School of Health Technology and Management

DEAN: Craig A. Lehmann
ASSOCIATE DEAN: Deborah T. Firestone
ASSOCIATE DEAN FOR GRADUATE STUDIES: Richard W. Johnson
ASSISTANT DEANS: Emeran Kha, Karen Jokow
OFFICE: HSC Level 2, Room 400  PHONE: (631) 444-2250
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Amercian demographically, economics and technological advances in diagnostics, treatment and therapy have combined to create an environment where patients are diagnosed earlier, are more likely to survive disease or trauma, live longer, participate in ambulatory-based treatment, and are asked to take a more participatory role in their own health care.

As advances in science and information technology collide with a new consumerism and cry for reform of systematic health care processes, educators find themselves in the midst of transition as we move from one health care model to another. To serve the new health care needs modeled evolos, you can be assured that the School of Health Technology and Management will provide its graduates with the necessary skills to practice their profession.

Presently the School offers baccalaureate, master’s and doctoral degrees in clinical and non-clinical areas that include athletic training, clinical laboratory sciences, cytotechnology, health care policy and management, health science, occupational therapy, physician assistant, physical therapy, and respiratory care. These programs are full-time and full-time bases for the equivalent of part-time practice. Successful applicants may meet minimum admission requirements, but might not be offered an interview or admission since places are limited by available space.

Professional Program Admission

Students seeking admission to the athletic training, clinical laboratory sciences, cytotechnology, occupational therapy, physical therapy, physician assistant and respiratory care programs in the school, either from the College of Arts and Sciences at Stony Brook or from other institutions, must be specifically accepted to the school and to the program they have selected.

Stony Brook students may declare a minor in adapted aquatic or a major in Health Sciences, which has been a Bachelor of Science degree. Health Science majors will spend three years on west campus taking liberal arts, science and health-related courses and will fulfill all D.E.C. requirements. The senior year will be spent enrolled in classes in the Health Sciences.

Admission Requirements

Candidates for admission to full-time upper-division study in athletic training, clinical laboratory sciences, cytotechnology, occupational therapy, and respiratory care must have a minimum cumulative average of 2.5 and must have 57 semester hours of credit. In addition, all entry-level clinical programs require the completion of 3 credits in English composition, 6 credits in social and behavioral sciences, 6 credits in arts and humanities and 6 to 8 credits in natural science. (Refer to “Requirements for the Bachelor’s Degree” at the beginning of this Bulletin for other requirements.) Candidates for admission to the Physical Therapy and Physician Assistant programs must complete a baccalaureate degree prior to admission. Preference is given to applicants to Physical Therapy and Physician Assistant programs with a grade point average (GPA) of 3.0 or higher. Transfer credit is given for course work completed with grades of C or higher.

The individual programs have additional requirements. Please check the admission requirements for each specific program to which admission is sought. Refer to “Health Sciences Admissions” at the beginning of this Bulletin for application information. Information for professional programs is available upon request. Individual programs also list additional requirements.

Selection Factors and Procedures

Programs within the school base selection of students on sever- al factors. Experience in the particular field or in the health care system, evidence of ability to succeed academically and demonstrated concern for human beings are considered as primary selection factors. These factors are judged by letters of recommendation, personal interviews, and transcripts, and by personal statements from the applicants.

Admission to the school is determined by the school’s Admissions Committee, which is composed of a representa- tive from each department. The Admissions Committee of each program reviews the candidates’ transcripts, records and application forms, conducts interviews and makes recommen- dations to the school’s Admissions Committee. Offers of admission are made to candidates who meet the minimum admission requirements. Although applicants may meet minimum admission requirements, they might not be offered an interview or admission since places are limited by available space.

Recommended Freshman and Sophomore Curricula

The general policy of the school is to avoid, to the greatest extent possible, specific prerequisite course requirements. The purpose of this policy is to permit flexibility in evaluating the records of candidates for admission. Emphasis is placed upon the extent to which the student is prepared through training and experience to pursue the program. It is recommended that students interested in a career in the health professions choose a sufficient number of courses in the physical and natural sciences to develop a broad understand- ing of those fields of study. At least one course in English composition, as well as a spectrum of courses in the humani- ties and social and behavioral sciences, is required.

In the case of rigid accreditation criteria, the school has special prerequisites for the program in which they are interested for special requirements. These are listed as “Admission Requirements” in the catalog. This section includes the heading for the specific program in the following pages.

Faculty members of the school are available to serve as advisors for the school; for assistance in choosing a career; for other undergraduate health science majors interested in applying to the school. The school requires that students enrolled in the Health Sciences program complete a minimum of 12 credits in English composition, 6 credits in social and behavioral sciences, 6 credits in arts and humanities, and 6 to 8 credits in natural science. (Refer to the “Requirements for the Bachelor’s Degree” at the beginning of this Bulletin for other requirements.)

The individual programs have additional requirements. Please check the admission requirements for each specific program to which admission is sought. Refer to “Health Sciences Admissions” at the beginning of this Bulletin for application information. Information for professional programs is available upon request. Individual programs also list additional requirements.

Health Care Policy and Management Program Admission

The Master’s Program in Health Care Policy and Management is offered under both full-time and part-time basis, with the summer term included. Students accepted are required to complete a minimum of 36 credits. The general policy of the school is to avoid, to the greatest extent possible, specific prerequisite course requirements. The purpose of this policy is to permit flexibility in evaluating the records of candidates for admission. Emphasis is placed upon the extent to which the student is prepared through training and experience to pursue the program. It is recommended that students interested in a career in the health professions have a sufficient number of courses in the physical and natural sciences to develop a broad understand- ing of those fields of study. At least one course in English composition, as well as a spectrum of courses in the humani- ties and social and behavioral sciences, is required.

Insurance

Students admitted to the school are required to purchase li- ability insurance prior to participation in clinical assignments. (Costa vary by program and can range from $15-$65 per year.) This includes liability, as well as medical and hospital insurance before beginning clinical rotations. It is the individ- ual student’s responsibility to arrange appropriate coverage.

Financial Aid

Financial aid, part-time employment, etc., is available in lim- ited amounts. Students may qualify for some of the general support programs administered by the Health Sciences Office of Student Services. For advice and detailed information, con- tact the Health Sciences Office of Student Services, (See the “Financial Assistance” section of this Bulletin.)

Academic Standing

The School of Health Technology and Management recognizes the necessity for knowledge, as well as superior behavioral, ethical and clinical standards. Students are evaluated on their knowledge, personal competences and skills, adherence to professional codes of ethics, sensitivity to patient needs, ability to work with and relate to peers and other members of the health care team, attitude, attendance, punctuality and pro-
fessional appearance. These standards foster the health care team concept and have been established to protect the rights of the patients and communities served by the Health Sciences Center. Failure to demonstrate these important qualities will be reflected in a student’s grade.

Undergraduate students must maintain an overall grade point average of 2.0 and a 2.5 minimum average in required professional courses to remain in good standing. Any student who earns a grade below 2.0 overall or 2.5 in professional courses will be placed on probation for the following term and terminated if his/her average does not attain those levels at the end of the probationary period. Graduate students must maintain an overall grade point average of 3.0 to remain in good standing. Normally, a student on probation will not be permitted to participate in the required periods of full-time clinical practice. Specific programs may have additional academic criteria or requirements. Refer to individual programs for details.

Grading Policy
The School of Health Technology and Management follows the grading policies stated in the front of this Bulletin with the exceptions that 1) the P/N/C, R, and S/U grades are not used; 2) SF/F may be used in specifically designated courses where final grading distinctions at the professional level are not appropriable; and 3) D grades may be given to graduate students in graduate level courses for which enrollment is determined by the grade point average, but no credit is granted toward the Master of Science or Doctor of Physical Therapy degrees.

Dean’s List
A Dean’s List of superior undergraduate students is compiled at the end of the fourth and eighth modules of each academic year. To be eligible for the Health Technology and Management Dean’s List, students must be matriculated full-time in a baccalaureate program of the school and have a minimum grade point average of 3.80 (seniors) or 3.65 (juniors).

Academic Dishonesty
Academic dishonesty shall be expulsion from the school, unless the dean and the chair of the department in which the accused is a student concur with a Committee on Academic Standing recommendation for a modified penalty.

Appeals
Students may appeal probation or termination by requesting reconsideration of this decision by the dean.

All other academic regulations in effect at Stony Brook University and the Health Sciences Center ordinarily apply to students of this school. Consult the “Academic Regulations and Procedures” at the beginning of this Bulletin for further information.

Academic Calendar
The School of Health Technology and Management is one of the few schools within the university that is faced with the need to meet concurrent academic and professional requirements. These mandates, joint with the geographic challenges incurred in obtaining suitable clinical experience in the Long Island area, make it impossible to adhere to the usual academic calendar. In order to meet these professional needs, a special academic calendar has been developed. This calendar provides for modules of five weeks in length; courses consist of one, two, three or more modules as determined by the academic faculty. (See the “Academic Calendar” section of this Bulletin and related publications.)

Core Curricula
In addition to the specific professional program required for qualification in their fields, all students registered for the undergraduate programs in clinical laboratory sciences, cytotechnology, occupational therapy, and respiratory care will take one or more of the following core courses and may be required to take other credits within the School of Health Technology and Management:

Core Courses

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<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>HAS 900</td>
<td>Issues in Health Care</td>
<td>2</td>
</tr>
<tr>
<td>HAS 935</td>
<td>Medical Ethics</td>
<td>1</td>
</tr>
<tr>
<td>HAS 990</td>
<td>Introduction to Statistics</td>
<td>2</td>
</tr>
<tr>
<td>HBP 310</td>
<td>Pathology</td>
<td>3</td>
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</tbody>
</table>

Programs may require some courses from the following list in addition to the core, basic science and professional courses.

