
SCHOOL OF HEALTH PROFESSIONS AND NURSING

The curricula of the School of Health Professions and Nursing integrates current knowledge in career-oriented programs with advanced sciences and liberal arts education to prepare students for leadership roles in health-related professions. The Biomedical Sciences Department offers a Bachelor of Science in Biomedical Sciences, Clinical Laboratory Science (Generalist); Cytotechnology; or Biomedical Technology. The Department, in association with the Department of Chemistry and Criminal Justice, offers a Bachelor of Science in Forensic Science. The Health Information Program offers a B.S. degree in Health Information Management. The Nursing Department offers a B.S. in Nursing for Registered Nurses as well as an accelerated B.S./M.S. degree. The Nutrition Department has a B.S. in Nutrition as well as an accelerated B.S./M.S. program. The Radiologic Technology Program offers a B.S. degree. In addition, preprofessional programs (curricula for the first two years of the baccalaureate program) are offered in Pre-Pharmacy and Pre-Respiratory Therapy.

Web site: www.liu.edu/cwpost/health
Phone: (516) 299-2485
Fax: (516) 299-2527
Email: healprof@liu.edu



Theodora Grauer, Ph.D.
Dean SHPN
tgrauer@liu.edu

Paul Dominguez
M.S., RDMS
Assistant Dean SHPN
paul.dominguez@liu.edu

DEPARTMENT OF BIOMEDICAL SCIENCES

Phone: (516) 299-3047

Faculty

Ahmad Aljada
Associate Professor of Biomedical Sciences
B.S., M.S., Ph.D., State University of
New York, Buffalo
ahmad.aljada@liu.edu

Pasquale Buffolino
Administrator, Forensic Science Program
B.S., M.S. Adelphi University;
M.P., Ph.D., City University of New York
pasquale.buffolino@liu.edu

Paul Dominguez
Assistant Dean, School of Health
Professions and Nursing
B.S., M.S., Long Island University
Registered Diagnostic Medical Sonographer,
OB
paul.dominguez@liu.edu

Virginia Donovan
Medical Advisor, Clinical Laboratory Science
Chairman of Pathology, Winthrop
University Hospital
B.A., M.D., Johns Hopkins University

Maria A. Friedlander, CT (ASCP),
CMIAC
Program Director, Cytotechnology
Memorial Sloan Kettering Cancer Center
B.A., Cornell University;
M.P.A., New York University
angelesm@mskcc.org

Francis T. Harten
Clinical Director, Forensic Science Program
Adjunct Assistant Professor of Forensic
Science
B.S., Fordham University;
M.S., Touro College School of Health
Sciences;
NYPD Crime Scene Detective (retired),
Crime Laboratory Detective Serologist
(retired)
francis.harten@liu.edu

Angela Meisse, MT (ASCP),SBB
CLS(NCA)
Program Director, Clinical Laboratory
Science
B.S., M.P.A., Long Island University
Registered Medical Technologist, Speciality
Certification, Blood Banking
N.Y.S. License, Clinical Laboratory
Technologist
ameisse@liu.edu

Rosario R. Modesto
Professor of Biomedical Sciences
B.A., Adelphi University;
M.S., University of Illinois;
Ph.D., Illinois Institute of Technology
rmodesto@liu.edu

Marc Musolino
Laboratory Manager, Department of
Biomedical Sciences
B.S., State University of New York at
Plattsburg;
M.S., Long Island University
marc.musolino@liu.edu

Seetha Tamma
Chair, Department of Biomedical Sciences
Professor of Biomedical Sciences
B.Sc., M.Sc., Andhra University;
Ph.D., University College Cork
stamma@liu.edu

Ernestine Marie Vellozzi
Associate Professor of Biomedical Sciences
B.S., M.S., Ph.D., St. John's University;
M.S., College of Pharmacy and Allied
Professions, St. John's University;
Certificate of Qualification – Laboratory
Director – Clinical Microbiology - Clinical
Immunology
ernestine.vellozzi@liu.edu

Professor Emeritus

Ellen M. Duffy
Professor of Biomedical Sciences
B.A., Manhattanville College;
M.S., The Catholic University of America;
Ph.D., Cornell University
eduffy@liu.edu

Biomedical Sciences

The B.S. Degree in Biomedical Sciences offers students several options to pursue a Professional Laboratory career. These degree options include:

- Clinical Laboratory Science, Generalist
- Cytotechnology
- Biomedical Technology
- Forensic Science (includes courses from the Department of Chemistry and Criminal Justice)

Explanation of Degree Options

Students who are either part-time or full-time can pursue the undergraduate degree program options. The Department of Biomedical Sciences integrates didactic courses taught at the University with simulated laboratories with clinical courses taught at off-campus affiliate sites. Through each degree program option, university-based courses are rein-

forced in the professional setting. In all of the Departmental Degree Programs, students are exposed to state-of-the-art instrumentation and are educated by highly qualified faculty.

Graduates become entry-level professionals with comprehensive competency evaluated skills to enter each Biomedical Science.

1. The Clinical Laboratory Science (CLS), option. Clinical Laboratory Science students are prepared for national certification in Clinical Laboratory Science (Medical Technology) and qualify for a New York State License as a Clinical Laboratory Technologist. The program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS) 8410 West Bryn Mawr Avenue, Suite 670, Chicago, Illinois 60631-3415, Telephone 773-714-8880. Upon completion of the CLS Program, students are eligible to take the following National Certification examinations: MT (ASCP), Medical Technologist (American Society of Clinical Pathology) and CLS (NCA), Clinical Laboratory Scientist (National Credentialing Agency for Clinical Laboratory Personnel). In addition students are eligible for a New York State License as a Clinical Laboratory Technologist contingent upon the passing of the New York State examination. Clinical Laboratory Scientists (Medical Technologists) are employable in a hospital clinical laboratory, commercial clinical laboratory, physician's office laboratory, biomedical research or public health laboratory, clinical diagnostic company or educational institution. Education in the clinical laboratory sciences also lends itself to further pursuits in graduate education. The professional courses in Clinical Laboratory Science begins in the junior year and consists of four semesters of education that integrates theoretical and technical instruction in a simulated clinical laboratory on campus. Followed by the final semester of 25 weeks of clinical practicum instruction at a NAACLS approved clinical affiliate site. Areas of study include Hematology, Coagulation, Clinical Chemistry, Microbiology, Clinical Immunology, Molecular Diagnostics, and Transfusion Medicine. For clinical placement, a student must have a combined GPA of 2.33 or higher, a 2.67 GPA in the major and successful interview. The

hospital placement will be determined by the Program Director and Clinical Coordinators. Students pay all tuition and fees including laboratory costs to C.W. Post Campus. Students should plan for transportation to and from the off-campus clinical sites. The NAACLS approved clinical affiliates for the CLS Program are:

- Icon Central Laboratories, Inc. Farmingdale, NY
 - North Shore University Hospital, Manhasset, NY
 - North Shore University-Long Island Jewish Health Care System Core Laboratory, Lake Success, NY
 - South Nassau Communities Hospital, Oceanside, NY
 - Sunrise Medical Laboratory, Happaage, NY
 - St. Francis Hospital, Roslyn, NY
 - Winthrop University Hospital, Mineola, NY
2. Students opting to pursue a degree in **Cytotechnology** are persons who are enrolled in the C.W. Post Campus, Dept. of Biomedical Sciences for three years of undergraduate study followed by 12 months of study at Memorial Sloan Kettering Cancer Center (MSKCC), New York, NY in their Hospital-based CAAHEP Accredited Program. CAAHEP = Commission on Accreditation of Allied Health Education Programs. Students must apply directly to MSKCC and are selected based on cumulative GPA and an interview. Traditionally this route of obtaining an undergraduate degree has been referred to as a 3+1 program route. Completion of the CAAHEP Cytotechnology Program allows students to take the ASCP Certifying Examination in Cytotechnology and in addition are eligible to apply for a New York State License as a Cytotechnologist.
 3. Students opting to pursue the **Biomedical Technology** degree learn basic and applied biomedical and advanced sciences which allow them to perform and evaluate results in a research or pharmaceutical setting in Biomedical Technology. These graduates are persons seeking career positions in the Bioscience Industry (biotechnology, medical devices, pharmaceuticals, life systems, project leadership or forensic pathology). Biomedical Technology students take a varied group of courses that allow them to perform a research project either on the campus or with another professional laboratory site of their choosing. These students can also take course pre-requisites that ready them

for entry into professional schools of Medicine, Osteopathy, Dentistry, or pursue other doctoral degree routes.

4. The Department of Biomedical Sciences (School of Health Professions and Nursing) and the Department of Chemistry (College of Liberal Arts and Sciences) with the support of the Department of Criminal Justice (College of Management) offer a B.S. Degree program in **Forensic Science** designed to educate students in forensic science theory and methodology. At degree completion, students have a strong science background coupled with a foundation in criminal justice and legal concepts. The program integrates didactic courses taught at the campus in simulated laboratories along with an internship or cooperative education experience between the junior and senior years of study. During this experience students will work and study in crime laboratories as well as in other related agencies. Graduates of this program will have the necessary scientific and technical background in forensic science, along with adequate criminal justice theory, to obtain entry-level positions in crime laboratories, administrative agencies and private industry. In addition, these students will be positioned for the graduate education in forensics that is necessary for career advancement. Students who are either part-time or full-time can pursue the undergraduate degree program in forensic science. Students desiring to continue in the program must maintain a minimum GPA of 2.33 (C+) out of 4.00 in the major courses. All students at the C.W. Post Campus, through the professional Academic Counselors, Director or coordinators and Department Chairs are guided to complete courses in the correct sequence to complete degree requirements in a four-year cycle.

Writing Across the Curriculum

Sections of BMS 50, BMS 87, BMS 150 and BMS 185 are often offered in Writing Intensive format to fulfill requirements of the Writing Across the Curriculum Program; students must check with academic advisors and consult the schedule of classes for current course offerings.

Life Experience Credit

Some individuals may have professional work experience at a hospital or have attended certificate programs that challenge existing course requirements through a "Life Experience Credit". Eligibility for credits is based on successful completion of proficiency examinations and/or extensive documentation of experiences.

Students should apply for life experience credits upon completion of their first 6 credits of study at C.W. Post, but before beginning their final 32 credits (residency requirements). Life experience applications will not be accepted once students have begun their senior residency. All proficiency examinations must be completed prior to the final 32 credits of undergraduate study.

Residency Requirements

The final 32 credits (9 credits in the major) toward the baccalaureate degree must be taken at C.W. Post. Life experience credits (see above) or transfer credits from other colleges may be applied toward the bachelor's degree requirements, but they cannot substitute for the residency requirement.

Admission Requirements for Departmental Degrees (CLS, CYT, BMT)

Students pursuing degree programs in the Department of Biomedical Sciences are requested to complete a separate application for admission to the respective undergraduate degree program in addition to their Admission Application for the

C.W. Post Campus and are to forward it to:

Director, CLS Program
Department of Biomedical Sciences
C.W. Post Campus
Long Island University
720 Northern Blvd.
Brookville, N.Y. 11548-1300

Completed Applications must be returned to the Program Director with official transcript(s) from all colleges or universities attended and with two letters of recommendations preferably from former Science Professors. Both transfer students and starting sophomores at C.W. Post must follow these requirements. A separate application for admission to the Campus must be submitted to the Admissions Office in addition to the admission application of the Department.

Applicants for admission to the Department of Biomedical Sciences Programs are contacted for a personal interview.

Students are expected to maintain a combined grade point average of 2.33 overall (4.0 is an "A" grade) in all pre-requisite courses whether they are C.W. Post students or transfer students into the departmental program.

Applicants to MSKCC must have an overall GPA of 3.0.

Students opting to pursue the B.S. Degree in Forensic Science (FSC) should notify the undergraduate academic advisor and Clinical Director of the Forensic Science program so that they may satisfy all course requirements in that major in the correct course sequence.

The B.S. degree programs of the Department of Biomedical Sciences (CLS, CYT, BMT) require:

- Completion of Campus Core Curriculum
- Completion of Departmental Core Curriculum
- Completion of specific course requirements for each degree program pursued

<i>College Core</i>	<i>Credits</i>
College 101 (not required for transfer students)	1
Laboratory Sciences (fulfilled by BIO 7, 8)	8
Language/Literature	6
History/Philosophy (PHL/BMS 19)	9
Mathematics (fulfilled by MTH 3)	4
Political Science/Economics	6
Fine Arts	6
Social Sciences	6
College Competencies (Writing, Oral, Library, Computer)	6-9
Total	52-55

<i>Basic Sciences</i>	<i>Credits</i>
Chemistry 3,4 (Principles of Chemistry)	8
Mathematics 40	3
Total	11

<i>Advanced Sciences</i>	<i>Credits</i>
Chemistry 25 Organic Chemistry for Health Scientists	4
Chemistry 71 Biochemistry	4
Total	8

Department of Biomedical Sciences Curriculum

Regardless of the program students opt to pursue, all students must complete a Departmental Core of courses which include the course prefix: Health Science-Medical Biology (BMS):

<i>Course</i>	<i>Credits</i>
BMS 40 Computer Applications	3
BMS 49 Laboratory Information Sciences	1
BMS 80 Immunology	3
BMS 87 Clinical Immunology (WAC)	3
BMS 90 Microbiology in Health Sciences	4
BMS 97 Virology	1
BMS 225 Histopathology of Body Systems	3
Total	18

1. Clinical Laboratory Sciences (CLS)

students pursuing the BS degree must take these university-based didactic courses with simulated laboratory sessions.

