacher of Students with Disabilities Option

B.S. in Biology

- General Option
- Biotechnology Option

B.A. in Chemistry

- General Option
- Preprofessional Option
- Teacher Certification Option

B.S. in Chemistry, Expanded Option

B.S. in Computer Science

- Information Systems Option

B.A. in Earth Science

- General Option
- Teacher Certification Option
- Teacher of Students with Disabilities Option

B. S. in Earth Science

- Earth System Science Option
- Geology Option
- Meteorology Option

B.A. in Mathematical Sciences

- Teacher Certification Option
- Teacher of Students with Disabilities Option

B.S. in Computer Integrated Design and Manufacturing Technology

B.S. in Electronics Technology

B.S. in Telecommunications and Information Technology

HEALTH PROFESSIONS

B.S. in Health Information Management

- General Option
- Occupational Therapy Track

B.S. in Medical Technology

- General Option
- Cytotechnology Option
- Histotechnology Option

B.S.N. in Nursing

Post Baccalaureate School Nurse Program

JOINT (OR COMBINED) DUAL DEGREE PROGRAMS

B.S. in Health Information Management/ M.S. Management Information Systems

B.S. in Health Information Management/ M.A. Communication Studies

B.A. / M.S. in Occupational Therapy

B.A. / DPT Physical Therapy (with UMDNJ)

COLLABORATIVE PROGRAM

BA in Elementary Education Liberal Studies in Mathematics, Science, and Technology:

- Biology Specialization
- Earth Science Specialization
- Mathematics Specialization
- Technology Specialization

DEPARTMENTS, FACULTY

Biological Sciences

Faculty: Codella, Field, Glazer, Hayat, James, Mancarella (Chairperson), Osborne, Porta, Pu, Rosenthal, Vassiliou, Yu, Zhang

Chemistry-Physics

Faculty: Castiglione, Criasia (Chairperson), Gao, Getzin, Hicks, Kampa, Kubow, Lees, Shin, Stokes-Huby, Vitale, Zarrilli

Geology and Meteorology

Faculty: Croft, Dobosiewicz, Krall, Kroll, Manfrino, Metz (Chairperson), Murphy, Ngoy, Yoh, Zois

Mathematics and Computer Science

Faculty: Abeles, Affouf, Alsina, Arnow, Avirappattu, Beaugris, Chang, Deavours, Emanouilidis, Hahn (Chairperson), Halper, Krantz, Lehmann, Lipson, Mathur, Narasimhan, Ryder, Santomauro, Stewart-Gardiner, Tse, Viglione, Wang, Wittenberg, Woubneh, Zafra

Technology

Faculty: Behi, Cokewood, Shahrabi (Chairperson)

Health Information Management

Faculty: Davis, Manger (Chairperson)

Medical Technology

Coordinator: Osborne

Nursing

Faculty: Campbell (Chairperson), Fitzgerald, Fitzsimons, Hascup, Krause-Parello, Neville, Pisani

Occupational Therapy

Faculty: Knis-Matthews, Richard, Stern (Chairperson)

Health Professions

Kean University offers an array of professional programs in nursing and health care careers. Students with an interest in any of these programs should consult the appropriate program coordinator or the College advisor.

PROFESSIONAL NURSING

The Baccalaureate of Science in Nursing (BSN) degree is offered to applicants who have completed lower division nursing education and hold a valid license to practice as a registered nurse (RN). The 125 credit, upper division program is accredited by the National League for Nursing Accrediting Commission (NLNAC).

POST BACCALAUREATE SCHOOL NURSE PROGRAM (Non-Degree)

The Post Baccalaureate School Nurse Program at Kean University is approved by the NJ State Department of Education and prepares students for certification as "School Nurse/Instructional."

Registered Nurses with a baccalaureate degree in any major and minimum GPA of 2.75 may apply. To apply go to www.kean.edu, please select "Apply online," then choose the application for "Post Baccalaureate Teacher Certification." Print a copy of the application, then carefully read and follow the directions for completion and submission.