Other Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>HAS 322</td>
<td>Management Concepts for Health Professionals</td>
<td>1</td>
</tr>
<tr>
<td>HAS 351</td>
<td>Research Literature and Research Design</td>
<td>1</td>
</tr>
<tr>
<td>HAS 363</td>
<td>Computer Literacy for Health Professionals</td>
<td>1</td>
</tr>
<tr>
<td>HAS 490</td>
<td>Research Tutorial</td>
<td>2</td>
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</tbody>
</table>

Clinical Resources
Clinical instruction takes place at more than 215 clinical affiliates of the Health Sciences Center, in addition to University Hospital. Other sections of this Bulletin describe University Hospital and key affiliates which now exceed 2,400 beds. Each program director, in consultation with the dean, negotiates affiliation arrangements for the use of those clinical facilities that will provide the best possible range and quality of instruction for students. Therefore, not all programs necessarily use the same student hospital. Each program director can provide, upon request, information about current arrangements for clinical instruction for his/her student group.

Each student is personally responsible for arranging transportation to and from clinical assignments.

Graduation and Degree Requirements
Undergraduate Degree (B.S.)
Candidates must have earned a minimum of 120 semester hours of credit (including credit granted for proficiency examinations, etc.), with a grade point average of 2.0 during the junior and senior years of study. (Refer to “Requirements for the Bachelor’s Degree” in this Bulletin for a complete description.)

All candidates for graduation must complete the general degree requirements, school and core curriculum and specific program requirements.

Graduate Degrees (M.S. or D.P.T.)
A cumulative grade point average of 3.0 is required for graduation; the minimum passing grade for each course is a C. See program descriptions for specific degree requirements. All degree requirements for the Health Care Policy and Management and Post-Professional Physical Therapy programs must be completed within five years. In addition, the Health Care Policy and Management program requires that a minimum of 30 semester hours of graduate study be completed at Stony Brook.

Courses
Courses offered by the school are intended for Health Technology and Management students only. However, some are open on a limited basis, with permission of the instructor, to other students. Priority is given to Health Sciences students.

The Center for Public Health Education
The Center for Public Health Education (CPHE) has been involved in education for health professionals and human service professionals since 1983. Its mission is to provide relevant and critical information on HIV/AIDS that will support health care providers in caring for people infected with HIV/AIDS; promote quality care and target resources needed to meet the needs of underserved communities; prevent HIV infection, education and harm reduction; and influence public policy relevant to the HIV/AIDS epidemic.

The number of programs provided by the CPHE document the presence of a strong educational commitment and a very active continuing program of education. Tens of thousands of providers from the Long Island community have participated in a wide variety of programs conducted by the CPHE throughout the region.

The CPHE is a partner in the New York/New Jersey AIDS Education and Training Center (AETC), funded by the Health Resources and Services Administration (HRSA). As a local performance site, the CPHE designs HIV-related training programs tailored to the specific needs of clinicians and agencies. Programs range from general HIV/AIDS overviews to in-depth, advanced trainings, mini-residencies, and clinical consultation and support in specialties that address the needs of needs of men, women and children with HIV, as well as special populations such as adolescents, inmates, substance abusers and the mentally ill.

The New York State Department of Health AIDS Institute provides funding to the CPHE to develop and deliver a wide range of HIV educational programs that include the new NYS 2005 HIV Testing Guidance as well as other relevant topics such as domestic violence, cultural competency, and HIV risk reduction and harm reduction, viral hepatitis and STIs.

The AIDS Institute provides support to the CPHE as a Center of Expertise in Case Management. The Center has received a contract from the New York State Department of Health to work on a Long Island wide needle and syringe disposal initiative.

For further information contact: The Center for Public Health Education School of Health Technology and Management Redcoat House Stony Brook University Stony Brook, New York 11794-4016 (631) 444-3245 fax: (631) 444-6744 Attention: Patricia Campagna, Associate Director

Program in Health Science Leading to the Bachelor of Science Degree

Program Director: Deborah Zelker

Professors: Peter S. A. Glass, Lawrence E. Reinstein, Stephen A. Vithan

Associate Professors: Terry M. Button, Maria R.G. Lagade, Srinivas N. Uppidi

Tamara E. Weiss, Andrew C. White, Joseph E. Whitton, Deborah Zelebrer

Lecturers: Sandeep Ailawadi, Joseph J. Balsamo, Nesly Beausoleil, John M. Esposito, Wendy Griffin, Ellen Mancini, Catherine D. McGurrin, Stacey L. Murphy, Bessie Ortega, Stephanie Patterson, Paul S. Reyes, Michele Rice-Nelson, Mananee T. Russo, Deedat Dan Samosah

Instructors: Laura J. Borchardt, Louis A. Cornonia, Katherine Sara Degn, Robby E. Kinkade, Laune Leventich, Carmen P. McCoy, Randon S. Miller, Janet Zweigle

Affiliated Faculty

Program Advisors: Alan M. Leiken (Associate Professor, Health Care Policy and Management), Nanci C. Rice (Associate Professor, Health Care Policy and Management), Candace Goldightly (Assistant Professor, Clinical Laboratory Sciences)

Professor: Craig A. Lehmann (Clinical Laboratory Sciences)

Associate Professor: Moises Eisenberg (Pharmacology Science)

Assistant Professors: Donna A. Crapanzano, Donna Ferrara-McCord, Valerie Kueimmel (Physician Assistant Education); M. Veronica McNicholl (Health Care Policy and Management); Christine Priotto (Clinical Laboratory Sciences); Paul Werfel (EMT–Paramedic); Dawn Blatt, Sharon Martin (Physical Therapy)

Lecturers: Carol M. Gomes, Dennis L. Proul (Health Care Policy and Management); Lawrence M. Zacarese (EMT – Paramedic)

The School of Health Technology and Management offers a Bachelor of Science degree in Health Science (BHS), with clinical and non-clinical concentrations. Non-clinical concentrations of study include community health education, disability studies, environmental health, health care informatics, health care management, medical billing and coding, pharmacy technician, and public health. Clinical concentrations of study include anesthesia technology, emergency and disaster management, medical dosimetry, nuclear medicine technology, radiation therapy, and radiologic technology. The curriculum requires that students receive a broad liberal arts education through appropriate admissions processes.

For the first semester of the last year of study (senior year), all students enroll in 15 credits of core health science courses including:

- HAN 300: Health Care Issues 3
- HAN 312: Communication Skills 3
- HAN 335: Professional Ethics 3
- HAN 364: Issues in Health Care Informatics 3
- HAN 365: Professional Writing 3

Special Academic Requirements

To be in good standing in the Health Science program, a student must maintain a 2.0 overall cumulative grade point average, with a 2.5 minimum professional grade point average in the required HAN (health science major) courses. All core Health Science program courses must be passed with a grade of C- or better before a student is permitted to advance to the concentration courses. If a student receives a grade less than C in any of the HAN courses, the course must be repeated.

*An unconditional approval for advancement may be granted if, upon judgment of the faculty, there are exceptional circumstances concerning program prerequisites. A student with 85 credits or U4 standing by the fall start date may be allowed to advance to the senior year curriculum. Outstanding prerequisites may be taken concurrently with the BHS senior year curriculum, subject to approval by the program director.

d. 21 credits of related electives (see below).

Any natural science course taken beyond the minimum requirement of 16 credits can also satisfy related elective requirement.

e. 10 upper-division credits (300 and 400 level courses).

Note: Can be met by course meeting D.E.C., natural science, or elective requirements.

f. 10 credits of computer science/information systems electives are strongly recommended as prerequisites for the Health Care Informatics concentration. CSE 101, CSE 113, and CSE 114 are strongly recommended.

Related Electives

Students are encouraged to take related electives designated:

- ECO, CSE and BUS for the Health Care Management concentration
- CSE, PST, ECO and BUS for the Health Care Informatics concentration
- HIS, HRP, ECO, MEC, BCP, SOC and BUS for the Environmental Health concentration
- LHWO, ECO, ANT, SOC, BMC, PSY and BUS for the Public Health concentration
- SOC, RWC, LHWO, PSY, SHI and BMC for the Community Health Education concentration

Call the Health Science program for advising and an extensive list of related electives or see the Course Description listing in the University Undergraduate Bulletin for complete information.

Program Requirements

A. Required Core Courses - Fall Semester (Senior Year)

For the first semester of the last year of study (senior year), all students enroll in 15 credits of core health science courses including:

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<tr>
<th>Course #</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>HAN 300</td>
<td>Health Care Issues</td>
<td>3</td>
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<tr>
<td>HAN 312</td>
<td>Communication Skills</td>
<td>3</td>
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<tr>
<td>HAN 335</td>
<td>Professional Ethics</td>
<td>3</td>
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<tr>
<td>HAN 364</td>
<td>Issues in Health Care Informatics</td>
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<tr>
<td>HAN 365</td>
<td>Professional Writing</td>
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</table>

B. Concentration Courses - Spring Semester (Senior Year)

During the last semester of the senior year, students must take one of the following concentrations.

Health Care Management

This concentration provides students with the knowledge and skills required to manage health care practices, plan health care programs and utilize the fundamentals of health care management and health services administration.

<table>
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<tr>
<th>Course #</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>HAN 412</td>
<td>Introduction to Health Care Management</td>
<td>3</td>
</tr>
<tr>
<td>HAN 434</td>
<td>Corporate Compliance and Regulation</td>
<td>4</td>
</tr>
<tr>
<td>HAN 435</td>
<td>Sales and Marketing in Health Care</td>
<td>3</td>
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<tr>
<td>HAN 436</td>
<td>Continuous Quality Improvement in Health Care</td>
<td>3</td>
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</tbody>
</table>

Community Health Education

This concentration provides students with the knowledge and skills needed to plan, implement and evaluate health education programs in the community. Students who successfully complete this concentration may be eligible for the national certification examination for health educators. Employment opportunities may be found in public and private health-related agencies, hospitals and HMOs.