BMS 50 Clinical Chemistry I & Urinalysis	4
BMS 63 Introduction to Hematology/Phlebotomy	3
BMS 147 Mgt., Supervision, Teaching + Professionalism Seminar	2
BMS 150 Clinical Chemistry II & Instrumentation	4
BMS 161 Hematology & Body Fluids	3
BMS 162 Coagulation	2
BMS 185 Immunoematology (WAC)	4
BMS 191 Clinical Bacteriology	3
BMS 194 Mycology/Parasitology	3
BMS 256 Diagnostic Techniques in Molecular Pathology	4
BMS 244 Journal Club Review Seminar	1
Total	33

The CLS student is assigned to a clinical affiliate site in his/her senior year to complete Clinical based courses (Practica) which are applied learning courses that ready students for mastery of entry-level competency in the Clinical Laboratory Science and readiness to take a National Certification Examination sponsored by the American Society of Clinical Pathologist (ASCP) or the National Credentialing Agency for Clinical Laboratory Personnel (NCA).

The Hospital/Clinical Courses include:

BMS 259 Practicum in Clinical Chemistry /Urinalysis	3
BMS 269 Practicum in Hematology, Coagulation, Histotechniques	3
BMS 289 Practicum in Immunoematology / Clinical Immunology	3
BMS 299 Practicum in Microbiology	3
Total	12

Examples of Departmental Course Electives

BMS 51 Pharmacology	3
BMS 212 Pathophysiology	3
BMS 255 Toxicology	3

2. Students pursuing the B.S. Degree in Biomedical Sciences, **Cytotechnology** take the following courses which ready them for a career position as a Cytotechnologist and prepare them to successfully complete the CT(ASCP) National Certification Examination.

The Cytotechnology student takes all Departmental Core Courses including BMS 225 Histopathology of Body Systems – 3 credits at the University and senior of classes which are hospital based courses taught at Memorial Sloan Kettering Cancer, New York, NY

Students registered for the following senior year courses but take all of them at Memorial Sloan Kettering Cancer Center, New York, N.Y.

<i>Course</i>	<i>Credits</i>
BMS 230 Microscopic Evaluation I	4
BMS 231 Microscopic Evaluation II & III	6
BMS 232 Laboratory Techniques I, II, III	4
BMS 233 Gynecologic Cytology	4
BMS 234 Research Seminar	2
BMS 235 Urinary / Body Fluid Cytology	3
BMS 236 Pulmonary Cytology	3
BMS 237 GI Tract Cytology	1
BMS 238 Fine Needle Aspiration Cytology	2
BMS 239 Laboratory Management & Operations	1
Total	30

3. Students pursuing the B.S. Degree in Biomedical Sciences, Biomedical Technology take the Departmental core courses plus courses that ready them for careers in a Bioscience Laboratory industry position.

The courses for this degree route include:

<i>Course</i>	<i>Credits</i>
BIO 121 Introduction to Human Genetics	3
BMS 51 Pharmacology	3
BMS 212 Pathophysiology II	3
BMS 244 Journal Club Seminar	1
BMS 248 Undergraduate Research Project	4
BMS 249 Bioinformatics	3
BMS 256 Diagnostic Techniques in Molecular Pathology	4
Total	21

Typical Program in Biomedical Sciences, Clinical Laboratory Science/Generalist

<i>Freshman Year</i>	<i>Credits</i>
College 101	1
BIO 7, 8	8
CHM 3,4	8
MTH 3, 40	7
Library Competency	0
ENG 1,2	6
Core	3
Total	33

<i>Sophomore Year</i>	<i>Credits</i>
CHM 25,71	8
Competency Areas	0
Core (includes BMS 19)	27
Total	35

<i>Junior Year</i>	<i>Credits</i>
BMS 225, 40, 63, 80, 90	16
BMS 49, 87, 97	9
BMS 162, 194	3
BMS 256	4
Core	3
Total	35

<i>Senior Year</i>	<i>Credits</i>
BMS 150, 161, 162	9
BMS 147, 185 191	9
BMS 259, 269	6
BMS 289, 299	6
BMS 244	1
	31

Total College Credits 134

Students planning to attend graduate or professional schools that may require language proficiency are strongly urged to take French, German or Russian to fulfill language/literature core requirements. Students opting to pursue entry into medical or dental schools are encouraged to complete one year (eight credits) of Physics.

Typical Program in Biomedical Sciences, Cytotechnology

<i>Freshman Year</i>	<i>Credits</i>
College 101	1
BIO 7, 8	8
CHM 3,4	8
MTH 3, 40	7
Library Competency	0
ENG 1,2	6
Core	6
Total	36

<i>Sophomore Year</i>	<i>Credits</i>
CHM 25, 71	8
Competency Areas	0
Core (includes BMS 19)	27
Total	35

<i>Junior Year</i>	<i>Credits</i>
BIO 107	4
BMS 40, 63, 80, 90	13
BMS 49, 256, 87, 97	9
BMS 225	3
Total	29

<i>Senior Year</i>	<i>Credits</i>
CT Program at Memorial Sloan Kettering Medical Center	
BMS 230 Microscopic Evaluation I	4
BMS 231 Microscopic Evaluation II & III	6
BMS 232 Laboratory Techniques I, II, III	4
BMS 233 Gynecologic Cytology	4
BMS 234 Research Seminar	2
BMS 235 Urinary/Body Fluid Cytology	3
BMS 236 Pulmonary Cytology	3
BMS 237 GI Tract Cytology	1
BMS 238 Fine Needle Aspiration Cytology	2
BMS 239 Laboratory Management & Operations	1
	30

Total College Credits 129

Students planning to attend graduate or professional schools that may require language proficiency are strongly urged to take French, German, or Russian to fulfill language/literacy core requirements. Students opting to pursue entry into medical or dental schools are encouraged to complete one year (eight credits) of Physics.

Typical Program in Biomedical Sciences, Biomedical Technology

<i>Freshman Year</i>	<i>Credits</i>
College 101	1
BIO 103, 104 or 7, 8	8
CHM 3, 4	8
MTH 3,40	7
Library Competency	0
ENG 1, 2	6
Core	3
Total	33

<i>Sophomore Year</i>	<i>Credits</i>
CHM 25, 71 or 21, 22	8
Competency Areas	0
Core (includes BMS 19)	27
Total	35

<i>Junior Year</i>	<i>Credits</i>
BIO 141	3
BMS 225, 40, 49, 51	
80, 87, 90, 97	21
Core and elective (BMS 256)	6
Total	30

<i>Senior Year</i>	<i>Credits</i>
BMS 212, 225	6
BMS 244	1
BMS 248	4
BMS 249, 256	7
BMS Electives	4
Other Elective Credits	9
Total	31

Total College Credits 129

Students planning to attend graduate or professional schools that may require language proficiency are strongly urged to take French, German, or Russian to fulfill language/literacy core requirements. Students opting to pursue entry into medical or dental schools are encouraged to complete one year (eight credits) of Physics.

Typical Program in Forensic Science (Coordinates courses with the Departments of Biomedical Sciences, Chemistry and Criminal Justice)

<i>Core Curriculum</i>	<i>Credits</i>
College 101(not required for transfer students)	1
Laboratory Sciences \ (fulfilled by BIO 7, 8, or 103, 104)	8
Language/Literature	6
History/Philosophy (PHL/BMS 19)	9
Mathematics (fulfilled by MTH 7)	4
Political Science/Economics	6
Fine Arts	6
Social Sciences	6
College Competencies (Writing, Oral, Library, Computer)	6-9
Total	52-55

<i>Natural Sciences Core</i>	<i>Credits</i>
BIO 3/103; BIO 4/104; BIO 7/8	8
BIO 141 Biostatistics*	3
CHM 3, 4 (Principles of Chemistry)	8
CHM 21, 22 (Organic Chemistry)	8
PHY 11, 12 (College Physics)	8
Total	35

* Any Statistics course

<i>Specialized Sciences Core</i>	<i>Credits</i>
BIO 107 Principles of Genetics or BIO 121 (no lab)	3 or 4
CHM 37 Quantitative Analysis	4
CHM 71 Biochemistry	4
BMS 80 Immunology	3
BMS 256 Diagnostic Techniques in Mol. Pathology	4
Total	22-23

Forensic Sciences Courses	Credits
ANP 51 Forensic Anthropology	3
CHM 39/FSC 2 Forensic Instrumentation	4
CRJ 76 Criminal Procedure	3
BMS 71/FSC 1 Intro to Criminalistics	3
BMS 255 Toxicology	3
BMS 257/FSC 3 Forensic Molecular Techniques	3
BMS 271/FSC 200 Forensic Internship	2
Total	21

Suggested Electives	Credits
BIO 201 Molecular Biology	4
CHM 24 Spectroscopic Analysis	3
BMS 51 Pharmacology	3
BMS 63 Hematology & Phlebotomy	3
BMS 90 Microbiology in Health Sciences or BIO 250 Microbiology	4
BMS 224 Journal Club Seminar	1
CRJ 47 Arson	3
BMS 19/PHL 19 Medical Ethics	3
Total Required Elective Credits	9

Forensic Science Program Course Sequences

Freshman Year	Credits
College 101	1
BIO 7 or 8, 103, 104	8
CHM 3, 4	8
ENG 1, 2	6
MTH 7	4
Anthropology 51	3
Library Competency	0
Core Curriculum	4
	33

Sophomore Year	Credits
CHM 21, 22	8
CHM 37	4
BIO 141*	3
BMS 19/PHL 19	3
Computer Competency	0
Oral Competency	0
Core Curriculum	4
Total	33

*Any statistics course

Junior Year	Credits
CHM 71	4
CHM 39/FSC 2	4
BIO 107/138	4
BMS 71	3
BMS 80	3
BMS 256	4
BMS 271 (Fall, Spring, Summer)	2
Electives	9
Core Curriculum	3
Total	36

Senior Year	Credits
Criminal Justice 76	3
PHY 11, 12	8
BMS 255	3
BMS 257	4
Core Curriculum	12
Total	30
Total College Credits	129

Biomedical Science Courses

BMS 20 Introduction to Disease Processes

The changes in the human body that may be biological, physical, chemical or anatomical which induce disease or an abnormal process are discussed. The etiology and pathogenesis of altered body systems is emphasized. How change can significantly reduce normal function of body systems is also identified. Writing Across the Curriculum course
Prerequisites: BIO 7, 8 or 103, 104. Fall, 3 credits

BMS 40 Computer Applications

This course reviews the usefulness of computers for home or business. Students learn the current Microsoft Word Program; Excel, Power Point, Access and the utilization of WebCT. Extensive hands-on computer use is involved for the completion of this course
Cross-referenced courses: HIM 53 and HPA 20 Fall, 3 credits

BMS 49 Laboratory Information Systems

This course describes the selection and evaluation of Laboratory Information Systems (LIS) to coordinate and interface departments of Clinical and Anatomical Pathology in the hospital setting. Problems concerning needs analysis, cost, value of the system and communication through computer technology are addressed. The usefulness of computer operations in charting, graphing, database analysis and on-line Internet services is also presented. Students identify criteria to be considered to evaluate the success of LIS systems, quality management and their competency.
Prerequisite: BMS 40. Spring, 1 credit

BMS 50 Clinical Chemistry I and Urinalysis

This course introduces students to safety principles, quality control and laboratory math and the analysis, quantitation,

physiologic and pathologic assessment of the serum and urine specimen. Emphasis is based on the clinical correlations and analytical procedures commonly performed on serum to determine the quantity of carbohydrates, lipids, proteins, enzymes, and non-protein nitrogen substances and to assess cardiac, liver, renal, pancreatic and gastrointestinal function. Analysis of the physical, chemical and microscopic examination of urine (urinalysis) is also presented along with the disease processes that hinder kidney function.

Laboratory fee

Prerequisites: BIO 7 or 103; CHM 25.

Spring, 4 credits

BMS 51 Pharmacology

The study of drugs or poisons and their effect to correct abnormal body function is presented. Emphasis is placed on the use of drugs to therapeutically treat disease and the consequence or expectation of body changes possible with their continued use. The Pharmacokinetics, Pharmacology and Pharmacodynamics of drugs in common use to treat disorders is also discussed.

Prerequisite: CHM 22.

Spring, 3 credits

BMS 63 Introduction to Hematology/Phlebotomy

This course is an introduction to the methodologies, instrumentations and OSHA regulations within a clinical hematology lab. Collection and preservation of blood specimens, description of all formed cellular elements, analysis of blood smears and classification of hematological disorders, such as the anemias and leukemias are discussed. The clinical significance of sedimentation rates and reticulocyte counts and proper phlebotomy techniques and theory are also identified. Safety regulations for blood collection, universal precautions and patient preparation ethics, confidentiality and patient rights are addressed. Practice and competency in phlebotomy is required for course completion.

Laboratory fee

Prerequisite: BIO 8 or 104.

Co-requisite: CHM 4 or permission of the instructor

Spring, 3 credits

BMS 71 Introduction to Criminalistics (FSC 1)

This course includes an overview of forensic science laboratory techniques. The subject introduces the student to information collected and chain of custody followed at the crime scene; photography; physical evidence and its properties (trace evidence; fingerprints;

firearms; fibers; paint; documents examination). This subject includes principles of microscopy; serology (blood identification procedures); origin determination; semen identification procedures; other biological substances of interest; hair comparison; drugs and toxicology; case-work interpretation; quality control, proficiency testing and accreditation; and recent criminal cases. Lectures, demonstrations, and basic laboratory exercises are used to present the subject matter.

Laboratory fee

*Two hour lecture. Three hour laboratory
Fall, 3 credits*

BMS 80 Immunology

This course is an introduction to Immunology and Immunochemistry. The Structures, reaction and biological effects among antigens, antibodies and complement in the body (in vivo) and in vitro are discussed. Cells of the immune and inflammatory responses, their structure, functions and inter-relationships in normal individuals and in disease states is also presented.