PREPROFESSIONAL MEDICAL PROGRAMS

Premedical and Predental

Although admissions requirements are not uniform among schools of medicine and dentistry, the following two programs include the courses required for entrance by most medical and dental schools: Department of Biological Sciences - B.S. or B.A. in Biology; Department of Chemistry-Physics - B.A. in Chemistry (Preprofessional). Other major programs may be selected if electives are chosen to fulfill the requirements of the medical or dental school(s) to which the student plans to apply.

Entering or transfer students interested in medical or dental school should consult a member of the Pre-Medical Advisory Committee for advisement. Names of committee members may be secured from the department offices of either Biological Sciences or Chemistry-Physics, or by viewing the Pre-Health Professions Web Page at <http://www.kean.edu/~biology/PREHEALTH>.

Other Preprofessional Medical Programs

Students with an interest in veterinary medicine, optometry, pharmacy, or other preprofessional medical programs should consult a member of the Pre-Medical Advisory Committee.

Podiatric Medicine

Under an articulation agreement between Kean University and the New York College of Podiatric Medicine, students interested in pursuing a career in podiatric medicine can apply to the New York College of Podiatric Medicine in their junior year. Students admitted to the program can complete two degrees (B.A. in Biology from Kean University and Doctor of Podiatric Medicine [DPM] from the New York College of Podiatric Medicine) in only seven years rather than the more typical eight.

HEALTH INFORMATION MANAGEMENT AND MEDICAL TECHNOLOGY

Baccalaureate programs are offered in medical technology (with options in cytotechnology and histotechnology) and health information management.

Both of these programs mentioned above can accommodate entering freshmen and transfer students from two or four-year institutions. The first two (preprofessional) years include general education requirements and basic courses in the sciences, mathematics and social sciences. The final two (professional) years include a sequence of courses and related clinical experiences in the professional area and advanced coursework in supporting disciplines. The curriculum of each program has been designed to enable the graduate to meet the requirements for eligibility for national or state certification. Each program has been accredited by the relevant professional association.

After completing the preprofessional requirements, students must apply for admission to the professional phase of the program. The number of students admitted to each program is limited by the availability of clinical placements, and the admissions process is selective. Students are advised to plan their coursework during the preprofessional two years in such a way that alternate majors are possible should they choose not to continue or should they not be admitted to the program of their choice.

DUAL DEGREE PROGRAMS

OCCUPATIONAL THERAPY

The Dual Degree Program provides an opportunity to earn both an undergraduate degree in one of thirteen majors and a master's degree in occupational therapy. Students will select from a list of undergraduate majors in other disciplines for the undergraduate degree. After three years, or when the undergraduate and prerequisite courses are completed, students may apply to the Master's program in Occupational Therapy. If accepted, the first year of the M.S. program in occupational therapy will be used to complete the undergraduate degree, and the Bachelor's degree will be

awarded in the undergraduate discipline chosen. Upon completion of the requirements of the occupational therapy program, a Master of Science in Occupational Therapy will be awarded. Both degrees are awarded by Kean University.

PHYSICAL THERAPY

This Dual Degree Program is a collaborative effort between Kean University and the University of Medicine and Dentistry of New Jersey (UMDNJ), combining both a Bachelor's and Doctor of Physical Therapy degrees. It consists of undergraduate studies at Kean for the Bachelor's degree and graduate studies at UMDNJ in Newark leading to a Doctor of Physical Therapy degree (DPT). The Dual Degree program is available to students who do not already have a Bachelor's degree.

Kean University offers nine majors from which to choose for the Bachelor's degree. In the fall semester of the Junior year, students apply for admission to the graduate program in Physical Therapy. If accepted into the program (and upon completion of the undergraduate coursework), courses taken during the first year of the DPT will be used to complete the senior year of the undergraduate degree. After completing the first year of the DPT, Kean University will award the Bachelor's degree in the undergraduate discipline chosen. Students will continue the two additional years at UMDNJ to complete the requirements for the DPT degree, to be awarded by UMDNJ.

PHYSICIAN ASSISTANT PROGRAM

An articulation agreement between Kean University and UMDNJ for a BA Biology from Kean, MS in Physician Assistant from UMDNJ, has just been approved. For further details, contact the Department of Biology, 90-737-3650.