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<tr>
<th>Course #</th>
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<th>Credits</th>
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<tr>
<td>HAN 440</td>
<td>Introduction to Community Health Education</td>
<td>3</td>
</tr>
<tr>
<td>HAN 442</td>
<td>Community Health Education Models and Resources</td>
<td>3</td>
</tr>
<tr>
<td>HAN 444</td>
<td>Teaching Strategies</td>
<td>3</td>
</tr>
<tr>
<td>HAN 456</td>
<td>Behavioral and Social Aspects of Health</td>
<td>3</td>
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Public Health

This concentration provides students with a basic foundation, including epidemiology and biostatistics, in public health. Students who graduate with this concentration may find employment in health departments, public health agencies, health maintenance organizations and health-related corporations.

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<th>Course #</th>
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<th>Credits</th>
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<tbody>
<tr>
<td>HAN 450</td>
<td>Introduction to Public Health</td>
<td>4</td>
</tr>
<tr>
<td>HAN 452</td>
<td>Epidemiology and Biostatistics</td>
<td>3</td>
</tr>
<tr>
<td>HAN 454</td>
<td>Issues in Public Health</td>
<td>3</td>
</tr>
<tr>
<td>HAN 456</td>
<td>Behavioral and Social Aspects of Health</td>
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Health Care Informatics

This concentration prepares students for a career in health care information systems, and processing and managing health data with computer and communication technologies. Emphasis is placed on health care information systems’ architecture, computerized medical data processing and clinical decision support systems. Ten credits of computer science/information systems electives are strongly recommended as prerequisites (CSE 101, CSE 113 and CSE 114 are strongly recommended).

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<tr>
<th>Course #</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>HAN 462</td>
<td>Developing Health Information Systems</td>
<td>4</td>
</tr>
<tr>
<td>HAN 464</td>
<td>Health Information Systems Management</td>
<td>4</td>
</tr>
<tr>
<td>HAN 466</td>
<td>Applied Health Care Informatics</td>
<td>4</td>
</tr>
<tr>
<td>HAN 467</td>
<td>Utilization and Outcomes Research Methods</td>
<td>3</td>
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</table>

Environmental Health

This concentration explores the concepts and principles of various environmental health issues, including lead management, pest management, hazardous waste management, and food service sanitation. Emphasis is placed on the recognition, identification and control of environmental contaminants in the workplace; prevention and preparedness for hazardous material incidents; and compliance with various regulatory agencies.

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<tr>
<th>Course #</th>
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<tbody>
<tr>
<td>HAN 470</td>
<td>Environmental Health, Radiation Safety and Safety Engineering</td>
<td>4</td>
</tr>
<tr>
<td>HAN 474</td>
<td>Industrial Hygiene</td>
<td>4</td>
</tr>
<tr>
<td>HAN 476</td>
<td>Hazardous Materials, Emergency Response and Environmental Auditing</td>
<td>4</td>
</tr>
<tr>
<td>HAN 478</td>
<td>Independent Study in Environmental Health</td>
<td>2</td>
</tr>
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Medical Billing and Coding

This concentration provides students with the knowledge and skills required to enter the health care industry in the field of medical billing and coding. Coursework covers the practices and procedures for coding, reimbursement, medical records issues and The Centers for Medicare and Medicaid Services guidelines.

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<tr>
<th>Course #</th>
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<th>Credits</th>
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<tbody>
<tr>
<td>HAN 420</td>
<td>ICD-9-CM for Medical Billers and Coders</td>
<td>4</td>
</tr>
<tr>
<td>HAN 421</td>
<td>CPT for Medical Billers and Coders</td>
<td>4</td>
</tr>
<tr>
<td>HAN 422</td>
<td>Medical Billing Methodologies</td>
<td>3</td>
</tr>
<tr>
<td>HAN 423</td>
<td>Clinical Records</td>
<td>3</td>
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</tbody>
</table>

Pharmacy Technician

This concentration provides students with the knowledge and skills required for competent performance as nationally certified pharmacy technicians in either hospital or retail settings.

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<thead>
<tr>
<th>Course #</th>
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<th>Credits</th>
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<tbody>
<tr>
<td>HAN 411</td>
<td>Math and Dosage Calculations for the Pharmacy Technician</td>
<td>3</td>
</tr>
<tr>
<td>HAN 412</td>
<td>Legal and Ethical Issues for Pharmacy Technicians</td>
<td>3</td>
</tr>
<tr>
<td>HAN 413</td>
<td>Pharmacology for Pharmacy Technicians</td>
<td>3</td>
</tr>
<tr>
<td>HAN 414</td>
<td>Pharmacy Technician I</td>
<td>3</td>
</tr>
<tr>
<td>HAN 415</td>
<td>Pharmacy Technician II</td>
<td>3</td>
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</table>
Disability Studies
This concentration provides students with an interdisciplinary focus of study in areas such as independent living, employment, and recreational endeavors associated with disabilities and health and community issues. This concentration will prepare students for entry-level professional and managerial positions in development, management, or implementation of disability services agencies, independent living centers, mental health centers, and geriatric and vocational rehabilitation agencies.

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<tr>
<th>Course#</th>
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<th>Credits</th>
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<tbody>
<tr>
<td>HAN 446</td>
<td>Disability Health and Community</td>
<td>3</td>
</tr>
<tr>
<td>HAN 447</td>
<td>Children with Disabilities</td>
<td>3</td>
</tr>
<tr>
<td>HAN 448</td>
<td>Disability and Employment</td>
<td>3</td>
</tr>
<tr>
<td>HAN 449</td>
<td>Pain Management/Diaphygm Studies</td>
<td>3</td>
</tr>
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Emergency and Disaster Management:
Emergency Medical Service Specialist
This concentration provides study in the recognition and management of HAZMAT incidents; a comprehensive overview of the nuclear, biological and chemical (NBC) agents that are more likely to be used as Weapons of Mass Destruction; and an understanding of the tactics and objectives of terrorism. Students will also be trained as emergency medical technicians through a 240-hour EMT course. Students that successfully complete this concentration of study will be admitted into the nationally known post-baccalaureate paramedic-training program, a 1204-hour program with a heavy clinical commitment. This concentration was specifically developed to expand conventional EMT training programs to better prepare paramedics for the realities of today’s workforce.

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<tr>
<th>Course#</th>
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<tbody>
<tr>
<td>HAN 370</td>
<td>Prehospital Care</td>
<td>6</td>
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<tr>
<td>HAN 472</td>
<td>Weapons of Mass Destruction: Nuclear, Biological and Chemical Agents</td>
<td>3</td>
</tr>
<tr>
<td>HAN 473</td>
<td>Emergency Response to Terrorism</td>
<td>3</td>
</tr>
<tr>
<td>HAN 477</td>
<td>HAZMAT Training for Emergency Medical Services</td>
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Radiation Therapy
This concentration is designed to provide students with the knowledge and skills required for the competent performance in entry-level positions in the field of medical dosimetry. A medical dosimetrist is a member of the radiation oncology team who has the education and expertise necessary to generate radiation dose distributions and dose calculations for cancer patients, in collaboration with the medical physicist and the radiation oncologist. HAN 392 Radiation Oncology/Medical Physics I (4 credits) is required during the fall semester of the senior year as a prerequisite to acceptance into the concentration. Acceptance into the post-baccalaureate clinical year is required in order to enter the concentration. Students must complete the one-year post-baccalaureate clinical training in order to be eligible to take the National Registry Examination.

Note: Preference will be given to students who document a strong science and mathematics background (minimum grade of C in each course; overall G.P.A. of 2.5). Coursework to include: 2 semesters of college calculus and physics, human anatomy, and physiology or other natural science courses. Preference will be given to students with health care experience (paid or volunteer) and/or community service.

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<tr>
<td>HAN 446</td>
<td>Principles of Radiation Therapy</td>
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<tr>
<td>HAN 488</td>
<td>Medical Imaging and Radiographic Anatomy</td>
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<tr>
<td>HAN 492</td>
<td>Radiation Oncology/Medical Physics II</td>
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Medical Dosimetry
This concentration is designed to provide students with the knowledge and skills required for competent performance in entry-level positions in the field of medical dosimetry. A medical dosimetrist is a member of the radiation oncology team who has the education and expertise necessary to generate radiation dose distributions and dose calculations for cancer patients, in collaboration with the medical physicist and the radiation oncologist. HAN 392 Radiation Oncology/Medical Physics I (4 credits) is required during the fall semester of the senior year as a prerequisite to acceptance into the concentration. Acceptance into the post-baccalaureate clinical year is required in order to enter the concentration. Students must complete the one-year post-baccalaureate clinical training in order to be eligible to take the National Registry Examination.

Note: Preference will be given to students who document a strong science and mathematics background (minimum grade of C in each course; overall G.P.A. of 2.5). Coursework to include: 2 semesters of college calculus and physics, human anatomy, and physiology or other natural science courses. Preference will be given to students with health care experience (paid or volunteer) and/or community service.

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<td>HAN 492</td>
<td>Radiation Oncology/Medical Physics II</td>
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Anesthesia Technology
This concentration provides the knowledge and skills required for students to function as integral members of anesthesia teams in surgical settings. After completion of this concentration, students will work in entry-level non-clinical positions or an anesthesia department or continue to the post-baccalaureate Anesthesiology Technology Program to be eligible to take the ASATT certification examinations.

Note: Preference will be given to students who document a strong science and mathematics background (minimum grade of C in each course; overall G.P.A. of 2.5). Coursework to include: college calculus and physics, human anatomy, and physiology or other natural science courses. Preference will be given to students who have CPR certification; health care experience (paid or volunteer) and community service.

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<td>Radiation Oncology/Medical Physics II</td>
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Nuclear Medicine
This concentration within Radiologic Sciences is designed to educate students to meet a growing need in the health care industry for highly trained technologists who utilize rapidly developing technologies to image the human body. Nuclear medicine is widely used for imaging the bodies of patients with cancer. HAN 394 Imaging Physics (3 credits) is required during the fall semester of the senior year as a prerequisite to acceptance into the concentration. Acceptance into the post-baccalaureate clinical year is required in order to enter the concentration. Students must complete the one-year post-baccalaureate clinical training in order to be eligible to take the National Registry Examination.