*Pre/co-requisite: Organic Chemistry or Biochemistry or permission of the instructor.
Fall, 3 credits*

BMS 87 Clinical Immunology

In addition to reviewing the cells and tissues of the immune system, specific and non-specific mechanisms of the immune response, the major histo-compatibility complex, hypersensitivities and tumor surveillance of the immune system, this course emphasizes immunologic techniques in the serologic identification of antigens and antibodies. Emphasis is made on measurement of the immune product or reaction which can yield significant information in the clinical differential diagnosis or monitoring the progress of a disorder / disease.

*Writing Across the Curriculum course
Laboratory fee*

Prerequisite: BMS 80.

Spring, 3 credits

BMS 90 Microbiology in Health Sciences

This course is required for all medical biology majors and health related majors including those students seeking graduate study in the biological sciences and those seeking admission into professional schools. The course introduces the principles of clinical microbiology and characteristics of microorganisms, host-parasite relationships, resistance, immunity, hypersensitivity, public health, epidemiology, as well as applied, medical and industrial microbiology. Includes clinical diagnostic methods such as cul-

ture, control, identification, sterilization, microbiological techniques and concepts, and emphasizes those techniques specifically employed in the clinical microbiological laboratory.

Laboratory fee

Fall and Spring, 4 credits

BMS 97 Virology

Viral structure, mode of infection of human cells, replication and classification are discussed. The DNA and RNA viruses associated with human diseases as well as the resultant clinical syndromes; diagnostic procedures used to collect and detect viral antigens in clinical specimens; viral serology; viral culture and storage are also presented.

Prerequisite: BIO 7, 8 or 103, 104.

Fall, 1 credit

BMS 98, 99 Undergraduate Research

HS-Medical Biology 98: One to two credits; HS-Medical Biology 99: Three credits. Junior and seniors can undertake an independent research project under the direction of a faculty member in the area of the student's principle interest.

Prerequisite: Permission of department chair and sponsoring faculty member.

Every Semester

BMS 147 Management, Supervision, Teaching and Professionalism Seminar

This seminar identifies the five components of Management in Laboratory Medicine: duties and responsibilities including "problem solving-decision-making" processes; concepts of managerial leadership: communication skills; process of personnel administration: evaluation of employee performance; effective laboratory operations and principles of laboratory finance: cost containment. Additionally, information on teaching, professionalism, supervision, regulatory agency requirements, laboratory information systems, and the importance of continuing medical education are discussed. Case study assignments reflect typical laboratory problems encountered. Teaching principles include writing of objectives: Educational Methodology.

Spring, 2 credits

BMS 150 Clinical Chemistry II & Instrumentation

This Clinical Chemistry course is a sequel of BMS 50. It presents topics addressing endocrinology, electrolyte and acid/base balance, porphyrins, vitamins and nutrition status, therapeutic drug monitoring, toxicology and identification of tumor markers. The clinical correlations, analytical methods commonly performed on

serum or urine are discussed with an emphasis on evaluating the patient's health care status. The principles of operating instrumentation used in clinical chemistry laboratories including point of care testing devices are also presented.

Laboratory fee

Prerequisite: BMS 50.

Fall, 4 credits

BMS 161 Hematology and Body Fluids

The formed elements of the peripheral blood, their precursors, function and structure – including basic methodologies for quantitation of cells and cellular components – are discussed. Normal and abnormal cellular morphologies, their clinical relevance in both the quantitative and qualitative assessment of disease in blood is also emphasized. Other body fluids are also addresses: cerebrospinal, synovial, pericardial, peritoneal, pleural, amniotic fluids and seminal fluid in terms of normal and abnormal findings, methods of collection and assessment.

Laboratory fee

Prerequisite: BMS 63.

Fall, 3 credits

BMS 162 Coagulation

The mechanism of Blood

Coagulation/Hemostasis is discussed including evaluation of bleeding disorders and thrombosis. Case studies identify the diagnostic evaluation of normal and disease states.

Prerequisite: BMS 63.

Fall, 2 credits

BMS 185 Immunohematology

This course addresses the many aspects associated with transfusion medicine. Lecture and laboratory coursework are incorporated to address the theoretical aspects of Immunohematology supported by a technical emphasis on laboratory procedures performed in a hospital transfusion service.

Laboratory fee

Prerequisites: BMS 80 and 87.

Fall, 4 credits

BMS 191 Clinical Bacteriology

The study of the bacteria that are medically important to humans with emphasis on identification of clinically significant pathogens distinguished from members of the normal flora are described. Methods of isolation, identification and characterization of bacteria are integral components of this course.

Laboratory fee

Prerequisites: BMS 90 or its equivalent and BMS 97.

Fall, 3 credits

BMS 194 Mycology and Parasitology

This course introduces the student to the science of Mycology and Parasitology. It addresses the pathogenesis, clinical manifestations and laboratory diagnosis of medically important fungi and parasites. Emphasis is given to the differential characteristics in the identification and clinical diagnosis of mycotic and parasitic diseases. The laboratory component of this course introduces students to various diagnostic techniques used to identify these eukaryotic organisms.

Prerequisite: BMS 90.

Spring, 3 credits

BMS 212 Pathophysiology II

This course extends a student's comprehension of disease processes by presenting the molecular, biochemical and metabolic events which identify a disease or disease process affecting several body systems.

Prerequisite: BMS 20.

Spring, 3 credits

BMS 225 Histopathology of Body Systems

The student comprehends the magnitude of changes that occur in diseased cells and tissues of the human body. Emphasis is on major changes observed in tissues undergoing pathologic processes such as: Inflammation, degenerations, necrosis, growth disorders; those changes that occur that influence the health and function of normal tissues within various body systems. Examination of pathology slides is an essential course requirement.

Laboratory fee

Prerequisites: BIO 7, 8.

Fall, 3 credits

Courses taught at Memorial Sloan Kettering Cancer Center (BMS 230-239)

BMS 230 Microscopic Evaluation I (weeks 1-20)

In this course students learn to use the light microscope for the purpose of detecting and diagnosing benign, pre-malignant and malignant processes in specimens collected for cytologic evaluation.

Fall, 4 credits

BMS 231 Microscopic Evaluation II and III (weeks 21-52)

Students continue to develop and refine microscopic skills needed to detect and diagnose benign, pre-malignant and malignant processes in gynecologic and non-gynecologic cytology specimens. Under the guidance of experienced, certified cytotechnologists, students screen actual routine specimens gaining competent microscopic skills and gradually acquiring accuracy and speed. Experience screening specimens from all body sites is gained.

Spring, 6 credits

BMS 232 Laboratory Techniques I, II, III (weeks 1-52)

Students learn and apply the basic principles of cytopreparation using established preparatory techniques. They first observe and then assist cytopreparatory technicians processing specimens.

Students gain practical experience in the operation of a cytopreparatory laboratory.

Spring, 4 credits

BMS 233 Gynecologic Cytology (weeks 1-13)

This course covers the principles of normal and abnormal gynecologic cytopathology. Didactic and microscopic instruction focuses on basic anatomy, embryology, histology, physiology, pathology, endocrinology, and diagnostic cytopathology of the normal, infectious, inflammatory, premalignant, and malignant pathologic processes of the female genital tract. Emphasis is on microscopic diagnostic features that distinguish benign cytopathologic changes from precancerous and malignant changes.

Fall, 4 credits

BMS 234 Research Seminar (weeks 1-52)

This course introduces students to research methods that can be applied to cytology. Students gain experience searching, critically reviewing and critiquing the scientific literature. Discussions of recent advances and progressive technological applications in cytology such as: image analysis, flow cytometry, electron microscopy, and molecular diagnostic procedures. Topics are selected for development of individual research projects.

Spring, 2 credits

BMS 235 Urinary/Body Fluid Cytology (weeks 21-31)

This course covers the principles of normal and abnormal urinary and body cavity fluid cytopathology. Didactic and microscopic instruction focuses on basic anatomy, embryology, histology, physiology, pathology and diagnostic cytopathology of normal, benign, infectious, inflammatory, and malignant pathologic processes in various cytologic specimens. Emphasis is on microscopic diagnostic features that distinguish benign from malignant cytopathologic changes. Cytologic interpretation is correlated with tissue biopsy whenever possible.

Fall, 3 credits

BMS 236 Pulmonary Cytology (weeks 14-20)

This course covers the principles of normal and abnormal pulmonary cytopathol-

ogy. Didactic and microscopic instruction focuses on basic anatomy, embryology, histology, physiology, pathology and diagnostic cytopathology of the normal, benign, infectious, inflammatory, and malignant pathologic processes of the upper and lower respiratory system.

Emphasis is on microscopic diagnostic features that distinguish benign from malignant cytopathologic changes.

Fall, 3 credits

BMS 237 Gastrointestinal Cytology (weeks 32-36)

This course covers the principles of normal and abnormal gastrointestinal cytopathology. Didactic and microscopic instruction focuses on basic anatomy, embryology, histology, physiology, pathology and diagnostic cytopathology of normal, benign, infectious, inflammatory, and malignant pathologic processes of the gastrointestinal system in various cytologic specimens. Emphasis is on microscopic diagnostic features that distinguish benign cytopathologic from malignant changes. Cytologic interpretation is correlated with tissue biopsy whenever possible.

Spring, 1 credit

BMS 238 Fine Needle Aspiration Cytology (weeks 37-41)

This course covers the anatomy, histology, pathology, and cytopathology of the following non-gynecologic sites: breast, lung, bone, thyroid, salivary gland, lymph node, liver and pancreas. The course focuses on cytomorphology of fine needle aspiration specimens obtained from superficial and deep lesions of the body. Pertinent clinical data, cytomorphology, and appropriate clinical management of patients affected with neoplastic lesions from these body sites are correlated. Cytologic interpretation is correlated with tissue biopsy whenever possible.

Spring, 2 credits

BMS 239 Laboratory Management and Operations (weeks 27-32)

This basic course in Laboratory Management includes approaches to management, laboratory operations and ethics. The concepts of quality control, quality assurance, laboratory safety, and continuing education as they apply to cytology are presented. Important issues affecting the practice of cytotechnology such as federal and state regulations are presented.

Spring, 1 credit

BMS 244 Journal Club/Review Seminar

This course is designed to provide senior CLS students with the appropriate expe-

riences in answering ASCP and NCA certification examination questions and in case study analysis. Additionally, students will learn to critically review research articles in the laboratory sciences. The major categories of hematology, chemistry, immunology, immunohematology (blood bank), and microbiology are addressed. The review sessions are team taught by practicing professionals and program faculty.
Spring, 1 credit

BMS 248 Undergraduate Research Project

This course serves as the culminating experience for students in the Biomedical Technology degree program. Students select a mentor to pursue a hands-on laboratory research project which investigates a biomedical problem or question. They are then expected to analyze the data obtained and submit to the department and to the mentor a written copy of the research project in a format consistent with that of a scientific publication/thesis.

Prerequisites: BMS 40 and 49.

Co-requisites: MTH 19.

Spring, 4 credits

BMS 249 Bioinformatics

This course addresses computational techniques used to study three-dimensional structures and orientation of macromolecules within biological systems. The subject enables students to work on a research life science problems and develop applications employing computerized biological images. Both areas of interest rely on proficiency in the use of the World Wide Web data. Training in bioinformatics is a prerequisite to the comprehension of information regarding the function of genes, proteins, and numerous cellular components. Comprehension about bioinformatics enhances the qualification of graduates in biomedical sciences by allowing them to meld computer skills with current information about the special relationships of biomolecules in living systems.

Prerequisites: BMS 40 and 49.

Co-requisite: BIO 141.

Fall, 3 credits

BMS 255 Toxicology

This course covers the instrumental methods of assay. Toxicologic and pharmacologic action on and by the host organism are examined along with a review of major drug and toxin types. Special topics of interest are covered in the detection and identification of drugs in biological fluids.

Three hour lecture

Prerequisite: CHM 22.

Fall, 3 credits

BMS 256 Diagnostic Techniques in Molecular Pathology

Molecular diagnostics is the application of methods in biotechnology to assist in the diagnosis of disease at the cellular level. Biotechnology involves techniques used in molecular biology that are applied to the study of abnormal cells. Techniques used in biotechnology are: cell culture, the polymerase chain reaction (PCR), immunohistochemistry, cloning and genetic probes. Formal lectures are followed by experiments in a laboratory equipped to perform some of the aforementioned techniques. Additionally, the use of the internet will be demonstrated as a means of accessing databases.

Laboratory fee

Prerequisite BMS 80.

Spring, 4 credits

BMS 257 Forensic Molecular Techniques (FSC 3)

This subject provides a detailed introduction to and history of forensic molecular techniques and applications; it covers relevant principles from genetics and biochemistry. This subject includes principles of forensic DNA profiling and repetitive DNA in the human genome; individualization versus identification; how genetic polymorphisms arise and are maintained; continuous versus discrete allele systems; DNA isolation methods; RFLP (Restriction Fragment Length Polymorphism) analysis methods; short tandem repeat (STR) markers; PCR based typing systems; automated systems and DNA databases; applications of mitochondrial DNA analysis; linkage, pedigree analysis, and reverse paternity; introductory applied statistics for forensic laboratories.

Laboratory fee

Three hours lecture and five hours laboratory.

Prerequisite: BMS 256.

Fall, 4 credits

BMS 259 Practicum in Clinical Chemistry/Urinalysis

The student will work with assigned preceptors learning the techniques, procedures, instrumentation, and rationales of the clinical significances of disease states utilizing routine and special chemistry tests. Routine urinalysis will be instructed for one week. (Special Chemistry for one week)

(40 hour week for 6 weeks = 240 hours)

Spring, 3 credits

BMS 269 Practicum in Hematology Coagulation, Histotechniques

The students will work with assigned preceptors to learn to perform and to troubleshoot with instrumentation rou-

tine and specialized tests in hematology and coagulation. The rationale of clinical significance will be addresses.