JOINT ACCELERATED UNDERGRADUATE/GRADUATE DEGREE PROGRAMS

HEALTH INFORMATION MANAGEMENT AND MANAGEMENT INFORMATION SYSTEMS

HEALTH INFORMATION MANAGEMENT AND COMMUNICATION STUDIES

Joint programs are offered which enable students to complete a Bachelor's degree in Health Information Management with a Master's degree in either Management Information Systems or Communication Studies. Elective courses at the undergraduate level may be substituted by prerequisite requirements for the graduate degree. If accepted, graduate coursework may begin in the Senior year.

Occupational Therapy

Chairperson: Dr. Lynne Richard
T-214, (908) 737-3384

The Dual Degree program at Kean University provides an opportunity to earn both an undergraduate degree in one of thirteen majors of your choice and a master's degree in occupational therapy. Students will select from a list of undergraduate majors in other disciplines. In addition to meeting the general education and major requirements, the prerequisite courses for the M.S. in Occupational Therapy will be completed. After three years, or when these requirements are completed, students may apply to the occupational therapy Master's program. If accepted, following one additional year of study, the Bachelor's degree will be awarded in the discipline chosen. Upon completion of the requirements of the occupational therapy program, a M.S. in Occupational Therapy will be awarded.

The Occupational Therapy Program is accredited by the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA), located at 4720 Montgomery Lane, P.O. Box 31220, Bethesda, MD 20824-1220. Their phone number is (301) 652-AOTA. Graduates of the program will be eligible to sit for the national certification examination for occupational therapists administered by the NBCOT. After successful completion of this exam, the individual will be an Occupational Therapist, Registered (OTR). Most states, including New Jersey, require licensure in order to practice. However, state licenses are usually based on the results of the NBCOT Certification Examination.*

*Please note that a felony conviction may affect a graduate's ability to sit for the certification examination or attain state licensure.

ADMISSIONS

Admission to the Master's Degree in Occupational Therapy program is competitive and through a special application process for dual degree students. Applications are available in November from the Occupational Therapy Department and are due by the third Friday of January for fall admissions. All general education, disciplinary and interdisciplinary, undergraduate major and occupational therapy prerequisite courses must be completed by end of Summer Session II. Successful completion of all coursework does not guarantee acceptance into the O.T. program.

To be eligible to apply for entry into the Occupational Therapy program, you must meet the requirements for a major at Kean University. To qualify for the baccalaureate degree at Kean University, you must be fully matriculated in a major program and complete that program as described, and must earn a minimum of 124 semester hours of credit.

A minimum of 32 degree credits, including one-half of the major requirements, must be earned at Kean. In order to begin the OT program in your senior year, you must have completed all of the required general education and major courses. Your elective course requirements would be fulfilled by occupational therapy courses taken during your senior year.

Choosing an Undergraduate Major

Students may choose from the following undergraduate majors:

Biology (General)
Communication
(Public Communication Option)
Earth Science (General)
Economics
Fine Arts
Health Information Management
History
Philosophy and Religion
Political Science
Psychology
Recreation Administration
(Therapeutic Recreation Option)
Sociology
Spanish

PROGRAM REQUIREMENTS

Successful admission to the program is based on:

- A cumulative grade point average (GPA) of 3.0 from all colleges attended
- A minimum GPA of 3.0 in prerequisite courses
- Departmental interview
- Three letters of reference
- Documented observation of occupational therapy services for a minimum of 40 hours
- All General Education and major requirements, as well as the following prerequisite courses:

PSY	1000	General Psychology	3 Credits
PSY	3110	Life Span Developmental Psych ^I	3 Credits
PSY	3200	Psychological Statistics	3 Credits
PSY	3540	Abnormal Psychology ^I	3 Credits
BIO	1000	Principles of Biology	4 Credits
BIO	2402	Human Physiology & Anatomy ^I	4 Credits
CHEM	1030	Essentials of Chemistry (w/lab)	4 Credits
SOC	1000	Introduction to Sociology	3 Credits

OR

ANTH	1800	Cultural Anthropology	3 Credits
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^IThese courses must be taken within 5 years of application to the program.