Note: Preference will be given to students who document a strong science and mathematics background (minimum grade of C in each course; overall G.P.A. of 2.5). Coursework to include: college calculus and physics, human anatomy, and physiology or other natural science courses. Preference will be given to students with health care experience (paid or volunteer) and community service.

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<td>HAN 401</td>
<td>Radiobiology and Health Physics</td>
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<td>HAN 402</td>
<td>Radiographic Anatomy and Pathology</td>
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<tr>
<td>HAN 426</td>
<td>Nuclear Medicine Instrumentation</td>
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<td>HAN 427</td>
<td>Nuclear Medicine Procedures</td>
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<tr>
<td>HAN 428</td>
<td>Nuclear Pharmacy and Therapy in Nuclear Medicine</td>
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Radiologic Technology
This concentration in Radiologic Sciences has been developed to educate students to meet the growing demand for imaging technologists. HAN 394 Imaging Physics (3 credits) is required during the fall semester of the senior year as a prerequisite to acceptance into the concentration. Acceptance into the post-baccalaureate clinical year is required in order to enter the concentration. Students must complete the one-year post-baccalaureate clinical training in order to be eligible to take the National Registry Examination.

Note: Preference will be given to students who document a strong science and mathematics background (minimum grade of C in each course; overall G.P.A. of 2.5). Coursework to include: college calculus and physics, human anatomy, and physiology or other natural science courses. Preference will be given to students with health care experience (paid or volunteer) and community service.

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<td>Radiobiology and Health Physics</td>
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<td>HAN 402</td>
<td>Radiographic Anatomy and Pathology</td>
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<tr>
<td>HAN 404</td>
<td>Radiology Instrumentation</td>
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<td>HAN 405</td>
<td>Radiographic Technique</td>
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<tr>
<td>HAN 406</td>
<td>Radiographic Procedures and Positioning</td>
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<td>HAN 200</td>
<td>Human Anatomy and Physiology for Health Science</td>
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This is the first course in a two-part sequence that introduces the study of human anatomy and physiology at the cellular, tissue, organ, and system levels of organization, with emphasis on understanding disease processes associated with systems. This course is designed for Health Science (HAY) majors, particularly those interested in pursuing HAN clinical concentrations of study. Open to non-HSC students. Prerequisite: one BIO course.

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<td>HAN 300</td>
<td>Health Care Issues</td>
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Provides students with an overview of the organization of the health care delivery system. Includes the role of health care professionals and healthcare organizations. Explores issues regarding health care insurance, the uninsured and underserved, managed care and changes in the healthcare marketplace. Provides an overview of major diseases including the role of health promotion and disease prevention as well as alternative and complementary medicine. Restricted to HAN majors.

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<td>HAN 312</td>
<td>Medical Terminology and Human Anatomy</td>
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Provides the medical terminology and human anatomy needed for non-clinical roles in healthcare. Presents medical terminology through didactic and experiential techniques by reviewing the digestive, urinary, integumentary, reproductive, respiratory, endocrine, nervous, cardiovascular and lymphatic systems. Students will learn how to build a medical vocabulary and understand the importance of precise communication in the delivery of health care.

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<td>HAN 333</td>
<td>Communication Skills</td>
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Introduces the principles of effective communication and stages of group development. Offers theory and practice of interpersonal communication and groups. Provides specific topics related to health care teams. Restricted to HAN majors.

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<td>HAN 335</td>
<td>Professional Ethics</td>
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Provides students with a framework for identifying ethical dilemmas in professional settings. Through the use of case studies, students learn to analyze ethical situations relating to confidentiality, informed consent and truth-telling, and explore various approaches for resolving these conflicts. Presents professional roles of ethics using small and large group discussions. Presents and discusses ethics-related topics such as genetics, transplant, advance directives, and health care accessibility. Restricted to HAN majors.

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<td>HAN 364</td>
<td>Issues in Health Care Informatics</td>
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Acquaints students with the use and application of personal computers and medical information systems used in health care. Emphasizes the optimization and customization poten-
tial of computer functions for standard and specialized tasks. Examines the present and potential use of the Internet in the health care application of medical informatics to health care delivery through classroom demonstrations and discussions. Restricted to HAN majors. 3 credits Lecture

HAN 394 Imaging Physics Provides an introduction to Radiologic Physics for students interested in a career in medical imaging or radiation therapy. Elements of general physics relevant to Radiological Sciences are presented. Topics include production of radiation, radiographic imaging, introduction of radiation with matter, radiation dosimetry, nuclear magnetic resonance, and production and detection of ultrasound. Restricted to HAN majors. 3 credits Lecture

HAN 395 Radiation Physics in Medicine Provides an introduction to medical radiation oncology physics for students interested in a career in medical imaging or radiation therapy. Elements of nuclear physics relevant to the radiological sciences. Topics include production of radiation, radiocative interaction of radiation with matter, radiation dosimetry, and computerized axial tomography (CAT) scanning. 3 credits Lecture

HAN 401 Radiobiology and Health Physics Presents an overview of the biological effects of radiation by examining the interaction of radiation with matter, macromolecules, tissues, and the whole body. Studies the clinical impact of responses to radiation. Introduces students to radi- ation safety through topics such as biologic consequences of irradiation, regulatory limitation of exposure.Restricted to students approved for appropriate senior year track in the Health Science major. Prerequisite: HAN 394 3 credits Lecture

HAN 402 Radiographic Anatomy and Pathology Provides basic radiographic anatomy from both the projection and cross sectional point of view of basic disease processes, including the nature and causes of disease and injury. Examines these processes on medical images acquired through radiography, computed tomography, magnetic resonance, scintigraphy, emission computed tomog- raphy and ultrasound. Restricted to students approved for appropriate senior year track in the Health Science major. Prerequisite: HAN 394 3 credits Lecture

HAN 403 Rayology Instrumentation Expands imaging physics into the area of Radiologic Technology. Studies the physical basis, construction, operation, and quality control of radiographic, fluoroscopic, computed radiographic, direct radiographic, digital subtraction, and computed tomography systems. Restricted to students approved for appropriate senior year track in the Health Science major. Prerequisite: HAN 394 3 credits Lecture

HAN 404 Radiographic Technique Focuses on production of radiographic images. Includes ration- ale for selection of technical factors, issues of image resolution, receptor technology; film sensitometry; image intensification; film processing; grid; automatic expos- sure control; portable/surgical procedures; and basic contrast agent pharmacology, and administration directly related to the production of radiographic images. Presents an overview of the special modalities of computed radiography (CR), direct radiography (DR), fluoroscopy, digital fluoroscopy, digital sub- traction angiography (DSA), computed tomography (CT), and picture archive communication systems (PACS). Special emphasis is placed on reducing patient exposure to radiation. Restricted to students approved for appropriate senior year track in the Health Science major. Prerequisite: HAN 394 3 credits Lecture

HAN 405 Radiologic Procedures and Positioning I Examines routine clinical radiographic positioning of the upper and lower extremities, shoulder, spine, chest, pelvis, skull, abdomen, and digestive and urinary systems. Includes portable studies, room operations, angiography and interventional radiological procedures. Restricted to students approved for appropriate senior year track in the Health Science major. Prerequisite: HAN 394 3 credits Lecture, Laboratory

HAN 406 Radiologic Procedures and Positioning II Examines routine clinical radiographic positioning of the upper and lower extremities, shoulder, spine, chest, pelvis, skull, abdomen, and digestive and urinary systems. Includes portable studies, room operations, angiography and interventional radiological procedures. Restricted to students approved for appropriate senior year track in the Health Science major. Prerequisite: HAN 394 3 credits Lecture

HAN 407 Survey of Nursing Provides introduction and overview of nursing concepts. Addresses the realities of work a nurse. 3 credits Lecture

HAN 409 Medical and Dosage Calculations for the Pharmacy Technician Comprehensive overview of pharmacy calculations. Emphasis will include the role of the pharmacist technician in the retail setting, customer service principles, prescription reading, patient profiles, preparation of prescriptions for filling, third party billing, cash handling, purchasing, and use of the computer. Restricted to students approved for appropriate senior year track in the Health Science major. 3 credits Lecture

HAN 410 Legal and Ethical Issues for Pharmacy Technicians Comprehensive overview of the laws governing the practice of pharmacy on both the state and Federal levels. Focus is on the pharmacy technician’s role and the legal and ethical role of the phys- ician. Regulatory agencies and professional organ- izations will be discussed in depth. Restricted to students approved for appropriate senior year track in the Health Science major. 3 credits Lecture

HAN 411 ICD-9-CM for Medical Billers and Coders Comprehensive overview of the practice and procedure of International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM) guidelines for coding and reporting performed in the hospital and physician’s office. Topics include: accurately translating infectious, parasitic, body-systems disease; physical and mental disorders, Uniform Hospital Discharge Data Set (UHDDS) definitions and ICD-9-CM codes to hospi- tal inpatient records, identification of patient encounter types, and interpretation of health diagnostic codes. Course will also cover Supplementary Classification such as E and V Codes. Restricted to students approved for appropriate senior year track in the Health Science major. 3 credits Lecture

HAN 412 Pharmacy Technician I Comprehensive overview of topics and subjects relevant to the skills set of pharmacy technician in both hospital and retail settings. Focus is on service aspects, roles, prescription filling, order filling, preparation of products, and proper use of equipment, inventory management, pharmacy literature, and reimbursement. Prepares student to function as a technician on the national level while clearly delineating the role as prescribed by New York State law. Restricted to students approved for appropriate senior year track in the Health Science major. 3 credits Lecture

HAN 413 Pharmacy Technician II Comprehensive overview of topics and subjects relevant to the skills set of pharmacy technician in both hospital and retail settings. Focus is on service aspects, roles, prescription filling, order filling, preparation of products, and proper use of equipment, inventory management, pharmacy literature, and reimbursement. Prepares student to function as a technician on the national level while clearly delineating the role as prescribed by New York State law. Restricted to students approved for appropriate senior year track in the Health Science major. 3 credits Lecture

HAN 414 Survey of Nursing Provides introduction and overview of nursing concepts. Addresses the realities of work a nurse. 3 credits Lecture

HAN 415 Survey of Nursing Provides introduction and overview of nursing concepts. Addresses the realities of work a nurse. 3 credits Lecture

HAN 416 Survey of Nursing Provides introduction and overview of nursing concepts. Addresses the realities of work a nurse. 3 credits Lecture

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HAN 424 Survey of Nursing Provides introduction and overview of nursing concepts. Addresses the realities of work a nurse. 3 credits Lecture

HAN 425 Survey of Nursing Provides introduction and overview of nursing concepts. Addresses the realities of work a nurse. 3 credits Lecture
approved for appropriate senior year track in the Health Science major.