Students will learn to perform techniques in the histology department. (Special Hematology for one week and Coagulation for one week)

(40 hour week for 6 weeks = 240 hours)

Spring, 3 credits

BMS 271 Forensic Science Internship

Independent laboratory and study (internship). A ten week, full-time internship in a crime laboratory covering the following functions: document examination, instrumental analysis, chemistry, toxicology, serology, crime scene service, special photography, explosive and incendiary device recovery, trace evidence, comparative microscopy in firearms and tool marks. This course is a 200-hour supervised practical experience.

Prerequisites: BMS 71, CHM 39 and BMS 256.

Fall, Spring and Summer, 2 credits

BMS 289 Practicum in Immunohematology/ Clinical Immunology

The students will work with assigned preceptors learning routine and advanced techniques of blood banking procedures and techniques. All aspects of transfusion medicine will be addressed. Two weeks Will be dedicated to the clinical immunology lab learning various molecular and immunological procedures and their associated clinical significances.

(40 hour week for 7 weeks = 280 hours)

Spring, 3 credits

BMS 299 Practicum in Microbiology

The student will learn under the direction of preceptors to isolate, culture and identify bacterial, fungal, and parasitic pathogens.

(40 hour week for 6 weeks = 240 hours)

Spring, 3 credits

Forensic Science Courses

The following courses are offered through the Departments of Chemistry and Criminal Justice:

ANP 51 Forensic Anthropology

This course is a study of the scientific techniques developed in physical anthropology to help identify human remains and understand the circumstances surrounding death. It also examines the contribution of forensic anthropology to the medicolegal community involved in solving both criminal and humanitarian cases of unexplained deaths.

Three hours lecture 3 credits.

Prerequisite: ANP 1 or permission.

Spring, 3 credits

BIO 107 Principles of Human Genetics

A study of Mendelian inheritance, multiple gene inheritance, gene structure and function, gene mapping mutation, gene regulation, evolutionary genetics and other basic concepts in genetics. The laboratory will consist of exercises utilizing microorganisms, viruses, insects and plants.

Three-hours lecture and four-hours laboratory/ field work.

Laboratory fee

Prerequisites: BIO 7, 8 or BIO 103, 104.

Fall, 4 credits

CHM 37 Quantitative Analysis

A study of classical gravimetric and volumetric quantitative determinations. The theory and practice of some of the more modern techniques of instrumental method are studied.

Three-hours lecture and four-hours laboratory.

Laboratory fee

Prerequisites: CHM 4.

Spring, 4 credits

CHM 39 Forensic Instrumentation

This course gives the student a basic understanding of the theory and applications of the methods of modern analytical chemistry as applied to forensic problems. It will show how spectroscopy, separation methods and other techniques can be applied to forensic tasks such as illicit drug analyses, residue analyses, forensic toxicology, explosive and arson investigations, and hair, paint and fiber evidence. Laboratory experiments will be performed to provide experience in using the methods discussed.

Three-hours lecture and four-hours laboratory.

Laboratory fee

Prerequisites: CHM 22 and 37.

Spring, 4 credits

CHM 71 Basic Biochemistry

A one-semester introduction to the major concepts of biochemistry including carbohydrates, lipids, amino acids, proteins, and nucleic acids.

Three-hours lecture and four-hours laboratory.

Laboratory fee

Prerequisite: CHM 22 or 25.

Spring, 4 credits

The following courses are offered through the College of Management, School Of Public Service

CRJ 76 Criminal Procedure

Survey of the constitutional rights and safeguards of individuals from unlawful activities of investigative agencies. Rules of evidence and the protection of individual rights in the administration of criminal justice.

Fall, 3 credits

The following courses are offered through the School of Health Professions and Nursing

BMS 71 Introduction to Criminalistics

The course includes an overview of forensic science laboratory techniques.

The subject introduces the student to information collected and chain of custody followed at the crime scene; photography; physical evidence and its properties (trace evidence, fingerprints; firearms; fibers; paint; documents examination). This subject includes principles of microscopy; serology (blood identification procedures); origin determination; semen identification procedures; other biological substances of interest; hair comparison; drugs and toxicology; case-work interpretation; quality control, proficiency testing and accreditation; and recent criminal cases. Lectures, demonstrations and basic laboratory exercises are used to present the subject matter.

Two-hours lecture and three-hours laboratory. Laboratory fee.

Fall, 3 credits

BMS 255 Toxicology

This course covers the instrumental methods of assay. Toxicologic and pharmacologic action on and by the host organism are examined along with a review of major drug and toxin types. Special topics of interest are covered in the detection and identification of drugs in biological fluids.

Three-hours lecture.

Prerequisite: CHM 22.

Fall, 3 credits

BMS 256 Diagnostic Techniques In Molecular Pathology

Molecular diagnostics is the application of methods in biotechnology to assist in the diagnosis of disease at the cellular level. Biotechnology involves techniques used in molecular biology that are applied to the study of abnormal cells. Techniques used in biotechnology are: cell culture, the polymerase chain reaction (PCR), immunohistochemistry, cloning and genetic probes. Formal lectures are followed by experiments in a laboratory equipped to perform some of the aforementioned techniques.

Additionally, the use of the Internet will be demonstrated as a means of accessing databases.

Three-hours lecture and four-hours laboratory.

Laboratory fee

Prerequisite: HSMB 80.

Spring, 4 credits

BMS 257 Forensic Molecular Techniques

This subject provides a detailed introduction to, and history of, forensic molecular techniques and applications, and covers relevant principles from genetics and biochemistry. This subject includes principles of forensic DNA profiling and repetitive DNA in the human genome; individualization versus identification; how genetic polymorphisms arise and are maintained; continuous versus discrete allele systems; DNA isolation methods; RFLP (Restriction fragment length polymorphism) analysis methods; short tandem repeat (STR) markers; PCR-based typing systems; automated systems and DNA databases; applications of mitochondrial DNA analysis; linkage, pedigree analysis, and reverse paternity; introductory applied statistics for forensic laboratories.

Three-hours lecture and four-hours laboratory.

Laboratory fee

Prerequisite: HSMB 256.

Fall, 4 credits

BMS 271 Forensic Science Internship

Independent laboratory and study (internship). A ten-week (30 hrs/week), full-time internship in a crime laboratory covering the following functions: document collection and examination, instrumental analysis, chemistry, toxicology, serology, crime scene review, special photography, explosive and incendiary device recovery, trace evidence collection, comparative microscopy in firearms and tool marks. This course is a 200-hour (30 per week) supervised practical experience.

Prerequisites: HSMB 71, 256 and CHM 39.

Fall, Spring, Summer, 2 credits

HEALTH INFORMATION MANAGEMENT

Phone: (516) 299-2485

Faculty

Donna Abbondandolo
 Director, Health Information Management Program
 B.S., Long Island University;
 M.B.A., Hofstra University
 Registered Health Information Administrator

This program leads to a Bachelor of Science degree in Health Information Management. The professional education is built on a foundation of liberal arts and sciences that prepares candidates at a bachelor's degree-level for careers as health information management professionals.

Health Information Management professionals have excellent management, interpersonal and computer skills. They are employed in every type of health care setting, including hospitals, outpatient facilities, and nursing homes. These highly visible professionals also play important roles in law firms, insurance companies, consulting firms, peer review organizations, government agencies and academic institutions. In these roles they are responsible for the management and design of health information systems and for insuring compliance with medical, legal, ethical, regulatory and administrative guidelines. The Health Information Management professional is an essential member of the health care team, collaborating with physicians, nurses, and other health care professionals to ensure that the information needed for critical health care decisions is available and accurate.

The program is accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIM) using standards set by the American Health Information Management Association (AHIMA). Graduates are eligible to take the national examination sponsored by AHIMA, in order to be certified as a Registered Health Information Administrator (R.H.I.A.).

All new and transfer students must meet criteria of the Campus Admissions Committee to be accepted into the program. Individuals who are working professionally in the field of health information administration may be granted some Life Experience Credits

toward the B.S. degree. These credits will be evaluated after a matriculated student completes six earned credits at C.W. Post. The student must formally apply to the Office of Life Experience for evaluation of eligible credits. Although submitted credentials for Life Experience Credits can be applied to the B.S. degree, the final 32 credits (nine credits in the major) must be taken in residence at C.W. Post Campus. Life Experience applications will not be accepted once the student has begun the senior residency.

A student who already has a bachelor's degree can receive a Certificate in Health Information Management. This path also enables the student to become a Registered Health Information Administrator (R.H.I.A.). To complete this course of study, students must fulfill certain requirements that include successful completion of course work in the Health Information Management major and in other areas that include biology and management. Required course work for the Health Information Management Certificate program will be determined on an individual basis by the academic advisor upon review of each student's official transcript.

B.S. in Health Information Management

<i>Core Curriculum</i>	<i>Credits</i>
College 101 (not required for transfer students)	1
Competencies	6
Language/Literature	6
History/Philosophy	9
Mathematics	3
Political Science/Economics	6
Social Science (PSY 1, 2)	6
Laboratory Sciences (BIO 7, 8)	8
Fine Arts	6
Total	50-51

<i>Related Courses</i>	<i>Credits</i>
HPA 14	3
ITR 151	3
ITR 264	3
MGT 11	3
CLA 29 or ITR 172	3
PHL 19	3
Total	18

Health Information Management Courses

	<i>Credits</i>
HIM 52 Medical Terminology	3
HIM 53/BMS 40 Computer	

Applications in Health Care	3
HIM 54/MTH 19 Statistics and Research	3
HIM 104 Health Information Science I: Medical Record Department Functions	3
HIM 104C Directed Practicum	2
HIM 106 Health Information Science II: ICD-9-CM coding	3
HIM 106C Directed Practicum	2
HIM 107/BMS 20 Pathophysiology	3
HIM 108 Regulatory, Compliance, Medical Staff and Hospital Organization	3
HIM 109/HPA 13 Legal Aspects of Healthcare	3
HIM 206 Advanced Coding	3
HIM 210 Computer-Based Health Information Systems	3
HIM 211 Health Information in Non-Hospital Settings	3
HIM 212 Quality Management and Regulatory Agencies	3
HIM 212C Directed Practicum	2
HIM 213 Organization & Management	3
HIM 213C Directed Practicum	3
Total	48
Electives	12
Total	128-129

Typical Program in Health Information Management

<i>Freshman Year</i>	<i>Credits</i>
College 101	1
BIO 7, 8	8
ENG 1, 2	6
PSY 1, 2	6
Language/Literature	6
Mathematics 1, 15 or 16	3
HIM 52	3
Total	33

<i>Sophomore Year</i>	<i>Credits</i>
HIM 104	3
HIM 104C	2
Fine Arts	6
HIM 53, CLA 29	6
History/Philosophy	6
Management 11	3
Political Science/Economics	6
Total	32

<i>Junior Year</i>	<i>Credits</i>
HIM 54/MTH 19, HIM 108	6
HIM 106, 106C	5
HIM 107/BMS 20	3
HPA 14	3
ITR 264	3
History/Philosophy	3
HIM 210	3
HIM 211	3
Elective	3
Total	32

Senior Year	Credits
Electives	9
ITR 151	3
HIM 109	3
HIM 206	3
HIM 212, 212C	5
HIM 213, 213C	6
PHL 19	3
Total	32

Health Information Management Courses

HIM 52 Medical Terminology

This course introduces the student to medical terminology based on an understanding of human body systems and their interaction, meanings of combining forms, suffixes and prefixes. Students gain the ability to define, build and interpret medical terms.

Fall, 3 credits

HIM 53 Computer Applications in Health Care

This course is a comprehensive review of computer concepts and usage in health care settings. It covers the types of computers that are appropriate for small or large hospitals and the storage devices needed. Students learn to create programs and to evaluate packaged software for its applicability to a particular health care setting. Extensive "hands-on" computer use required.

Cross-referenced with BMS 40, CSC 6, and HPA 20.

Fall and Spring, 3 credits

HIM 54 Statistics and Research for the Health Information Manager

This course assists the student in understanding and interpreting numerical data. Topics covered include: descriptive statistics, regression, correlation, sampling techniques and elements of inferential statistics.

Cross-referenced with MTH 19.

Fall and Spring, 3 credits

HIM 104 Health Information Science I: Health Information Department

This course provides the student with the knowledge necessary to function in a manual or electronic environment within the Health Information Management field. This includes a discussion of the historical development of medical care, and defining primary and secondary health information. The student learns to analyze, abstract and assess the timeliness and quality of health care data. Instruction on filing systems and controls is also included.

Fall, 3 credits

HIM 104C Directed Practicum

This is a supervised learning experience to develop understanding, skill and insight into medical procedures; develop awareness of the confidential nature of information given by the patient to the physician; and to observe interaction among departments.

Every Semester, 2 credits

HIM 106 Health Information Science II: ICD-9-CM Coding

Purposes and methods of classifying diseases and operations; differences between nomenclature and classification systems ICD-9-CM Coding; other systems of classification and the value of indexes and registers are emphasized. Appropriate methods of supervising ICD-9-CM coding is achieved through actual training in the coding process.

Prerequisites: HIM 52, 107.

Spring, 3 credits

HIM 106C Directed Practicum

This course is a supervised learning experience to develop skill and insight in classifying diseases and operations and in the use of various systems of classification.

Every Semester, 2 credits

HIM 107 Pathophysiology

This course is an introduction to medical science including the study of the nature and causes of disease and the changes that occur in various disease processes.

The course focuses on etiological factors and includes nutritional and environmental aspects of disease.

Cross-referenced with BMS 20/420.

