

## 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](http://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.

# Nursing

Chairperson: Dr. Minnie Campbell  
T-116, (908) 737-3390/73396

The Bachelor of Science in Nursing is a 125-credit upper division program open only to Registered Nurses. The program is accredited by the National League for Nursing Accrediting Commission (NLNAC\*). Admission is through a competitive departmental process.

The B.S.N. prepares Registered Nurses to enter professional practice and to assume new and changing roles as nursing professionals in clinical settings based in a wide range of diverse community and private agencies. The upper division curriculum includes advanced course work in nursing theory, clinical practice and related disciplines. The upper division course work may be completed in two years of full-time study or up to ten years on a part-time basis. The program accommodates the special needs of the nurse in full-time practice.

**Degree Requirements:** The following are the degree requirements for the Bachelor of Science in Nursing. Prerequisites for admission to the nursing major are indicated with a "+" preceding the course number. Transcripts of Registered Nurses accepted for the program are evaluated and credit toward the degree is granted for college level courses already completed in accordance with the policies of Kean University for the transfer of credit. In addition, 30 lower division credits (28 credits of Nursing and 2 credits of Health Education) are transferred upon admission to the University. There are 5 clinical nursing courses in the upper division curriculum. Attendance at all clinical sessions is required. Those courses with a clinical component are identified by italics.

\*NLNAC: 61 Broadway, NY, NY 10006, 212-363-5555

## B.S.N. DEGREE

### GENERAL EDUCATION REQUIREMENTS 47-51 (CREDITS)

*Foundations Requirements (12 credits)*

*ENG 1030	College Composition	3
*MATH 1016	Statistics	3
*COMM 1402	Speech Comm. as Critical Citizenship	3
*GE 2024	Research & Technology	3

### DISCIPLINARY & INTERDISCIPLINARY REQUIREMENTS

<i>Humanities (9 credits)</i>		
*ENG 2403	World Literature	3
PHIL 1100	Intro to Philosophy	3
One course from the following:		
Fine Arts or Art History		3

Foreign Languages		3
Music or Theatre		3
Interdisciplinary		3

### *Social Sciences (9 credits)*

*HIST 1000	History of Civil Society in America	3
+PSY 1000	General Psychology	3
+SOC 1000	Intro to Sociology	3

### *Science & Mathematics (9-11 credits)*

*CPS 1031	Intro to Computers	3
+BIOX 2003	Microbiology	3-4
+CHEM 1030	Essentials of Chemistry	3-4

### *Health/Physical Education (Credit by examination)*

### CONCENTRATION 6-8

+BIOX 2001	Anatomy & Physiology I	3-4
+BIOX 2002	Anatomy & Physiology II	3-4

### MAJOR REQUIREMENTS 71 (CREDITS)

#### *Support Course Requirements (15 credits)*

SOC 2100	Sociology of the Family	3
PSY 3110	Life-Span Developmental Psychology	3
PHIL 3314	Moral Problems in Health Care	3
PSY 3630	Social Psychology	3
HED 3635	Introduction to Public Health	3

#### *Lower Division Nursing (Credit by examination)*

#### *Upper Division Nursing Courses (28 credits)*

NURS 3000	Conceptual Found/Inq. in Nursing	3
NURS 3010	Health Assessment	2
NURS 3020	Foundations of Transcultural Care	3
NURS 3200	Professional Nursing HP/Community	5
NURS 4200	Research in Nursing	3
NURS 4300	Professional Nursing: Living with Illness	5
NURS 4400	Professional Nursing: Leadership	5

#### *Major/GE Capstone Course*

NURS 4900	Independent Practicum in Nursing	2
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(1 credit from NURS 4400 applies to capstone)

### FREE ELECTIVES 3-7

### TOTAL 125 (CREDITS)

\*Required Course  
+ Nursing Prerequisite Course

## POST BACCALAUREATE SCHOOL NURSE PROGRAM

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. The following are requirements for program completion.

## CURRICULUM REQUIREMENTS

### PRE ADMISSION

- Current NJ registered nurse license
- Professional liability insurance.
- Evidence of having passed a basic physical assessment course with practicum or applicant must receive a grade of "C" or better in NURS 3010.

### FOUNDATION AND SUPPORT COURSES+

PSY 3110	Life-Span Dev. Psych	3
EDUC 3000	Curriculum Evaluation and the Learner	3
H.ED. 3533	Methods and Materials in Health Education in Elem & Secondary Schools	3
H. ED. 3300	Community Mental Health	3
NURS 3020	Foundations in Transcultural Care	3
H. Ed. 4650	Community Health Counseling	3
ID 2042	Human Exceptionality	3

One of the following:

NURS 3200	Professional Nursing HP/Community	5
H.ED. 3635	Introduction to Public Health	3

+All courses listed above must be completed before registering for school nursing courses.