3 credits Lecture

HAN 422 Medical Billing Methodologies

Comprehensive overview of the practice and procedures of the Medical Billing in both the hospital and physician’s office. Topics include the link between International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM) diagnoses and Current Procedural Terminology (CPT-4) procedure coding for reimbursement, reimbursement methodologies, medical records issues, and guidelines of the Health Care Financing Administration (HCFA) and Evaluation and Management codes and guidelines. Restricted to students approved for appropriate senior year track in the Health Science major.

3 credits Lecture

HAN 423 Clinical Records

Explores students to actual medical records from a variety of clinical settings: ambulatory surgery centers, emergency department, ambulatory and outpatient hospital departments. Focuses on an intensive application of coding skills. Advanced areas of medical records coding will emphasize sequencing of multiple diagnosis codes and procedures to assure correct reimbursement. Restricted to students approved for appropriate senior year track in the Health Science major.

3 credits Lecture

HAN 426 Instrumentation for Nuclear Medicine

Expands on HAN 384 (Imaging Physics), specifically in the area of Nuclear Medicine Technology. Examines the physical basis, construction, operation and quality control of radiation detection, pulse height analysis, planar imaging, Single Photon Emission Tomography (SPECT) and Positron Emission Tomography (PET) imaging devices. Restricted to students approved for appropriate senior year track in the Health Science major. Preerequisite: HAN 384

3 credits Lecture

HAN 427 Nuclear Medicine Procedures

Covers principles, methods and instrumentation used in Nuclear Medicine. Emphasizes the preparation and performance of planar, Single Photon Emission Tomography (SPECT) and Positron Emission Tomography (PET) nuclear medicine imaging procedures. Provides information needed to perform a variety of imaging and/or functional studies (e.g. liver, spleen, hepatobiliary, gastric reflux, gastrointestinal bleeding, lung, endocrine, central nervous system). Presents in vitro nuclear medicine procedures. Principles of sensitivity, specificity, accuracy, and predictive values of diagnostic testing are also covered. Restricted to students approved for appropriate senior year track in the Health Science major. Preerequisite: HAN 384

3 credits Lecture, Laboratory

HAN 429 Radiopharmacy and Therapy in Nuclear Medicine

Examines the production, labeling, quality control, clinical biodistribution, and application of radionuclide tracers for nuclear medicine imaging. Covers radionuclide and radiopharmaceutical characteristics that provide suitable imaging properties. Discusses various aspects of laboratory procedures (e.g. safe handling of radionuclides, radiation safety surveys, hot laboratory instruments, radiopharmaceutical preparation, quality control and sterile technique). Explores pathologies, radiopharmaceuticals, dosage calculation and administration, as well as the patient-related to radionuclide therapy. Restricted to students approved for appropriate senior year track in the Health Science major. Prequisite: HAN 384

3 credits Lecture

HAN 432 Introduction to Health Care Management

Introduces students to the principles and theories of health care policy and management. Presents an overview of the trends in public policy and management techniques. Restricted to students approved for appropriate senior year track in the Health Science major. Prequisite: HAN 384

3 credits Lecture

HAN 434 Corporate Compliance and Regulation

Provides an overview of recently enacted legislation requiring healthcare institutions’ compliance programs. Introduces regulations and compliance including anti-trust, contractual relationships, Americans with Disabilities Act, Occupational Safety and Health Act, Joint Commission on Accreditation of Healthcare Organizations, Department of Health jurisdiction over hospitals and licensure requirements. Restricted to students approved for appropriate senior year track in the Health Science major. Prequisite: HAN 384

3 credits Lecture

HAN 435 Sales and Marketing in Health Care

Introduces the essential aspects of marketing and sales in the changing health care world. Addresses the concept of marketing, the nature of marketing strategy and the environment in which marketing operates. Provides a framework for understanding the consumer, along with key selling methods. Topics include the “four Ps” of marketing (product, price, promotion, place) and will examine the “four Cs” of marketing (consumer, cost, convenience, communication). Restricted to students approved for appropriate senior year track in the Health Science major.

3 credits Lecture

HAN 436 Continuous Quality Improvement in Health Care

Provides basic principles associated with Total Quality Management (TQM) and Continuous Quality Improvement (CQI). Aids identification and quality problem solving found in all health care organizations utilizing continuous quality improvement (CQI) tools and techniques. Through the use of case studies, current events, and activities, students will learn how to identify problems, recommend improvements, and collect data to demonstrate process improvement.

3 credits Lecture

Restricted to students approved for appropriate senior year track in the Health Science major. Co-scheduled with HPH 617.

3 credits Lecture

HAN 440 Introduction to Community Health Education

Introduces students to the foundation of planning, implementing and evaluating community-based health education programs. Presents classic theories of health education including the developmental theory, health belief model, and the attribution theory. Review relevant health education programs. Examines various learning styles and skills. Basic health education models are introduced and critiqued through individual and group projects. Reviews health education professional organizations and associations. Each student is required to design a health education program for a selected population. Restricted to students approved for appropriate senior year track in the Health Science major.

3 credits Lecture

HAN 441 Community Health Education and Marketing Resources

Reviews past and present community health education models utilized locally, nationally and internationally. Analyzes health education programs and teaches skills that may be applied to future projects. Discusses resources for providing community health education from private corporations, foundations, and public organizations and agencies. Introduces governmental and non-governmental resources for planning and implementing health education programs for diverse and special populations. Restricted to students approved for appropriate senior year track in the Health Science major.

3 credits Lecture

HAN 443 Aging and Disability

Provides comprehensive overview of aging and disability. Includes introduction to the field of geriatrics, age related disabilities, and the experiences of people with disabilities as they age. Presents an interdisciplinary perspective. Incorporates social, environmental, cultural, economic background and diversity to disability and aging. Film, narrative, biography and guest speakers provide students with first-hand accounts of elders with disabilities. Restricted to students approved for appropriate senior year track in the Health Science major.

3 credits Lecture

HAN 444 Teaching Strategies

Students examine their roles as health planners and health teachers for diverse communities. Presents written goals, behavioral objectives, health education and teaching strategies and evaluation plans. Reviews appropriate media (print, audiovisual, software, interactive programs) for selective programs. Requires students to prepare, deliver and evaluate a community health education session that is videotaped and reviewed by the class. Restricted to students approved for appropriate senior year track in the Health Science major.

3 credits Lecture

HAN 445 Independent Living and Disability

Interdisciplinary exploration of how independent living has evolved as a social and political movement. Topics include analyzing current legislation, social issues and living philosophies. Guest speakers will facilitate the students gaining a multi-disciplinary view of the issues faced by people with disabilities who are living independently. Restricted to students approved for appropriate senior year track in the Health Science major.

3 credits Lecture

HAN 446 Disability Health and Community

Presents a comprehensive view of health and community concerns experienced by people with disabilities. Explores historical analysis, biomedical discourse, cultural critique, and field research to understand the evolution of medical practices, cultural beliefs, and social structures influencing the treatments, services, and opportunities available to people with disabilities in the United States and internationally. Includes gender, sexuality, race, "invisible disabilities," "eugenic sterilization," assisted suicide topics. Guest speakers will facilitate a multi-layered understanding of the issues faced by people with disabilities and their families. Restricted to students approved for appropriate senior year track in the Health Science major.

3 credits Lecture

HAN 447 Children with Disabilities

Provides a comprehensive overview of the theories of child development and issues related to children with development disabilities, attentional or discipline difficulties, and socioeconomic factors. Includes behavioral, cognitive, cultural, developmental, language, medical, motor and sensory needs of children with developmental disabilities. Restricted to students approved for appropriate senior year track in the Health Science major.

3 credits Lecture

HAN 448 Disability and Employment

Presents a comprehensive overview of the Disability and Employment field. Explores pertinent employment-related legislation and administrative system, the intersection of existing governmental and not-for-profit programs, and current disability employment practices. Through the use of lecture, experiential learning, and research students will gain an understanding of the key roles of placement professionals. Provides individualized learning opportunities for individuals with disabilities who happen to be job-seekers or for people interested in the field. Restricted to students approved for appropriate senior year track in the Health Science major.

3 credits Lecture

HAN 449 Project in Disability Studies

Students will develop independent projects in topical area of disability studies. They will be required to develop a set of readings, engage in a minimum of 15 hours of experiential learning (in the form of community site visits, volunteerism, or internships). Course instructors and assigned mentors will assist students during bi-weekly group meetings and by scheduled appointments. Restricted to students approved for appropriate senior year track in the Health Science major.