Prerequisite: BIO 7.

Co-requisite: BIO 8.

Every Semester, 3 credits

HIM 108 Regulatory, Compliance, Medical Staff, and Hospital Organization

This course is a comprehensive overview of the impact of government regulation and compliance on health information management functions, Medical Staff functions and health facilities operations. A review of the organization of the medical staff within the health care organization is outlined. The structure of health care facilities is also presented and includes medical staff responsibilities, organizations and the implications of peer review for the health information manager.

Prerequisite or Co-requisite: HIM 104.

Alternate Fall, 3 credits

HIM 109 Legal Aspects of Health Care

This course considers the importance of health records as legal documents. Areas

emphasized include a general introduction to the law, legal aspects of hospital and medical staff organization, release of information and legal actions requiring evidence from health records, confidential communications, consents and authorizations. Acquaints the student health information manager with medical-legal considerations.

Cross-referenced with HPA 13.

Prerequisite: HIM 104.

Fall, 3 credits

HIM 206 Advanced Coding

This course emphasizes the unique coding requirements in the D.R.G. environment (Diagnosis Related Groups). The student learns to code procedures utilizing the CPT-4 coding methodology. Coding supervision is emphasized as well as coding TQM (Time Quality Management).

Prerequisite: HIM 106.

Fall, 3 credits

HIM 210 Computer-based Health Information Systems

This course is a comprehensive review of health information systems.

Establishment of a health information system is outlined in addition to a detailed analysis of patient care, administration, and research subsystems.

Prerequisites: CSC 6, HIM 53, 104.

Alternate Spring, 3 credits

HIM 211 Health Information in Non-Hospital Settings

This course is a survey of the problem-oriented medical system, health records for ancillary service departments, and records for nursing homes, psychiatric centers, clinics and other non-hospital settings.

Prerequisite: HIM 104.

Alternate Spring, 3 credits

HIM 212 Quality Management and Regulatory Agencies

This course introduces concepts of quality control in health care settings. It is divided into two distinct parts: the first deals with internal systems for setting standards, measuring quality and professional accountability; the second with external review agencies such as Peer Review Organization and the Joint Commission on Accreditation.

Prerequisite: HIM 109.

Alternate Spring, 3 credits

HIM 212C Directed Practicum

The directed practicum consists of supervised learning experience in the areas taught in HIM 109 and HIM 212.

Every Semester, 2 credits

HIM 213 Organization and Management of a Health Information Department

This senior seminar utilizes case studies, case problems and examples; the student applies the basic health information science principles through the management process.

Prerequisite: All HIM courses or permission of instructor.

Alternate Spring, 3 credits

HIM 213C Directed Practicum

Practical applications of concepts learned in the didactic setting are provided in a supervised learning experience.

Every Semester, 3 credits, 120 hrs

NURSING

Phone: (516) 299-2320

Fax: (516) 299-2352

Email: nursing@cwpost.liu.edu

Faculty

Theodora T. Grauer
Dean, School of Health Professions and Nursing;

Professor of Nursing
Diploma, Bellevue Hospital School of Nursing;

B.S., Hunter College;
M.S., Ph.D., Adelphi University
tgrauer@liu.edu

Mary Infantino
Associate Professor of Nursing
B.S., Molloy College;
M.S., Ph.D., Adelphi University;
mary.infantino@liu.edu

Minna Kapp
Chair, Department of Nursing
Associate Professor of Nursing
B.S., Hunter-Bellevue;
M.B.A., Baruch College, City University of New York;
M.A., M.E.D., Ed.D., Teachers College, Columbia University
mkapp@liu.edu

Loretta Knapp
Associate Vice President for Academic Affairs
Associate Professor of Nursing
B.S., State University of New York, Downstate Medical Center;
M.A., Ph.D., New York University;
lknapp@liu.edu

Amy Wysoker
Professor of Nursing
B.S., State University of New York, Downstate Medical Center;
M.A., New York University;
Ph.D., Adelphi University
awysoker@liu.edu

B.S. in Nursing

The Department of Nursing offers a CCNE-accredited program leading to the degree of Bachelor of Science in Nursing for registered nurses. Through baccalaureate education, the RN student is provided with an opportunity for advancement in professional nursing practice. The graduate is also provided with a foundation in liberal arts, the humanities, sciences, and nursing as a basis for post-baccalaureate education.

Program Planning

Required nursing courses are usually scheduled for evenings so that students are able to continue their present employment but are required to complete the nursing sequence within a maximum of five years. Students taking courses at off-campus sites must fulfill a residency requirement.

Admission and Matriculation

Transfer credits from courses taken at other colleges or universities will be evaluated individually. The college core requirements may be met by transfer credits from other institutions or by completing courses at C.W. Post.

Candidates for admission to the B.S. program are required to be licensed registered nurses. However, applicants who have taken, but have not received notification of having passed the NCLEX exam, may be admitted to C.W. Post as limited matriculants. Such applicants may enroll in non-nursing courses for one semester only.

Evidence of licensure must be presented by all such students prior to enrollment in courses during the subsequent semester.

Candidates for admission to the Nursing Program must present a cumulative grade point average of 2.5 or better. Candidates are asked to submit an Evaluation of Clinical Experience form completed by a work-related supervisor or nursing professor.

Before registering for clinical courses, students are required to show evidence of required immunizations, malpractice insurance, and health insurance.

Lower Division Course Validation

Graduates of an associate degree program in nursing receive 28 transfer credits for previous nursing education.

Graduates of a diploma program in nursing receive 28 credits of advanced standing toward the B.S. degree.

B.S. in Nursing Requirements

<i>College Core</i>	<i>Credits</i>
Language/literature	6
History/Philosophy	9
Political Science/Economics	6
Social Sciences (fulfilled by PSY 1, 2)	6
Laboratory Science (fulfilled by Bio 7, 8 Human Anatomy and Physiology 1 & 2)	8
Fine Arts	6
Mathematics (fulfilled by MTH 19 or 41 Statistics)	3
College Competencies (Writing-English 1 & 2, Computer, Oral, Library)	6
Total	50
Credit for previous Nursing Education See lower division course validation above.	28

Nursing Requirements (upper division nursing)	<i>Credits</i>
NUR 79 Philosophical and Conceptual Basis of Nursing	3
NUR 81 Issues in Professional Nursing	3
NUR 82 Nursing Research	3
NUR 82P Nursing Research Proposal Seminar	1
NUR 84 Health and the Human Life Cycle	3
NUR 85 Health Assessment	2
NUR 85L Health Assessment Lab	2
NUR 86 Family Health Nursing Theory	3
NUR 86L Family Health Nursing Practice	2
NUR 86S Family Health Nursing Seminar	0
NUR 87 Community Health Nursing Theory	3
NUR 87L Community Health Nursing Practice	3
NUR 87S Community Health Nursing Seminar	0
NUR 90 Management Theory and Nursing	3
NUR 91 Communication and Group Skills for the Health Care Setting	3
NUR 99 Pathophysiology	3
Total	37

<i>Co-related courses</i>	<i>Credits</i>
CHM 6 Chemistry of Life	4
Microbiology BMS 90 or Bio 135	4
Social Science Elective	
Total	11
Free elective	2
Minimum credits for the B.S. degree	128

Nursing Courses

NUR 79 The Philosophical and Conceptual Basis of Nursing

An introduction to professional nursing. Content focuses on systems, human needs, therapeutic communication, change and leadership theories. Selected nursing theories and professional nursing roles will be examined.
3 credits

NUR 81 Issues in Professional Nursing

An exploration and critical analysis of issues influencing nursing practice, nursing education and the delivery of health care. The political, social and economic factors influencing health care and health policy will be studied. Leadership behaviors relevant to nursing practice will be addressed. Emphasis will be placed on the use of information technology tools in the teaching and learning techniques of the course.
3 credits

NUR 82 Nursing Research

An introduction to a conceptual understanding of the research process for application throughout the nursing curriculum. A spirit of inquiry will be encouraged along with learning experiences focusing on preparing a research oriented practitioner. The major steps in the research process and various research approaches will be considered.
Writing Across the Curriculum course (WAC)
Prerequisite: Statistics (Math 19 or 41).
3 credits

NUR 82P Nursing Research Proposal

This independent study bridges the gap between theory (N82) and the application of the research process. The student develops a written proposal using the steps of the research process.
1 credit

NUR 84 Health and the Human Life Cycle

Building on the student's prior knowledge of growth and development, this course focuses on the impact of selected biopsychosocial stressors on human development. Cognitive, emotional, and physiological growth and development are set forth within the context of critical tasks and crises inherent within each stage of maturation. Emphasis is placed on the second half of the life cycle, and the role of the nurse in caring for an aging population.
3 credits

NUR 85 Health Assessment

This course focuses on physical examination and health assessment, and its place in the clinical decision-making process within the context of a selection of nursing models. Students will identify strategies for health teaching and health promotion for a culturally diverse population. Nursing activities are explored that facilitate adaptive responses in well, acute, and chronically ill clients across the lifespan with an emphasis on the older adult.

Prerequisite NUR 99; BIO 7, 8; CHM 1; BMS 90 or BIO 135.
Co-requisite 85L.
2 credits

NUR 85L Health Assessment Lab

This course is the laboratory component of NUR 85. Students practice skills of physical examination and health assessment, and apply the concepts learned in NUR 85.

Special fee, \$55
Co-requisite NUR 85.
2 credits

NUR 86 Family Health Nursing Theory

The family as an adaptive system is the focus of study. Several theoretical frameworks are presented and utilized to assess the health status of a family system. Family structural components and functions are explored to understand and predict risks and promote adaptive responses.
Co-requisite NUR 86L, 86S.
3 credits

NUR 86L Family Health Nursing Practice

This course focuses on practice with families that are selected from various home health agencies. Students work with families from diverse cultures and in various developmental stages to promote health within the family.
Co-requisite NUR 86, 86S.
2 credits

NUR 86S Family Health Nursing Seminar

This course addresses important issues that students identify from their clinical experiences working with families. In addition, the course emphasizes the application of current trends and research in family health nursing.
Co-requisite NUR 86, 86L.
0 credits

NUR 87 Community Health Nursing Theory

Theoretical concepts integral to community health nursing and strategies for nursing intervention form the promotion of community health will be identified. Course organization will reflect the philosophy that community nursing practice is comprehensive and continuous.
This is a Writing Across the Curriculum course (WAC)
Co-requisites NUR 87L, 87S.
3 credits

NUR 87L Community Health Nursing Practice

This course focuses on community nursing practice. The community will be examined as a system, the multi-variables (subsystems) characterizing the community will be identified through field study. Students will work with individuals, families, and identified groups within selected community health settings.
Co-requisite NUR 87, 87S.
3 credits

NUR 87S Community Health Nursing Seminar

This course focuses on a discussion of important issues that students identify from their clinical experiences working in various community health settings.
Co-requisite NUR 87, 87L.
0 credits

NUR 90 Management Theory and Nursing

Management theory and leadership concepts and their application to nursing are discussed. Strategies for the implementation of management concepts are presented and utilized. Students work in teams to analyze case-study problems using current management principles and theories.
3 credits

NUR 91 Communication and Group Skills for the Health Care Setting

This course provides the theoretical basis and clinical application of communication techniques, group dynamics and group process for healthcare professionals working in a variety of health care settings. The knowledge, strategies and techniques needed to communicate effectively with others and in groups will be the focus of this course.
3 credits

NUR 99 Pathophysiology

A survey of disease processes using a systems framework is developed in a logical manner that includes etiology, epidemiology, pathogenesis, clinical manifestations and outcomes for each disease.
3 credits



NUR 101 Writing a Scholarly Paper

This course reviews and builds upon basic writing skills. The student will develop a position paper, via a series of revisions, that presents thoughts clearly and logically using correct grammar and sentence structure. Various writing styles will be presented with an emphasis on APA format. An annotated bibliography will be developed for this paper using APA format.

Elective course, one or two credits

NUTRITION

Phone: (516) 299-2762

Fax: (516) 299-3106

Faculty

Jerrilynn D. Burrowes
Associate Professor of Nutrition
B.A., Fisk University;
M.S., Ph.D., New York University
jerrilynn.burrowes@liu.edu

Frances Gizis
Chair, Nutrition Department;
Associate Professor of Nutrition
B.H.Sc., University of Guelph;
M.S., Cornell University;
Ph.D., New York University
frances.gizis@liu.edu

Barbara Shorter
Associate Professor of Nutrition
Director, Didactic Program in Dietetics
B.S., Hunter College;
M.S., New York University;
M.Ed., Ed.D., Columbia University
bshorter@liu.edu

Jack R. Thomas II
Assistant Professor of Nutrition
B.S., Bowling Green State University;
M.Ed., Bowling Green State University;
Ph.D., Ohio State University
jack.thomas1@liu.edu

Alessandra Sarcona
Director, Dietetic Internship Program
B.S., East Carolina University;
M.S., New York University
asarcona@liu.edu

Nutrition Degree Program

The Department of Nutrition offers the Bachelor of Science degree in Nutrition as a science-oriented, liberal arts foundation for understanding nutrition.

This program, the Didactic Program in Dietetics (DPD), is accredited by the Commission on Accreditation for Dietetic Education (CADE) of the American Dietetic Association, 216 W.

Jackson Boulevard, Chicago, Illinois 60606-6995.

Emphasis is placed on the application of nutrition knowledge to healthy individuals and to those with complex disease states. The goal of the program is to develop a graduate who meets the foundation knowledge and skills required by the American Dietetic Association.

Transfer students must have a GPA of 2.5 to be admitted to the Nutrition Program. To successfully complete the program, a student must maintain a GPA of 2.5 in major subjects. Students who receive a grade of D in a required NTR nutrition course must repeat the course and receive a grade of C or better. Upon completion of the B.S., an accredited Dietetic Internship (DI) is required before the student is eligible to sit for the Registered Dietitian (R.D.) examination.