COURSE REQUIREMENTS

SEMESTER ONE*

BIO	3405	Gross Anatomy	(4)
OT	4500	Kinesiology	(3)
OT	5400	Occupational Therapy Theory I	(4)
OT	4210	Clinical Conditions I	(2)
OT	4300	Occupation Across the Lifespan I	(4)

SEMESTER TWO*

BIO	3406	Neuroscience	(4)
OT	5401	Occupational Therapy Theory & Assessment	(4)
OT	5520	Research Methods in OT I	(3)
OT	4311	Occupation Across the Lifespan II	(3)
OT	4610	Activity Group Process	(3)

SUMMER SESSION*

OT	4211	Clinical Conditions II	(3)
OT	5001	Medical Terminology	(1)

SEMESTER THREE

OT	6920	Seminar I	(6)
OT	6922	Seminar III	(5)
OT	6521	Research Methods in OT II	(3)
OT	5511	Principles of Supervision	(2)

SEMESTER FOUR

OT	6921	Seminar II	(6)
OT	6601	Orthotics	(2)
OT	5510	Principles of Administration	(3)
OT	6522	Research Methods in OT III	(2)

SUMMER SESSION

OT	6950	Advanced Fieldwork Seminar I	(3)
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SEMESTER FIVE

OT	6951	Advanced Fieldwork Seminar II	(3)
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*Completed as an undergraduate student.

OCCUPATIONAL THERAPY COURSES

OT 4210 Clinical Conditions I (2)

This course is a study of major psychiatric clinical conditions commonly treated in occupational therapy. The focus is on causes, symptoms and the effects that these conditions have on the individual's functional abilities in the performance of life tasks and activities.

Prerequisite: PSY 3540 Abnormal Psychology; Corequisite: OT 5400 Theory I

OT 4211 Clinical Conditions II (3)

Study of major physical conditions resulting from disease, trauma, developmental and/or congenital disorders that impact upon an individual's capacity to perform life tasks and activities and are commonly treated in occupational therapy. Emphasis will be placed on learning diagnostic information and the use of clinical reasoning in determining the resulting dysfunction or disability from an occupational therapy perspective.

Prerequisites: Bio 3405, OT 5400.

OT 4300 Occupation Across the Lifespan I (4)

This course examines the human development of performance abilities in areas of occupation (activities of daily living, education, work, play/leisure, and social participation) from birth to pre-adolescence. Analysis of underlying performance skills and patterns, context, activity demands and client factors as they contribute to occupational performance. The selection of media to assist in growth and development in areas of childhood occupations, the use of activity analysis and synthesis, the role of cultural influences in media selection and the roles of the therapist in the intervention process will be studied.

Prerequisite: Admission to the Master's program in Occupational Therapy

OT 4311 Occupation Across the Lifespan II (3)

This course examines the human development of performance abilities in areas of occupation (activities of daily living, education, work, play/leisure, and social participation) from adolescence to senescence. Analysis of underlying performance skills and patterns, context, activity demands and client factors as they contribute to occupational performance. Selection and implementation of therapeutic media in occupational therapy appropriate to adult occupations, the use of activity analysis and synthesis, the role of cultural influences in media selection and the roles of the therapist in the intervention process will be studied.

Prerequisite: OT 4300

OT 4500 Kinesiology for Occupational Therapy (3)

Application of gross anatomy to the study of body movements with emphasis on understanding the functional relationship of the musculoskeletal system to activities of daily living.

Corequisite: Bio 3405 Gross Anatomy

OT 4600 Activity Group Process (3)

Study of the concepts and principles of activity groups as applied in the practice of occupational therapy. Focus on role and function of occupational therapists in promoting, influencing or enhancing function or remediating dysfunction within a group context. Development of skills in planning and implementation of activity groups. Development of personal and professional awareness in an interactional context. Lecture and laboratory experiences.

Prerequisites: OT 4300, OT 5400