3 credits Lecture, Laboratory

SCHOOL OF HEALTH TECHNOLOGY AND MANAGEMENT

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SCHOOL OF HEALTH TECHNOLOGY AND MANAGEMENT

www.tombrook.edu/cohbulletin
HAN 450 Introduction to Public Health
Introduces the principles and practices of public health, including the history, development, and current determinants of health, and ethical and legal aspects of public health. Orient students to various public health settings such as local and state health departments, for-profit community organizations, and agencies for special populations. Provides students with basic knowledge and skills for conducting community needs assessment with diverse populations. Addresses infectious disease control, environmental health, chronic disease control, tobacco and drug control, maternal and child health, women's health, and injury control topics. Restricted to students approved for appropriate senior year track in the Health Science major.
3 credits Lecture

HAN 452 Epidemiology and Biostatistics
Provides students with the basic knowledge and skills for studying diseases of individuals and groups. Introduces biostatistical approaches and skills for collecting and organizing data of communities to meet health needs. Addresses epidemiologic concepts, operating research methods and study design. Through the case studies, students study various epidemiological models used regionally, nationally and internationally. Includes discussion about ethical situations related to research and statistical studies. Restricted to students approved for appropriate senior year track in the Health Science major.
3 credits Lecture

HAN 453 Research Methods in Public Health
Focuses on the details of public health research design. Guides students through a step-by-step course on qualitative, quantitative and mixed research designs and analysis methods. Students will learn the language of research, critical thinking, research methods for conducting research and how to identify and synthesize research literature. Builds on concepts covered in the other courses in the public health/community health major. Restricted to students approved for appropriate senior year track in the Health Science major.
3 credits Lecture

HAN 454 Issues in Public Health
Addresses contemporary topics related to public health policies and practices. Topics include recent regional and national pandemics, changes in public health prevention programs and current political policy-making. Introduces health trends and patterns through the study of changing laws and policies governing health. Guest lecturers from the county health departments and local community health and public health organizations present up-to-date information on public health issues. Restricted to students approved for appropriate senior year track in the Health Science major.
3 credits Lecture

HAN 456 Behavioral and Social Aspects of Health
Introduces the role of behavioral factors as determinants of health. Explores theories of human and group behavior and health behavior change models through lecture and case study. Explores the dynamics between health behaviors and culture, gender, age and socioeconomic status. Students study various inventory tools for measuring health-related knowledge, attitudes and behaviors and top to students approved for appropriate senior year track in the Health Science major.
3 credits Lecture

HAN 462 Developing Health Information Systems
Introduces students to fundamental hardware and software concepts, operating systems, GUI environments and system development life cycles. Reviews Windows applications such as spreadsheet, database, forms, queries and reports. Restricted to students approved for appropriate senior year track in the Health Science major.
3 credits Lecture

HAN 464 Health Information Systems Management
The course includes organizational change issues in healthcare environments, resource management (inventory, tracking and acquisition) and the role of policy formulation. Consumers, issues, standards and security and the protection of health information resources to healthcare organizations are covered. Relevant applications and issues related to health services will also be explored. Restricted to students approved for appropriate senior year track in the Health Science major.
3 credits Lecture

HAN 466 Applied Health Care Informatics
Provides overview of information systems in healthcare organizations. Emphasizes the integration of evidence-based research into clinical decision-making and the influence of information systems on health outcomes. Explores technical, organizational and cost-benefit issues related to healthcare information systems, including clinical decision-support, integrated networking and distributed computing technologies, telemedicine applications and artificial intelligence solutions. Through a combination of classroom-based seminars and case study laboratory exercises, students will develop and exercise analytical skills for appraising health information systems, as well as acquire practical experience using biomedical research software, desktop application software, and electronic communication systems. Restricted to students approved for appropriate senior year track in the Health Science major.
3 credits Lecture

HAN 467 Utilization and Outcomes Research Methods
Provides the necessary tools to understand and implement research methods and utilize outcomes within the healthcare system. Presents an overview of statistics and research methods as well as utilization techniques by utilizing group discussions and case studies. Demonstrates the utilization of technology as a resource for existing research as well as management tools. Restricted to students approved for appropriate senior year track in the Health Science major.
3 credits Lecture

HAN 470 Environmental Health, Radiation Safety and Safety Engineering
Presents an overview of the field of occupational health and safety. Focuses on three key areas including radiation protection, environmental health, and safety engineering. Restricted to students approved for appropriate senior year track in the Health Science major.
3 credits Lecture

HAN 472 Weapons of Mass Destruction: Nuclear, Biological and Chemical Agents
Presents a comprehensive overview of nuclear, biological and chemical agents that are more commonly known to be used as Weapons of Mass Destruction (WMD). Expands the Emergency Medical Service (EMS) provider's training in responding to conventional HAZMAT incidents and focuses on the recognition and management of incidents involving bioterrorism, chemical and nuclear weapons. Restricted to students approved for appropriate senior year track in the Health Science major.
3 credits Lecture

HAN 473 Emergency Response to Terrorism
Prepares emergency medical services (EMS) providers to recognize and respond to terrorist incidents. Topics include identification of on-scene indicators of a suspicious incident, recognition of the tactics and objectives of terrorism, and scenario/paper role plays unique to a terrorist incident. Restricted to students approved for appropriate senior year track in the Health Science major.
3 credits Lecture

HAN 474 Industrial Hygiene
Introduces basic concepts of industrial hygiene. Presents the methodology and process of identifying and evaluating hazards in the workplace. The course will also cover the proper use of personal protective equipment and what must happen after exposure. Restricted to students approved for appropriate senior year track in the Health Science major.
3 credits Lecture

HAN 476 Hazardous Materials, Emergency Response and Environmental Auditing
Concentrates on the nature of hazardous materials and how they are handled in the workplace. Presents the fundamentals of environmental and process planning and how to perform environmental audits. Restricted to students approved for appropriate senior year track in the Health Science major.
3 credits Lecture

HAN 477 HAZMAT Training for Emergency Medical Services
Comprehensive overview of the practice and procedures required of Emergency Medical Service (EMS) providers when responding to major HAZMAT incidents. Includes management strategies for Hazards Materials (HAZMAT) disasters. Emphasizes on the coordination of services and resources by national, federal and local agencies. Restricted to students approved for appropriate senior year track in the Health Science major.
3 credits Lecture

HAN 478 Independent Study in Environmental Health
Proposals for special projects involving advanced readings, edge area research, or unexplored application of advanced topical health issues must be submitted. A research paper on the selected topic will be submitted to an assigned faculty sponsor. Restricted to students approved for appropriate senior year track in the Health Science major.
2 credits Tutorial

HAN 480 Introduction to Radiation Therapy and Medical Dosimetry
Provides students with a foundation and an overview of radiation therapy and medical dosimetry and their role in medicine. Students will be oriented to academic and administrative structure, key departments and personnel. Introduces other health science professionals and how they interface to the radiation therapy and medical dosimetry professions. The student will be oriented to the hospital organization and radiation oncology services organization. Certification examinations, professional credentialing, accreditation, and professional organizations will be identified and discussed. The clinical education component will be introduced and emphasis placed upon how knowledge, attitudes and skills will be applied within the clinical setting, and what training must occur in the clinic. A detailed list and explanation of clinical rotations and responsibilities of radiation therapy and medical dosimetry students will be provided. Career advancement and mobility will be explored. Restricted to students approved for appropriate senior year track in the Health Science program.
1 credit Lecture

HAN 481 Introduction to Anesthesia
Introduces the basics of the anesthesia specialty. Defines the role of the anesthesia specialist as an integral part of the anesthesia patient care team. Through the use of lecture, video, tours and hands-on demonstration, students will gain a working knowledge of how to assist anesthesiologists and anesthetists in the acquisition, preparation, and utilization of equipment and supplies required for the administration of anesthesia. Restricted to students approved for appropriate senior year track in the Health Science major.
3 credits Lecture

HAN 482 Introduction to Pathology
Pathology is the branch of medicine devoted to the study and understanding of disease. This course will introduce the student to the concept of disease as a process of either growth, causative factors and biological behavior of neoplastic disease and tissue dis- cused. Staging procedures are introduced. Restricted to stu- dents approved for appropriate senior year track in the Health Science major.
3 credits Lecture

HAN 483 Cardiopulmonary Physiology for ASATT
Familiarizes students with the anatomical structures and physiological mechanisms and functions of the cardiopulmonary system. Reviews mathematical formulas and calcula- tions used in clinical applications of physiologic concepts. Restricted to students approved for appropriate senior year track in the Health Science major.
3 credits Lecture
HAN 484 Radiation Therapy Physics
Introduces students interested in a career in radiation therapy to medical physics for radiation oncology. It will provide the basis for further study of the applications of radiation oncology physics to radiation treatment planning and radiation dose calculations. Restricted to students approved for appropriate senior year track in the Health Science program.
3 credits Lecture

HAN 485 Clinical Monitoring
Provides students with a working knowledge of clinical monitoring devices and their application to clinical settings. Covers techniques of anesthesia technology including the provision of technical support to professional staff in order to facilitate anesthesiology departmental functions. Develops skills to maintain and organize the anesthesia control environment, equipment and supplies. Restricted to students approved for appropriate senior year track in the Health Science major.
1 credit Lecture

HAN 486 Principles and Practice of Radiation Therapy
Introduces student to the practice and technical aspects of radiation therapy. An overview of cancer to include: statistics, epidemiology, etiology, patient education and assessment, and pharmacology and drug administration. Radiation therapy techniques specific to anatomical site will be demonstrated and treatment outcome statistics discussed. Explores treatment options available to cancer patients. Restricted to students approved for appropriate senior year track in the Health Science major.
3 credits Lecture

HAN 488 Medical Imaging and Radiographic Anatomy
Presents an overview of a variety of diagnostic imaging modalities and therapeutic applications and procedures provided by modern healthcare facilities. Discusses imaging equipment and procedures, and includes recording images on film media and operation of photofiche processing equipment. Restricted to students approved for appropriate senior year track in the Health Science program.
3 credits Lecture

HAN 489 Pharmacology for ASAT
Presents basic principles of pharmacologic properties and clinical applications. Through the use of lectures and scenarios, provides working knowledge base of drug classifications and their modes of action to produce therapeutic effects on target sites. Restricted to students approved for appropriate senior year track in the Health Science major.
3 credits Lecture

HAN 492 Radiation Oncology/Medical Physics II
Provides students interested in a career in medical dosimetry with the foundation to medical physics for radiation oncology. This is the second course in a two-part series that provides the basis for further study of the applications of radiation oncology physics to radiation treatment planning and radiation dose calculations. Covers topics such as radiation dose distribution, patient dose calculations, treatment planning, electron beam therapy, brachytherapy, modern treatment delivery, and radiation protection. Restricted to students approved for appropriate senior year track in the Health Science program.
3 credits Lecture

Department of Health Care Policy and Management
Chair: Alan M. Leiken
Vice Chair: Nanci C. Rice
Professors: Robert O. Hawkins Jr. (emeritus), I. Bernard Hirsch, H. Barry Waldman
Assistant Professors: Susan C. Cappello, Josephine Connolly-Schoonen, M. Veronica McKinnon, Karen J. Mendelsohn, Hector Sepulveda, Robert A. Wild

Program in Health Care Policy and Management Leading to the Master of Science Degree
Program Director: Nanci C. Rice

This program is open to qualified health professionals who wish to pursue careers in health care management, health policy, gerontology, and nutrition within their own professional fields.