B.S. in Nutrition

<i>College Core</i>	<i>Credits</i>
College 101 (not required for transfer students)	1
Laboratory Sciences (fulfilled by BIO 7, 8)	8
Language/Literature	6
History/Philosophy	9
Mathematics (fulfilled by MTH 3)	4
Political Science/Economics	6
Fine Arts	6
Social Sciences (fulfilled by PSY 1, 2)	6
College Competencies (Writing, Oral, Library, Computer)	6-9
Total	52-55

<i>Related Science and Statistics Requirements</i>	<i>Credits</i>
CHM 3, 4 Principles of Chemistry	8
CHM 25 Organic Chemistry	4
CHM 71 Biochemistry	4
CSC 6 Computer Literacy or BMS 40 Computer Applications	3
BMS 90 Microbiology in the Health Sciences	4
MTH 19 Basic Statistics or MTH 40 Biostatistics or ECO 72 Statistics	3
Total	26

<i>Nutrition Requirements</i>	<i>Credits</i>
NTR 16 Cultural and Social Aspects of Food	3
NTR 21 Introductory Food Science	3
NTR 21L Introductory Food Science Laboratory	1
NTR 23 Institutional Food Service Management I	3
NTR 24 Institutional Food Service Management II	3

NTR 100 Concepts in Nutrition	3
NTR 101 Contemporary Nutrition Strategies	3
NTR 200 Advanced Concepts in Nutrition	3
NTR 202 Research Methodologies	4
NTR 206 Nutrition Communication	3
NTR 210 Community & Professional Nutrition Issues	3
NTR 211 Medical Nutrition Therapy I	3
NTR 212 Medical Nutrition Therapy II	3
NTR 212L Medical Nutrition Therapy I	3
NTR 215 Energy & Exercise	1
NTR 221 Food Technology Trends	3
Total	45

Electives 7

Typical Program in Nutrition

<i>Freshman Year</i>	<i>Credits</i>
College 101	1
BIO 7, 8	8
PSY 1, 2	6
MTH 3	4
ENG 1, 2	6
*Core	6
Total	31

<i>Sophomore Year</i>	<i>Credits</i>
CHM 3, 4	8
NTR 23	3
CSC 6 or BMS 40	3
NTR 21, 21L	4
BMS 90	4
*Core	12
Total	34

<i>Junior Year</i>	<i>Credits</i>
NTR 100, 101	6
CHM 25, 71	8
NTR 16	3
NTR 24	3
NTR 211	3
MTH 19 or 40 or ECO 72	3
*Core	6
Total	32

<i>Senior Year</i>	<i>Credits</i>
NTR 212	3
NTR 212L	1
NTR 202	4
NTR 215	3
NTR 206	3
NTR 200	3
NTR 210	3
NTR 221	3
*Core	3
Elective	6
Total	32

*Refers to one of the following:
 Language/Literature 6 credits
 History/Philosophy 9 credits
 Fine Arts 6 credits
 Political Science/Economics 6 credits

Minimum Credits for the B.S. Degree 129

Accelerated B.S./M.S. Degree in Nutrition

The Department of Nutrition offers a combined B.S./M.S. degree program.

This program is particularly suitable for students who have a baccalaureate degree in another major and have chosen to continue their studies in the field of nutrition. Many students from other majors chose to become Registered Dietitians, and this goal can be met in the combined B.S./M.S. program. Applicants who have completed a baccalaureate degree with a GPA of at least 3.0 will be accepted to the program.

The accelerated B.S./M.S. program of 152 credits results in savings of 12 credits from the individual degree programs. Up to four graduate courses will be substituted for upper level undergraduate courses.

The Bachelor of Science program is accredited by the Commission on Dietetic Education (CADE) of the American Dietetic Association and is a science-oriented liberal arts foundation for understanding nutrition. Courses in the major include the study of food science, normal nutrition, nutrition during the life cycle, community nutrition, food service management, and medical nutrition therapy. The M.S. program provides the opportunity for advanced study in nutrition. Students can specialize in one of four areas: Clinical Nutrition, Nutrition and Exercise, Eating Disorders, or Geriatric Nutrition. A core includes nutrition science, communications/counseling, biostatistics, research methods, and a library research paper or a research study. Electives enable the student to pursue individual interests. Please see the Graduate Catalog for detailed course descriptions.

The American Dietetic Association requires that persons entering a Dietetic Internship have a baccalaureate degree. For those students who have a B.S. or B.A. degree, the academic requirements for application to the Dietetic Internship can be met during the B.S./M.S. program. The student will be issued an American Dietetic Association Verification Statement upon completion of appropriate coursework. A student may then apply to the Dietetic Internship. Upon completion of the Dietetic Internship, students are eligible to take the national examination to become a Registered Dietitian (RD). Graduate credits from the Dietetic Internship are applied to the B.S./M.S. degree.

Transcripts will be evaluated by the Academic Advisor to determine transfer credit. Applicants should complete an undergraduate application form. Current students at the C.W. Post Campus or transfer students should seek advice from the director of the graduate program when considering application to this program.

Nutrition Minor

This plan of study is intended for students majoring in an area where nutritional concerns are relevant to their major coursework. It provides a foundation for the integration of a student's major field of study with the science of nutrition. Completion of the minor does not qualify a student to become a Registered Dietitian. Students wishing to minor in Nutrition will complete a minimum of 15 credits in Nutrition. In addition, 8 credits of Biology and 8 credits of General Chemistry are required. Therefore, a total of 31 credits will be required for the minor.

<i>Required Nutrition Courses</i>	<i>Credits</i>
NTR 100 Concepts in Nutrition	3
NTR 101 Contemporary Nutrition Strategies	3
NTR 211 Medical Nutrition Therapy I	3
NTR 212 Medical Nutrition Therapy II	3

<i>Plus One Nutrition Elective</i>	<i>Credits</i>
NTR 16 Cultural and Social Aspects of Food	3
NTR 21 Introductory Food Science and NTR 21L Introductory Food Science Laboratory	4
Total	15 or 16

Nutrition Courses

Sections of NTR 101, 202 and 206 are offered in Writing Intensive format to fulfill requirements of the Writing Across the Curriculum Program; students must check with academic advisors and consult the schedule of classes for current course offerings.

NTR 10 Nutrition

In this course, students learn about the role of nutrition in improving health and applying these ideas to developing a healthy eating pattern. They will understand how food choices and physical activity contribute to total well-being. Open to Non-Majors only
 Fall, 3 credits

NTR 16 Cultural & Social Aspects of Food

This course examines the role of culture and society as determinants of food preferences and eating patterns. Particular attention is paid to the influences on the foodways of ethnic groups throughout the New York Metropolitan and Long Island areas. Emphasis is on developing sensitivity to different ethnic groups.
Special Fee, \$35
Fall, Spring, 3 credits

NTR 21 Introductory Food Science

A fundamental course about foods that concentrates on the chemical and physical properties affecting the handling, preparation and storage of food. Also includes the effect of microorganisms on the storage, preparation, preservation, processing and serving of food.
Co-requisite: CHM 3.
Fall, Spring, 3 credits

NTR 21L Introductory Food Science Laboratory

This laboratory course accompanies the lecture course NTR 21. Lab exercises are completed in which students prepare foods and observe the effect of chemical and physical properties on the product. Students gain experience in fundamental food preparation and critique foods using evaluation techniques.
Co-requisite: CHM 3.
Special Fee, \$45

Fall, Spring, 2 contact hours (1 credit)

NTR 23 Institutional Food Service Management I

The course is an introduction to the administrative aspects of food service institutions and covers the basic management principles required to operate a food service in any type of institution.
Spring, 3 credits

NTR 24 Institutional Food Service Management II

The principles of food service management including organizational design, leadership qualities, personnel management, financial considerations, and kitchen design are addressed. Field trips and guest speakers are included to acquaint the student with various types of food service facilities and management styles.
Prerequisite: NTR 23.
Fall, 3 credits

NTR 100 Concepts in Nutrition

An in-depth view of the six nutrients required for normal healthy metabolism. Emphasis is placed on nutrient interaction in digestion, absorption, transport, and metabolism.
Co-requisite: CHM 3, pre-requisite BIO 8.
Fall, 3 credits

NTR 101 Contemporary Nutrition Strategies

The selection of an adequate diet using knowledge of a variety of dietary standards. These standards as well as nutrient needs are incorporated into the planning of diets during the life cycle for pregnant women, infants, children, adolescents, the middle-aged and the elderly.
Prerequisite: NTR 100.
Spring, 3 credits

NTR 200 Advanced Concepts in Nutrition

An in-depth examination of human nutrition and metabolism with emphasis on the interrelationships of nutrients and metabolism based on the principles of biochemistry. Current research issues are discussed.
Prerequisites: NTR 101, CHM 71.
Spring & Summer, 3 credits

NTR 201 Practicum in Nutrition

Based on a student's individual interests, a field site and special project are selected for a 90 hour practical experience. A designated faculty member serves as a liaison between the field site and the student.
Prerequisites: NTR 24, 211.
Co-requisites: NTR 212.
Fall, 3 credits

NTR 202 Research Methodology

The introduction to the scientific method of problem solving; the identification of the research process in nutrition; development of the practical tools for the interpretation and application of research findings. A research proposal is completed.
Prerequisites: NTR 101, 211, MTH 19 or 40.
Fall & Spring, 4 credits

NTR 206 Nutrition Communication

This course is designed to provide the nutrition student with an overview of oral, written, and technical skills necessary for successful communication and education of patients, the public and allied health professionals. Skills in patient interviewing and counseling are introduced.
Prerequisite: NTR 211.
Fall, 3 credits

NTR 210 Community and Professional Nutrition Issues

A look at nutrition monitoring in the U.S. and the integral components necessary to develop effective programs and services to improve the nutrition and health for all segments of society. Needs assessment, legislation, public policy, pro-

gram development, monitoring and evaluation are addressed. Ethics of care are included. Professional development issues and credentialing are discussed.
Prerequisite: NTR 101.
Fall, 3 credits

NTR 211 Medical Nutrition Therapy I

This course is the first semester of a two semester sequence covering the pathophysiology and medical nutrition therapy for specific disorders and diseases. In this initial semester course, the cause, prevention and treatment of certain medical conditions such as liver disease, diabetes mellitus and cardiovascular disease are examined. Nutritional assessment techniques are introduced to evaluate dietary, biochemical and anthropometric changes that relate to nutrition and disease processes. Case problems and studies are incorporated into the course to develop clinical practice skills.
Prerequisite: NTR 100.
Co-requisite: NTR 101.
Fall, Spring, 3 credits

NTR 212 Medical Nutrition Therapy II

This course is the second part of a two semester sequence covering the pathophysiology and medical nutrition therapy for specific disorders and diseases. In this second semester course, the causes, prevention and treatment of certain medical conditions such as pulmonary disorders, renal disease, anemias and cancer are examined. Clinical skills related to interpreting laboratory values and to planning enteral/parenteral nutrition care are also addressed as well as documentation in the medical record and the nutrition care process. Case problems and studies are incorporated into the course to develop clinical practice skills.
Prerequisite: NTR 211.
Fall, Spring, 3 credits

NTR 212L Medical Nutrition Therapy Laboratory

Theory and concepts from Medical Nutrition Therapy (MNT) I and II are applied through a variety of methods such as nutrition assessment, care plans, chart notes, and case studies. Practical application of tools and techniques used for assessment and management of nutritional status will be covered.
Co-requisite: NTR 212.
Contact hours: 2 (1 credit)
Fall, Spring

NTR 215 Energy and Exercise

A discussion of energy needs and factors affecting energy requirements; development and treatment of obesity; characteristics and treatment of eating disorders; nutritional needs and recommendations during physical exercise.

Prerequisite: NTR 100.

Co-requisite: NTR 101.

Spring, 3 credits

NTR 221 Food Technology Trends

The course is an overview of food legislation, regulations and policies; issues related to food production and sustainability of the food supply; and a discussion of factors leading to the deterioration of food. Methods of food preservation including irradiation, canning, refrigeration, freezing, drying of foods and fermentation are described. Nutritional losses and nutrification of foods are discussed. Other topics of current interest such as biotechnology, phytochemicals, functional foods, alternative sweeteners, fat substitutes, and food packaging are included.

Prerequisites: NTR 21, CHEM 4.

Spring, 3 credits

RADIOLOGIC TECHNOLOGY PROGRAM

Phone: (516) 299-2743

Fax: (516) 299-3081

Faculty

James F. Joyce

*Director, Radiologic Technology Program
B.S., State University of New York,
Downstate Medical Center;
M.S., Long Island University;
Registered Radiologic Technologist
RT (R) (M) (QM) (ARRT)
jjoyce@liu.edu*

Suzanne McGuirk

*Clinical Instructor, Radiologic Technology
B.A., State University of New York at
Albany;
M.S., Long Island University;
Registered Radiologic Technologist
RT (R) (ARRT)
spizaro@liu.edu*

John T. O'Hare

*Instructor, Radiologic Technology Program
Diploma, Catholic Medical Center Program
of Radiography
B.A., M.S., Adelphi University
Registered Radiologic Technologist
john.ohare@liu.edu*

Kathi L. Yanatos

*Clinical Coordinator, Radiologic Technology
B.S., M.S., Long Island University;
Registered Radiologic Technologist
RT (R) (QM) (ARRT)
kyanatos@liu.edu*

Mission Statement

In congruence with the stated mission of the C.W. Post Campus, the Radiologic Technology Program is dedicated to providing a strong educational base of science and the liberal arts in combination with radiologic technology coursework. Students receive the core knowledge for entry into professional practice as well as tools for lifelong learning. Through the synthesis of clinical and didactic experiences, students develop clinical competence, conceptual understanding and critical thinking skills for effective problem solving.