### SCHOOL NURSING CONCENTRATION\*

NURS 5501	School Nursing I	3
NURS 5502	School Nursing II	3
NURS 5510	School Nursing Internship	3
HED 5500	Health Education Internship	3

### EXIT REQUIREMENTS

- Completion of program requirements
- Maintain minimum GPA of 2.75
- Grade of "B" or better in School Nursing concentration
- CPR and AED (defibrillation) certification prior to enrollment in School Nurse/Health Education Practicum

\*The courses in the school nursing concentration are graduate level and must be taken at Kean University unless transfer credit is approved by Program Coordinator. An approved petition is required for registration. CPR/AED certification must be obtained prior to registration for internship courses.

## MAJOR COURSES

**Please Note: Nursing courses 3200 and above require Department of Nursing Admission status.**

### **NURS 3000 Conceptual Foundations and Inquiry in Nursing** (3 credits)

A comprehensive exploration of historical and contemporary nursing and related knowledge, including systems, the metaparadigm, philosophies, conceptual models, middle and grand theories as fundamentals of research-based nursing practice. Recognition of the scholarly role of the nurse and the value of theory and theory development as an essential basis for professional nursing practice with diverse populations. Focus is on health promotion/risk reduction as the essence of all activities is the care of individuals, families, groups and populations in all health and settings.

### **NURS 3010 Health Assessment** (2 credits, lab course)

Introduction to holistic health assessment and physical examination. Comprehensive health assessment to include physiological, cultural, development, nutritional, genetic and mental status assessment. Focus is on data gathering techniques, therapeutic communication skills, and use of a body systems approach to physical examination. Documentation of findings and use of the nursing process will facilitate clinical decision making in designing health promotional, risk reduction, and disease prevention activities for diverse client populations across the life span.

*Pre or Co-requisite: PSY 3110*

### **NURS 3020 Foundations of Transcultural Health Care** (3 credits)

An introduction to concepts and theories relevant to healthcare for diverse populations. Diversity is examined relative to social organization, role and expectations, communication patterns and values/ beliefs underlying health-illness behaviors between western and non-western cultures. Emphasis on development of knowledge and skills in culturally congruent communication and cultural assessment. Comparative approach to global healthcare by understanding similarities and differences among commonly encountered diverse population groups.

### **NURS 3200 Professional Nursing Practice: Health Promotion in the Community** (5 credits with clinical)

Continued study of nursing models and application of relevant theories to guide nursing practice as it pertains to health promotion and risk reduction. Using the family as the essential unit of care within the community, critical thinking and clinical decision-making processes will facilitate the design, management and provision of care to modify risk factors, and promote. Specific clinical activities are related to prevention and reduction of health disparities across the life span through the conduct of community assessment and the development and implementation of culturally appropriate nursing strategies reflecting professional values and behaviors.

*Prerequisite: Admission to the Department of Nursing, NURS 3000, NURS 3020*  
*Co-requisite: SOC 2100*

### **NURS 4200 Research in Nursing** (3 credits)

Introduction to systematic investigation of nursing problems. Includes historical overview of research in nursing and current research priorities. Classroom practice in critical appraisal of research reports, and systematic review of research findings for evidence upon which to base nursing practice.

*Pre or co-requisite: Math 1016.*

### **NURS 4300 Professional Nursing Practice for Clients Living with Illness** (5 credits with clinical)

Intensive study of the care of the sick in and across all environments. The comprehensive impacts of illness, including the bio-psychosocial and cultural aspects on the individual, family, group and community will be explored. Designing, coordinating, and managing care of the sick with emphasis on client groups as the modality of care. Includes therapeutic communication, health counseling and education of special population with the goal of maximizing optimal health states throughout the trajectory of illness across the life span.

*Prerequisite NURS 3200, NURS 3010, Co-requisite PSY 3630*

### **NURS 4400 Professional Nursing Leadership in Health Care Settings** (5 credits with clinical)

Application of systems theory as the basis for designing, managing and coordinating client care in an evolving health care environment. Focus on expanding knowledge and skills of leadership and management theories for direct and indirect nursing care. Special emphasis on delegation, development of nursing team personnel, and evaluation of outcomes. Exploration of legal/ethical issues, licensure, health policy, politics and role of professional nurse as a leader in health care will be addressed.

*Prerequisite NURS 4300, co-requisite : PHIL 3314 Moral problems in health care.*

### **NURS 4900 Independent Practicum in Nursing** (2 credits clinical)

Concluding course in which students integrate the knowledge they have gained to select, develop and implement project with clinical nursing foci. Emphasis on facilitating students' transition to role of baccalaureate prepared nurse practitioners and preparing them for future roles in professional practice.

*Prerequisite: All support courses and all upper division nursing courses.*