Program Requirements
Candidates must complete a minimum of 36 credits and satisfy the specific core, concentration, and practicum requirements described below. Courses are chosen with program advisement and approval.

Core: Candidates must successfully complete courses to demonstrate understanding and competence in the areas of medical care delivery, research methodology, statistics and communication (12 credits).

Concentration: Candidates must select a specialty concentration in radiation planning and radiation dose calculations. Covers topics such as radiation dose distribution, patient dose calculations, treatment planning, electron beam therapy, brachytherapy, modern treatment delivery, and radiation protection. Restricted to students approved for appropriate senior year track in the Health Science program.
3 credits Lecture

Practicum: Candidates must complete a practicum in their specialty concentrations (3-6 credits).

Thesis: A master’s thesis is optional (4-6 credits) and is in lieu of the practicum requirement.

The Advanced Certificate Program in Health Care Management
Program Directors: Alan Leiken and Thomas Sexton

Program Requirements
The Advanced Certificate Program in Health Care Management is a professional development program intended for health practitioners who require management training and for managers who require specific management training in the health care field. The program is jointly sponsored by the School of Health Technology and Management and the College of Business.

The curriculum consists of 18 credits. Students are required to complete a minimum of four courses with a health care management focus.

Dietetic Internship Program
Program Director: Josephine Connolly-Schoonen

The Dietetic Internship Program is a 35-week program beginning each September, co-sponsored by the School of Medicine and the School of Health Technology and Management. Applicants are required to have a baccalaureate degree from an accredited college or university; a minimum grade point average of 3.0; and an American Dietetic Association verification statement of completion of a dietetic internship. Students may apply to the Master of Science degree program in Health Care Policy and Management with a concentration in nutrition and pursue the graduate degree concurrently. The internship program participates in the national computer matching process.

Undergraduate Courses

HAS 151 Preparation for Statistics
Arithmetic, algebra, exponents, and graphing needed for elementary statistics. Requirements permit of the instructor, whose decision will be based on results of a preliminary diagnostic test.
1 credit Lecture

HAS 190 Introduction to the Health Professions
Presents topics of interest to students considering careers as health professionals. Introduces the student to basic concepts of health, factors influencing health care, health care settings, and selected health professions. May not be taken for credit in addition to LHW 102. Open to west campus students.
1 credit Lecture

HAS 290 Medicine and Society
Examines traditional concerns of the humanities and social sciences as they interface with health care and its delivery. Practicing physicians or other health professionals present clinical cases. Emphasizes confidentiality, experimentation, dying, death, and allocation of resources on the social, historical, ethical, and humanistic importance of the cases. Permission of instructor required. Open to west campus students.
3 credits Lecture

HAS 292 Behavioral Intervention for Children with Autism
Provides framework to develop and implement behaviorally based instruction for children with autism spectrum disorders. Presents the various techniques used in instructional environments. Offers opportunity to develop technical competencies in behavior analytic intervention strategies (defining and measuring behavior, shaping, chaining, and discrete trial instruction) that facilitate acquisition, maintenance and generalization of skills. Involves “hands on” experience for minimum of five hours per week at sites that provide services for children with autism. Corequisite or prerequisite: HAS 192, not to be taken for credit in addition to HAS 502. Transportation to off-campus sites must be provided by the student. Open to west campus students.
3 credits Lecture

HAS 300 Issues in Health Care
Examines major issues influencing health care delivery. Emphasizes analysis of significance of these issues to the health professions. Covers organization of the delivery system, professional roles, quality control, cost controls, health agencies and alternative delivery models, consumer lifestyle, and health statistics. Examines current trends in managed care, reimbursement, health policy and reform. Discusses infectious disease and nutrition. Allows for discipline-specific program development and implementation through HSC outreach efforts.
2 credits Lecture

HAS 332 Management Concepts for Health Professionals
Identifies coping strategies with bureaucrats as agent, participant, and consumer. Considers the human dimensions of personnel, financial, and materials management as related to the service functions of health agencies.
1 credit Lecture

HAS 335 Medical Ethics
Introduces health professional students to basic concepts and challenges in medical ethics. Uses a framework and decision-making process to help students learn how to approach ethical dilemmas. Explores current topics in health care ethics including advance directives, assisted dying, genetics, cloning, transplants, confidentiality, informed consent, and professional conduct.
1 credit Lecture
HAS 350 Introduction to Statistics
Discusses elements of biostatistics, graphs and tables, descriptive probability, populations of samples, normal distribution, hypothesis testing, and computers.
3 credits Lecture

HAS 351 Research Literacy/Research Design
Prepares students to perform a literature search in their respective disciplines to find scientific and health articles and books in the Health Sciences Center Library. Presents research terminology, methods, and design. Provides basic skills to enhance interpretation, evaluation and analysis of research articles including the hypothesis, literature review, design, methodology, and data analysis.
1 credit Lecture

HAS 363 Computer Literacy for Health Professionals
Surveys the uses of computers for health practitioners. Offers practical experience in literature database searching and use of application software.
3 credits Lecture

HAS 391 Readings in Health
Supplementary specialized readings under faculty supervision. Topics determined by mutual agreement between undergraduate student and faculty and must have the approval of the program director in the School of Health Technology and Management prior to registration.
1-4 credits Tutorial

HAS 399 Independent Study in Health
A special project involving advanced readings, reports, discussions, research, or special course work on topics or problems of the student's choosing with the guidance of an assigned faculty member. Projects must have the approval of the program director in the School of Health Technology and Management prior to registration.
1-4 credits Tutorial

HAS 490 Research Tutorial
An original research project is conducted. Prerequisite: HAS 351
2 credits Tutorial

Graduate Courses

HAS 501 Autism Spectrum Disorders
Provides educators a comprehensive overview of autism and related disorders. The course will review manifestations at varied developmental, intellectual levels across the age spectrum. Includes current theories of causation, Asperger's syndrome and other pervasive developmental disorders. Examines educator's role in therapeutic interventions.
3 credits Lecture, 1-3 credits Practicum

HAS 502 Behavioral Intervention for Students with Autism
Provides educators with comprehensive frameworks to develop and implement behaviorally based instruction for children with autism spectrum disorders. Explores variables that control learning in instructional environments. Students will develop behavior analytic intervention plans that facilitate acquisition, maintenance and generalization of skills. Involves a minimum of five hours per week of experiential work at sites that provide services for children with autism. NOTE: not to be taken for credit in addition to HAS 192
3 credits Lecture

HAS 503 Issues, Trends and Challenges in Nutrition
Examines evidence regarding efficacy, safety and cost of new products. Discusses applications in practical professional settings.
3 credits Lecture

HAS 505 Food Nutrition Policies: Cultural, Behavioral, Social Aspects
Introduces health care professionals to existing food and nutrition policies, the types of data that these policies are based on and the process by which they are developed. Offers skills needed to critically analyze the process and resulting policies, and those used in developing new policies and securing funds for such projects.
3 credits Lecture

HAS 506 Food and Nutrition Policy and Practice
This course is designed for nutritionists who want to develop effective management skills in the food service and clinical areas with an emphasis placed on clinical dietetics. Case studies, problem-based learning scenarios, and role-playing scenarios will complement lectures and provide students with an opportunity to problem solve and apply information acquired. Personal, environmental, cost containment, and management practices pertinent to clinical and food service functions will be discussed and applied to real life situations. Reviews safety and sanitation procedures with practical applications. The survey process and accreditation standards will be covered.
3 credits Lecture

HAS 513 Health Care and Older People
Course is designed to maximize a student's understanding of policy and administrative issues in delivering health care to older people. Highlights examples of policy directions on the national, state and local levels and the practical application of administrative tools in managing health facilities mandated by the Health Care Financing Administration.
3 credits Lecture

HAS 515 Measurement and Evaluation in Health Professions Education
Explores issues of measurement and evaluation in educational institutions. Emphasizes opportunities to testing, types of instruments, reliability, validity, and item analysis, and examines methods and approaches to evaluation of research.
3 credits Lecture

HAS 516 Health and the Aging Process
An overview of information and issues pertinent to physical and psychological health of aging Americans. Includes demographics, graphics, attitudes, physiological and psychological changes, health promotion, disease prevention, health care delivery settings, ethical and legal issues.
3 credits Lecture