We seek to prepare graduates who will have essential literacies, including written and oral communication skills, and to be clinically competent professionals able to provide quality care to the community and other groups of interest.

The Radiologic Technology Program provides instruction leading to the degree of Bachelor of Science in Radiologic Technology. The course of study is accredited by the New York State Department of Health Bureau of Radiologic Technology and the Joint Review Committee on Education in Radiologic Technology (JRCERT). Upon satisfactory completion of the program, students are eligible to take the American Registry of Radiologic Technologists primary examination in Radiography. Students who receive a grade above 75 on this national examination become registered with the ARRT and are eligible to apply for licensure to practice diagnostic radiography in New York State.

All new students and transfer students who wish to enter the Radiologic Technology Program will be classified as pre-radiologic technology students (RDT) and will register for courses in the Core Curriculum. Students enter the professional portion of the program in the Fall semester of their junior year.

Students desiring to enter the Radiologic Technology Program are advised to contact the program office beginning in the month of January prior to the fall semester in which they wish to enter.

The first step for admission into the Radiologic Technology program is admission to the C.W. Post Campus of Long

Island University. Once accepted, the student must then complete a formal application procedure for admission to the Radiologic Technology program. The application procedure includes a separate program application, letters of reference, a personal statement, and an interview with members of the Radiologic Technology Admissions Committee. During the admissions procedure, the program makes evident to the student that there are specific technical standards required for an individual to become a successfully practicing radiologic technologist. Students wishing to pursue entrance to the program should have completed approximately 64 academic credits with a cumulative GPA of 2.5.

The student will have an opportunity to pursue his or her professional education at the C.W. Post radiologic technology laboratory, which houses a complete diagnostic radiography unit and darkroom facilities.

The curriculum is enhanced with the use of an advanced-imaging workstation and laser-disk programs for computer assisted instruction in diagnostic radiography and cross-sectional imaging. Concurrently, the student will devote part of the academic year at an affiliated clinical health care facility, utilizing his or her medical imaging knowledge in the practical portion of the program.

The medical imaging facilities of the following institutions are utilized:

- Franklin Hospital Medical Center, Valley Stream, NY
- Long Island Jewish Medical Center, New Hyde Park, NY
- New-Island Hospital, Bethpage, NY
- Nassau University Medical Center, East Meadow, NY
- Southside Hospital, Bayshore, NY
- Zwanger Pesiri Lindenhurst, NY

The professional portion of the Radiologic Technology program must be completed on a full-time basis. The student will be required to register for courses during six academic semesters. The program begins in the Fall of the Junior year and continues full-time through the Summer following the Senior year.

Clinical rotations and didactic course work are completed during both summer semesters on a full-time basis. Students must maintain a GPA of 2.5 in a major. A student whose index falls below this requirement may be placed on academic probation and is subject to dismissal at the discretion of the program faculty. The schedule of a student placed on academic probation may be restricted until the student's major GPA has risen above

the minimum requirement. Students are advised that this may severely delay graduation. Students must complete the degree requirements within five years of the start of the Radiologic Technology sequence.

JRCERT approved hospital school graduates may be admitted to the program by applying for admission to the C.W. Post Campus of Long Island University and the Radiologic Technology program. A maximum of 50 Life Experience Credits may be granted depending upon the hospital school transcript and the extent of competency based clinical experience achieved. The Radiologic Technology 50 credits will be evaluated after a matriculated student completes 6 earned credits on campus and makes formal application to the coordinator of life experience. The student must also complete a diagnostic radiography assessment examination through the Radiologic Technology program before life experience credits are granted. The Life Experience student must have acquired a New York State license to practice radiography and have satisfactorily passed the American Registry of Radiologic Technologists (ARRT) examination in Radiography. A copy of the New York State license and ARRT certificate must be submitted to the director of the Radiologic Technology program.

Graduates of JRCERT approved two year college-based programs in Radiologic Technology may also be admitted to the bachelor of science program.

The student must be registered with the ARRT and licensed to practice in New York State. A maximum of 72 transfer credits may be granted with the approval of the Academic Standing Committee and the Evaluation Committee.

Two-year hospital or college-based radiography program graduates must complete 9 credits of Radiologic Technology courses at the C.W. Post Campus.

All students must complete the graded final 32 credits of their degree in residence at the C.W. Post Campus. Students in the Radiologic Technology program will complete the Professional Plan of Study. The student will have the opportunity to select between two areas of concentration: Plan A or Plan B.

The Professional Plan A provides a strong foundation for students who wish to pursue additional education in graduate or professional schools. It is science-based and consists of 24 credits in basic sciences and mathematics.

The Professional Plan B provides the

opportunity to combine radiologic technology with magnetic resonance imaging or 16 credits of courses of interest to the student. This program of study is particularly appropriate for the professional whose goals include positions as health-care administrators and/or educators in radiologic technology or MRI Technologists.

B.S. in Radiologic Technology

Core Curriculum	Credits
Competencies	6
College 101 (not required for transfer students)	1
Language/Literature	6
History/Philosophy	9
Mathematics (see Co-related Sciences)	4
Political Science/Economics	6
Social Science	6
Laboratory Sciences (BIO 7, 8)	8
Fine Arts	6

Professional Plan A Co-related Sciences	Credits
CHM 3, 4	8
MTH 7, 8 (satisfies the Core Curriculum)	8
PHY 3, 4	8
BIO 9, 10	6

Professional Plan B Co-related Sciences	Credits
BIO 9, 10	6
MTH 1, 3 or 7 (satisfies the Core Curriculum)	4
BMS 40 Computer Applications in Health Care or an entry level computer course or An entry level computer course	3
Electives	10

Radiologic Technology Requirements	Credits
RDT 103 Methods of Patient Care 103L Venipuncture/Patient Care Lab	3 0
RDT 105 Principles of Radiation Protection (WAC)	3
RDT 116 Radiographic Pathology (WAC)	3
RDT 118 Breast Imaging	1
RDT 120 Medical Language	3
RDT 121 Quality Assurance and Quality Control	1
RDT 123 Pharmacology	1
RDT 125 Radiation Physics	3
RDT 144 Computed Tomography	3
RDT 145 Magnetic Resonance Imaging	3
RDT 147 Principles of Medical Imaging I	3

RDT 147L Calculation Recitation (Pass/Fail)	0
RDT 148 Principles of Medical Imaging II	3
RDT 150 Advanced Theory & Practice in Medical Imaging	3
RDT 155, Medical Imaging Procedures I,	3
RDT 155L Medical Imaging Procedures I Lab	0
RDT 156 Medical Imaging Procedures II (WAC)	3
RDT 156L Medical Imaging Procedures II Lab	0
RDT 157 Medical Imaging Procedures III	3
RDT 157L Medical Imaging Procedures III Lab	0
RDT 170 Medical Imaging Capstone Seminar	3
RDT 180 Digital Medical Imaging	3
RDT 200 Introduction to Clinical Practice (Pass/Fail)	2
RDT 201 Medical Imaging Practicum I	2
RDT 202 Medical Imaging Practicum II	2
RDT 203 Medical Imaging Practicum III	2
RDT 204 Medical Imaging Practicum IV	2

All Grades Must be C or Higher (C minus is NOT Acceptable)

A minimum of 129 credits is required for a B.S. Degree in Radiologic Technology.

Typical Program in Radiologic Technology

Professional Plan A Freshman Year	Credits
College 101	1
BIO 7, 8	8
MTH 7, 8	8
PHY 3, 4	8
Competencies	6
Core	12
Total	37
Sophomore Year	Credits
CHM 3, 4	8
Core	27
Total	35
Junior Year	Credits
RDT 103, 103L, 105, 116, 118, 120, 125, 147, 147L 148, 155, 155L	32
RDT 202 (Summer)	2
Total	34

Senior Year	Credits
BIO 9, 10	6
RDT 121, 123, 144, 145, 150, 157, 157L, 170, 180, 203, 204	24
Total	30

Total Credits 136

Professional Plan B

Freshman Year	Credits
College 101	1
BMS 40	3
Competencies	6
Electives	4
Core	18
Total	32

Sophomore Year	Credits
BIO 7, 8	8
MTH 3	4
Electives	3
Core	15
Total	30

Junior Year	Credits
RDT 103, 103L, 105, 116, 118, 120, 125, 147,147L, 148, 155, 155L, 156, 156L, 200, 201	32
RDT 202 (Summer)	2
Total	34

Senior Year	Credits
BIO 9,10	6
Electives	3
RDT 121, 123, 144, 145 150, 157 157L, 170,180, 203, 204	24
Total Credits	129

A minimum of 129 credits is required for a B.S. Degree in Radiologic Technology.

IMPORTANT NOTICE: *The student must consult with the academic advisor to assure that the liberal arts component and writing requirement of the degree have been satisfied. The student is responsible for the degree requirements in the semester he/she has matriculated. Please refer to the Undergraduate Bulletin. All RDT 200 classes require that the student maintain continuous health insurance coverage and may be subject to background/drug screening.*

Radiologic Technology Courses

Sections of RDT 105, RDT 116 and RDT 156 are often offered in Writing Intensive format to fulfill requirements of the Writing Across the Curriculum (WAC) Program; students must check with academic advisors and consult the schedule of classes for current course offerings.



RDT 103 Methods of Patient Care

Designed to provide the basic concepts of the physical and emotional needs of the patient. Describes routine and emergency procedures, insertion and maintenance of an intravenous line. As well as infection control utilizing universal precautions and recognition and treatment of reactions to contrast media. Educate student in obtaining vital signs and contrast media injection. Identifies the importance of patient education. Includes medical ethics, law and cultural differences.

Co-requisite: RDT 103L.

Fall, 3 credits

RDT 103L Venipuncture/Patient Care Lab

Co-requisite: RDT 103

Fall, 0 credits

RDT 105 Principles of Radiation Protection

Provides knowledge of radiation protection and radiation biology as related to the legal and ethical responsibilities of the radiographer. Reviews Regulatory Agencies and their requirements. Identifies biological effect and response to radiation on patients, personnel, and the public.

Writing Across the Curriculum course (WAC)

Fall, 3 credits

RDT 116 Radiographic Pathology

An overview of acute, chronic and congenital pathology. Discussion on how pathology and disease relate to medical imaging procedures. Includes systemic

classification, diagnosis and treatment of diseases.

Writing Across the Curriculum course (WAC)

Spring, 3 credits

RDT 118 Breast Imaging

Provides the knowledge and cognitive skills required to perform in the specialized area of mammography/breast imaging. Discussion includes positioning, special techniques, anatomy, physiology and pathology of the breast.

Spring, 1 credit

RDT 120 Medical Terminology

An introduction to the origins of medical terminology, including word building, abbreviations and symbols. Orientation to the understanding of medical orders and interpretation of diagnostic reports related to the respiratory, digestive and musculoskeletal systems. Cardiovascular, lymphatic, urinary, reproductive, integumentary, sensory, nervous and endocrine systems.

Fall, 3 credits

RDT 121 Quality Assurance and Quality Control

Concepts and benefits of quality assurance and control programs. Introduction to the evaluation of radiographic systems to assure consistency in the production of quality images. Identifies components, tests, procedures and the agencies involved in regulating, inspecting and enforcing guidelines.

Prerequisite: RDT 148.

Fall, 1 credit

**RDT 123 Pharmacology**

An introduction to basic pharmacology. Common drug nomenclature and basic concepts of pharmacology will be presented. Biological factors affecting actions of drugs will be discussed. Contrast media characteristics, allergic reactions and side-effects will be covered.
Prerequisite RDT 103.
Spring, 1 credit

RDT 125 Radiation Physics

An in-depth view of the characteristics and physical laws which apply to radiation. Topics explored include principles governing radiation production, detection and containment. Fundamentals of the circuitry which comprise medical imaging units will also be presented.
Prerequisite RDT 10.5
Spring, 3 credits

RDT 259 Clinical Experience Practicum X

Students, under supervision, continue their clinical experience in advanced diagnostic imaging procedures. Every Semester 1, 2, or 3 credits

RDT 144 Computed Tomography

An in-depth study of the physical principles and practical application of Computerized Axial Tomography. A presentation of protocol, positioning and the elements of room design and construction.
Co-requisite: BIO 9 or BIO 10.
Fall, 3 credits

RDT 145 Magnetic Resonance Imaging

Presentation of the physical principles utilized in Magnetic Resonance Imaging. Discussion of the technical and economic factors of this advanced imaging procedure. Patient protocol will also be incorporated into the course format.
Co-requisite: BIO 9 or BIO 10.
Spring, 3 credits

RDT 147 Principles of Medical Imaging I

Provides an introduction to the factors that govern and influence the production of a medical image on radiographic film. The principles of medical imaging to be discussed include: latent image, factors governing image quality, beam limiting devices, beam filtration, film holders, screens and technique formation. Darkroom processing and Article 35 of the New York State Public Health Law relating to medical imaging will also be covered.
Co-requisite: RDT 147L.
Special Fee: \$70.00
Fall, 3 credits

RDT 147L Principles of Medical Imaging I Laboratory

Co-requisite: RDT 147.
Fall, 0 credits

RDT 148 Principles of Medical Imaging II

An in-depth study of medical imaging exposure factors. Laboratory materials will be utilized to demonstrate the clinical applications of the theoretical principles and concepts. Problems encountered during the imaging of infants and children will also be addressed. Special emphasis will be placed on radiation protection, equipment, accessories and special positions utilized when imaging infants and children.
Prerequisite: RDT 147.
Special Fee: \$70.00
Spring, 3 credits

RDT 150 Advanced Theory and Practice in Medical Imaging

An in-depth study of special radiographic procedures. Special procedure equipment such as serial film changers and automatic pressure injectors will be introduced. Image detecting methodologies such as subtraction, magnification and tomography will be discussed.
Prerequisite: RDT 157.
Spring, 3 credits

RDT 155 Medical Imaging Procedures I

Designed to provide the knowledge and skills necessary to perform standard medical imaging procedures of the chest, abdomen, upper and lower extremities. The production of images of optimal diagnostic quality will be stressed. Laboratory experience utilizing a phantom patient will be used to complement the classroom portion of the course. The student will produce a portfolio of medical images.

Co-requisite: BIO 7, RDT 155L.

Lab Fee: \$70.00

Fall, 3 credits

RDT 155L Medical Imaging Procedures I Laboratory

Co-requisite: RDT 155.

Fall, 0 credits

RDT 156 Medical Imaging Procedures II

A continuation of medical imaging procedures with an emphasis on standard imaging of the vertebral column and the breast. The student will also be introduced to more advanced studies which involve the use of contrast material. Laboratory experience using a phantom patient will allow the student to apply the concepts acquired in the classroom environment.

Writing Across the Curriculum course (WAC)

Prerequisite: RDT 155, Co-requisite: BIO 8, RDT 156L.

Lab Fee: \$70.00

Spring, 3 credits

RDT 156L Medical Imaging Procedures II Laboratory

Writing Across the Curriculum course (WAC)

Co-requisite: RDT 156.

Spring, 3 credits

RDT 157 Medical Imaging Procedures III

This course serves to focus on the more advanced positions utilized in the practice of medical imaging. The student is introduced to medical imaging procedures of the skull. Practical laboratory experience will complement the information presented in the didactic portion of the course, allowing the student to demonstrate the ability on the phantom patient.

Prerequisite: RDT 156, Co-requisite: BIO 16, RDT 157L.

Lab Fee: \$70.00

Fall, 3 credits



RDT 157L Medical Imaging Procedures III Laboratory

Co-requisite: RDT 157.

Fall, 0 credits

RDT 170 Medical Imaging Capstone Seminar

This seminar provides the student with an opportunity to review the fundamental and advanced principles of medical imaging. The application of clinical imaging theory will be reinforced.

Spring, 3 credits

RDT 180 Digital Medical Imaging

During this course, the student will be introduced to the components, principles and operation of the Picture Archiving and Communications System (PACS), Digital Imaging including; Digital Radiography (DR), Computed Radiography (CR), Hospital Information Systems (HIS) and Radiology Information Systems (RIS).

Prerequisites: RDT 147 and 148 and 125.

Co-requisite: RDT 144.

Fall, 3 credits

RDT 200 Introduction to Clinical Practice

During this practicum, the student begins to increase proficiency and skills through demonstration of core competencies. The student will become familiarized with the clinical setting. The student has the opportunity to apply

theories and knowledge acquired in the classroom and laboratory in a clinical setting. The student also assumes a more active role in performing procedures.

Fall, 2 credits

RDT 201 Medical Imaging Practicum I

An introduction to the clinical environment at an affiliated hospital. Students will be assigned to various work areas in the Department of Radiology to observe operations of the entire department. Students will assist in routine imaging and under close supervision of a registered licensed technologist, begin to acquire medical imaging skills with the emphasis on chest, abdomen, and extremities.

Prerequisites: RDT 103, 105.

Spring, 2 credits

RDT 202 Medical Imaging Practicum II

Students continue to improve their medical imaging skills in the areas of chest, abdomen, and extremities under the quality control of a registered licensed technologist. Students are introduced to principles of medical imaging of the vertebral column and procedures which involve the use of contrast material. (Ends the Last Friday in July)

Prerequisite: RDT 201.

Summer 1, 2 credits

RDT 203 Medical Imaging Practicum III

A continuation of the two previous practica where students continue to improve skills in all routine and contrast medical imaging procedures under the supervision of a registered licensed technologist. The student will be introduced to more advanced projections as well as principles of skull imaging.

Prerequisite: RDT 202.

Fall, 2 credits

RDT 204 Medical Imaging Practicum IV

An opportunity for the student to improve skills in the areas of general, contrast, advanced and skull imaging at the assigned medical center under close supervision. An introduction to specialty areas such as Computed Tomography, Magnetic Resonance Imaging and Advanced Special and Angiographic Imaging. (Ends Last Friday in June)

Prerequisite: RDT 203.

Special Fee: \$55.00

Spring, 2 credits

PRE-PROFESSIONAL PROGRAMS

Phone: (516) 299-2485

Pre-Pharmacy Program

The Pre-Pharmacy Program is designed to prepare qualified students to enter the Arnold & Marie Schwartz College of Pharmacy and Health Sciences at Long Island University's Brooklyn Campus.

Successful completion of two years of pre-professional study (P-1 and P-2) in the basic sciences, mathematics and humanities provides the foundation for admission to the professional pharmacy curriculum. The professional program is very competitive and offers no guarantee of admission. Selection is based on several factors that include, but are not limited to grade point average; test scores; personal statement; letters of recommendation; and interview. Only those P-1 or P-2 students who meet the following progression requirements will be eligible to apply to the first professional year of study (P-3) at the College of Pharmacy at Long Island University's Brooklyn Campus:

1. Satisfactory completion of all P-1 and P-2 course requirements.
2. An overall cumulative grade point average of at least 3.0 ("B").
3. A cumulative grade point average of at least 3.0 ("B") in all required P-1 and P-2 math and science courses.
4. Completion of the PCAT.
5. Submission of a PharmCAS application.

To be accepted as a Pre- Pharmacy major, an incoming freshman must have an SAT score of at least 1,000 and a high school average of 80 or, if below 1,000 on the SATs, then an average of 85. Students not accepted into the Pharmacy Program at the Brooklyn Campus may continue at C.W. Post Campus as Biomedical Sciences, Health Information Management, Radiologic Technology, Biology, Chemistry or Physics majors (or other appropriate fields).

Pre-Pharmacy Requirements for C.W. Post

<i>Freshman Year</i>	<i>Credits</i>
<i>Course</i>	
College 101 (not required for transfer students)	1
BIO 3, 4	8
CHM3*, 4	8
ECO 11 or 12**	3
ENG 1, 2	6
MTH 7	4
Oral Communications 17	3
Total	33

<i>Sophomore Year</i>	<i>Credits</i>
<i>Course</i>	
BIO 7, 8 (Anatomy & Physiology)	8
CHM 21, 22	8
ENG 7, 8	6
HIS 1, 2 ***	6
PHL***	6
PSY 1	3
PHY 3	4
Total	35

**Mathematics 3 is a pre-requisite for Chemistry 3.*

***Students may take either Economics 11 or 12.*

****Students must take both History 1 and History 2 or any two courses from Philosophy 8 through 37. The following philosophy courses are particularly recommended for students in the pre-pharmacy program: PHL 8, PHL 10, PHL 13, PHL14, PHL 18, PHL 19.*

PROFESSIONAL PHARMACY PROGRAM

The professional Pharmacy Program leads to a Doctor of Pharmacy (Pharm. D.) degree and may be completed in six years: two years at C.W. Post; four years at Long Island University's Brooklyn Campus. The Arnold & Marie Schwartz College of Pharmacy and Health Sciences accepts approximately 200 students each year to the third year (first professional year) of the Doctor of Pharmacy (Pharm.D.) Program.

Admission to the professional program is very competitive and is based on several factors that include, but are not limited to grade point average; test scores; personal statement; letters of recommendation; interview; and the individual candidate's commitment to the profession of pharmacy. Students seeking to apply to the professional (year 3) program at the Arnold & Marie Schwartz College of Pharmacy and Health Sciences are required to apply through the Pharmacy College Admission Service (PharmCAS) for consideration. All required documentation is to be submitted directly to PharmCAS for processing.

Application Requirements

1. Pharmacy College Application Service (PharmCAS)

- PharmCAS is an electronic application service operated by the American Association of Colleges of Pharmacy (AACP). All professional (year 3) applications, should be processed through this service. There is a separate non-negotiable fee required. To complete the application and receive further information please visit their web site at www.pharmcas.org. (This replaces the previously used progression applications.)

2. Transcripts

- Submit official transcripts from every college or university previously attended, INCLUDING LONG ISLAND UNIVERSITY, directly to PharmCAS. A minimum cumulative GPA of 3.0 with a 3.0 science and math GPA is required for consideration. Before entry into the Pharm.D. program, in addition to other requirements, satisfactory completion of all pre-professional coursework is required by the end of Summer prior to

the year of entry. You must also provide a list of current coursework in progress and future courses expected to be completed by the entry date.

*Students with credentials from abroad should submit evaluations and translations for university work, also sent directly to PharmCAS. Please refer to Office of Admissions website or the Pharmacy Guidelines Booklet for 2008 to obtain the list of acceptable agencies. Even if you have previously submitted foreign credentials to Long Island University you must resubmit them through PharmCAS.

3. Personal Statement

Part of the PharmCAS application is a personal essay, approximately one page in length, addressing why you selected Pharmacy as a career and how the Doctor of Pharmacy degree relates to your immediate and long-term professional goals. You should explain why you want to be a pharmacist, and support this information with autobiographical details including pharmacy, health care, work or volunteer experiences, related extracurricular activities, leadership roles, or any other important information.

4. Pharmacy College Admission Test (PCAT)

The PCAT is required for all students, including Long Island University students, who wish to apply for the professional phase of the Pharm.D. program. This test measures the student's knowledge in Verbal Ability, Reading Comprehension, Quantitative Ability, Chemistry, Biology and Writing. Scores must be submitted directly to PharmCAS. (In order to submit scores directly to PharmCAS choose the PharmCAS three digit school code 104 when making application for the PCAT.) Pre-registration for the PCAT is required. Please find the available testing dates and sites listed on their website at www.PCATweb.info. PCAT scores should not be older than 3 years.

5. Letters of Recommendation

Two letters of recommendation are required. These letters can be from an employer, professor, supervisors of a community service project, etc.; however they may not come from a family member, teaching assistant, co-worker or friend. You will need to designate your evaluators as part of your PharmCAS application. Electronic submission of letters of reference is preferred but paper references are accepted. Paper references must be accompanied by the printed PharmCAS evaluation form available on the PharmCAS web site.

6. Interviews

Personal interviews will be required for selected candidates only. Notification to interviewees will be posted to the individual PharmCAS accounts. Applicants will also receive a letter by mail.

7. Additional Information

The College of Pharmacy and Health Sciences requires criminal background checks and drug screening for applicants invited to interview. Information on completing this requirement will be supplied at the time selected applicants are invited for an interview.

Information regarding pre-requisite courses and complete program information is available in the Pharmacy Bulletin. The Brooklyn Campus Undergraduate Bulletin contains course descriptions of pre-requisite courses. The Pharmacy Guidelines Booklet for 2008, although primarily intended for external applicants, contains information that applicants from Long Island University may also find useful. For your convenience each of these documents is available on the Brooklyn Campus website, at www.brooklyn.liu.edu in the Office of Admissions section.

Pre-Respiratory Care Program

The Pre-Respiratory Care Program (formerly Respiratory Therapy program) leads to a Bachelor of Science degree in Respiratory Care and can be completed in four years: two years at C.W. Post and two years at Long Island University's Brooklyn Campus that is within walking distance of the LIRR station in Brooklyn. Qualified students will be admitted into the Respiratory Care major. Admission is competitive (GPA 2.50 and C+ grades or higher in Math and Science courses) and students should apply by contacting the program at the Brooklyn Campus. For more information use www.liu.edu then Brooklyn Campus/School of Health Professions. For additional professional information, one should use www.aarc.org for the American Association for Respiratory Care.

Students not accepted into the specialty of Respiratory Care may continue at C.W. Post as Biology, Chemistry, Medical Biology, Health Information Administration, Radiologic Technology or Physics majors (or other appropriate fields).

Students who are Registered Respiratory Therapists (R.R.T.) by the National Board for Respiratory Care (NBRC) are exempt from clinical experience and may receive up to 21 credits for

life experience. Those students who are Certified Respiratory Therapists (CRT) by the NBRC may be exempted from some courses depending upon evaluation of their transcripts. Students transferring from Respiratory Care programs at another college or university may receive transfer credit for courses. Students are required to be resident in the major by taking 15 credits in Respiratory Care and at least 32 credits at the Brooklyn Campus.

Required Curriculum in Respiratory Care at C.W. Post

	Credits
College 101 (not required for transfer students)	1
CHM 3, 4 (1 semester is required, 2 semesters are recommended)	4
BIO 3, 4	8
BIO 7, 8	8
ENG 1, 2	6
English Literature 11,12	6
HIS 1, 2	6
MTH 3,19	7
Medical Microbiology BMS 90	4
Oral Communication	3
PHL 8,13	6
PSY	3
PHY11	4
Social Sciences	3
Total	69

Required Curriculum in Respiratory Care at Brooklyn Campus

	Credits
Cardiopulmonary Physiology	3
Clinical Application of Acid-Base Balance	2
Pulmonary Function	2
Clinical Experience I	2
Theory & Practice of Respiratory Care I	5
Evaluation & Management of Injuries and Emergencies	2
Cardiopulmonary Pathology	3
Cardiopulmonary Medical Science	3
Clinical Experience II	3
Theory & Practice of Respiratory Care II	5
Cardiopulmonary Pharmacology	3
Selected Topics in Internal Medicine	3
Rehabilitation Techniques in Respiratory Care	3
Neonatal & Pediatric Respiratory Care	3
Clinical Experience III	8
Cardiopulmonary Physiology II – Intensive Respiratory Care	3
Clinical Experience IV	8
Problems in Respiratory Care	4
Total	65