HAS 518 Women and Health Care
This course provides an overview of women as users and providers of health care in the United States. Attention is given to women as active participants in their health care today. Examines comprehensive approaches when women should be encouraged to be passive. Throughout the course, case studies are introduced to demonstrate the contemporary utilization patterns of health care by women, including the use of managed care companies, women's public health agencies and grassroots health organizations. In addition, a number of issues are addressed regarding the role of women in providing health care, specifically from a public health management perspective. The course includes examples and presentations of radiation and health care concerns, such as breast cancer, reproductive choices, heart disease, tobacco use, menopause-related issues, and domestic violence. Special populations are also discussed as they relate to women and health care, including adolescents, older women, homeless women, working women, caretaking women and middle-class uninsured women. This course will provide health care strategies as they are offered as acceptable methods for meeting the growing and changing needs of women presently and in the future.
3 credits Lecture

HAS 521 Disability and Health Promotion
Examines the life experiences of people with disabilities from a disability studies perspective. Includes a study of the history, sociology, and psychology of disability, and looks at inter-disability issues, cost containment and management policies pertinent to clinical and health care functions will be discussed and applied to real life situations. Reviews safety and sanitation procedures with practical applications. The survey process and accreditation standards will be covered.
3 credits Lecture

HAS 523 Occupational Safety and Environmental Health
Designed to provide students with an in-depth understanding of occupational and environmental public health issues including health effects and broader health promotion. The course focuses on the community's health. Specific topics addressed are lead poisoning, chemical toxins, asbestos, OSHA, EPA, child labor, infectious diseases and ergonomics.
3 credits Lecture

HAS 525 Complementary and Alternative Medicine
Examines the theory, philosophy and applications of complementary and alternative medicine within today's health care system. Presents the many alternatives to traditional Western or allopathic medicine, and how these various models, systems and therapies impact on the delivery of health care in the United States. Addresses skills needed to best respond to consumers' requests for information about these approaches. Students will examine the current body of research and tables and complementary and alternative medicine and be introduced to the vast array of resources available, the type of training involved in licensure/certification, and how to incorporate these and their clinical practices. This course will combine lecture, readings, speakers, independent research and some experimental, hands-on work.
3 credits Lecture

HAS 526 Community Health
Provides a critical examination of the mental health system as it has evolved in the United States. Focuses on the service delivery system: how it has developed, what it is today and where it is going. Deals with the mental health system as a business: how it operates, how it is funded, who it employs and how it will develop in the new managed care environment.
3 credits Lecture

HAS 527 Principles and Practice of Public and Community Health
Provides an overview of the public health system, the philosophy and purpose of public and community health, the managerial and educational aspects of public health programs, health and the social determinants of health, the role of government in public health delivery, the future of women in the health care system, the economic and fiscal implications of the system on state and local governments will be discussed. Students will analyze the critical elements of a health care system.
3 credits Lecture

HAS 528 Long Island's Community Health
Provides students with an overview of community health concerns of Long Island and information and resources for addressing them. Presents conditions that are associated with special populations such as the Native Americans, baymen, homeless, migrant workers, rural residents, urban residents, and the uninsured middle-income residents. Community health problems with high incidence on Long Island including breast cancer, Lyme disease, AIDS, and tuberculosis will be covered. Reviews Long Island's environmental health problems with special emphasis on those associated with drinking and swimming water, agriculture, pesticides, and transportation. Discusses the role of health care delivery system and model programs and resources.
3 credits Lecture

HAS 529 Community Health and Patient Education
Provides information on current trends in patient education program development. Emphasizes techniques used by health professionals in planning and evaluating patient education programs in hospitals and other health care organizations concerned with the educational component of patient care.
3 credits Lecture
HAS 530 Health Care Operations
Addresses the operations within health care institutions from the micro (micro level of management) to the macro (moral and ethical dilemmas). Examines the ethical and legal aspects of health care operations. Provides an introduction to the principles of management, including the planning, organizing, staffing, directing, and controlling functions. Examines the ethical and legal aspects of health care operations.

HAS 539 Strategic Planning for Health Programs, Facilities and Networks
Conveys to prospective and current health program managers the fundamentals of strategic thinking and planning and the integration of those processes into executive management functions. Prepares prospective and current managers to fulfill their roles and responsibilities within a dynamic, changing health care environment.

HAS 541 Strategic Management in Health Care
Designs for health services organizations. Provides exposure to varied theories of organization and management and the development of managerial actions and responses relative to public policy. Readings focus on four major themes: organization/environment, role and responsibilities, organization complexity, strategic management, and the significance of economic theory in understanding organization and systems behavior.

HAS 542 The Political Setting of Public Health Policy and Management
Examines the influences and effects of politics on the implementation of health policy at federal, state, local and levels of government. Analyzes the roles and consequences of various governmental and social entities within the policy implementation structure and process. Reviews outcomes of selected public policies within the legislative and administrative context.

HAS 543 Health Policy
Provides students with an overview of health care policy making principles. Specific policy formats will be analyzed using examples of local and national policies. Students will learn to develop selective health policies using case studies.

HAS 544 Principles of Managed Care
Provides an in-depth understanding of the meaning of managed care and the relationship of managed care systems. Examines the history, components, and various organizational forms of managed care systems. Potential benefits, problems, controversies, and the legal, social and ethical implications of managed care as a health care delivery system will be discussed.

HAS 545 Ethics and Health Care
Provides an overview of ethics in health care in a rapidly changing society. Teaches students to approach ethical dilemmas using theoretical frameworks and decision making processes. Explores ethical issues surrounding health care reform and public health policy and includes discussion of factors influencing the role of government. Examines the ethics of health care and the ways in which they may be used to analyze health care policy and improve the delivery of health care services. The effects of change in market forces, human resources needs, changes in health care delivery systems, health promotion initiatives and the impact of technology will be studied.

HAS 546 The Political Setting of Public Health Policy
Introduces the terminology of health care delivery and the impact of the political environment on the health care delivery system. Examines the ethical and legal aspects of health care operations and the impact of the political environment on the health care delivery system.

HAS 547 Grantmanship in the Health Professions
Introduces the grantmanship process, in both federal and private domains. Focuses on research, design, preparation, and submission of grant applications.

HAS 550 Statistics and Data Analysis
Teaches the use of descriptive statistics such as means, medians, standard deviations and histograms to report results of experiments. Illustrates how inferences can be made from hypothesis testing and regression analysis. Includes analysis of the validity and appropriateness of statistical techniques employed by researchers in the health field.

HAS 551 Research Design and Proposal Writing
This course is designed to help students learn the skills to write an independent research or practicum proposal that demonstrates an understanding of how to plan, design, implement, analyze, and interpret a study to address a problem within the health care delivery system. Students will learn and apply the tools and skills needed to develop and implement a research study or practicum project in the future: formulate a research question or hypothesis, conduct literature reviews, use bibliographic resources, critically appraise scientific literature, select an appropriate research design and methodology for data collection, consider the protection of human subjects and health information and determine whether or not to apply to the Committee on Research Involving Human Subjects to appropriate; apply descriptive and inferential techniques, and write/orally present proposals.

HAS 552 The Political Setting of Public Health Policy and Management
Examines the influences and effects of politics on the implementation of health policy at federal, state, local and levels of government. Analyzes the roles and consequences of various governmental and social entities within the policy implementation structure and process. Reviews outcomes of selected public policies within the legislative and administrative context.

HAS 553 Health Law
Addresses the legal aspects of health care delivery and addresses problems encountered by institutions and individuals. Examines the external forces that affect health care agency operations, increasing evolution of laws, agency regulations, and controls that apply to health organizations. Includes elements of planning and budgeting that apply to the internal functioning of health care institutions. Emphasis on development of managerial ability and departmental relationship to the total agency's activities.

HAS 554 Marketing in Health Services
Provides an introductory explanation of marketing as a required function of managers in health care management. Emphasizes the basic principles and general philosophies of marketing, the course concentrates on the importance of marketing in health care service delivery and a managed care environment.

HAS 555 essentials of Health Care Law and Ethics
Introduces strategic thinking and the effects of the health care buyer decision-making process. Examines the ethical aspects surrounding health care reform and public health policy and includes discussion of factors influencing the role of government. Examines the ethics of health care and the ways in which they may be used to analyze health care policy and improve the delivery of health care services. The effects of change in market forces, human resources needs, changes in health care delivery systems, health promotion initiatives and the impact of technology will be studied.

HAS 556 Outcome Measures and Continuous Quality Improvement (OQI) in Health Care
Reviews the conceptual and statistical development of outcome measures in health delivery settings including health care delivery situations and health policy considerations. OQI principles will be developed, and outcome measures will be illustrated and evaluated. Appropriate statistical methods will be introduced. Prerequisite: HAS 550 or MGT 515

HAS 557 Planning and Evaluating Health Programs
Prepares students to conduct needs assessments of various diverse populations and develop health care programs to meet the needs. Plans include detailed goals, behavioral objectives, methods, resource and budget allocation, including grant and contract considerations.

HAS 558 Epidemiology and Health Policy
Reviews the conceptual and statistical development of outcome measures in health delivery settings including health care delivery situations and health policy considerations. OQI principles will be developed, and outcome measures will be illustrated and evaluated. Appropriate statistical methods will be introduced. Prerequisite: HAS 550 or MGT 515

HAS 559 Health Behavior and Risk Reduction
Discusses the impact of behavior on the health and well-being of the public. Addresses the leading causes of death and disability that are largely attributable to behaviors that can be modified or prevented through changes in individual, community, and institutional or organizational behavior. The course is designed to help students acquire knowledge of the factors and concepts to describe, explain and predict health-related behaviors as well as behavioral responses to risk communication.

HAS 561 Evaluation and Health Policy
HAS 560 Evaluation of Community Health Programs
Addresses basic principles and practices of program evaluation in the context of a community health program; designing an evaluation plan that can determine if program goals are achieved; implementing an evaluation plan; interpreting evaluation data, and using the results of the program evaluation to improve performance. Students are required to design an evaluation component for the community health program they developed in HAS 557.
Prerequisite: HAS 557
3 credits Lecture

HAS 562 Teaching Strategies for Health Professionals
Examines selection and use of teaching strategies including group discussions, lectures, workshops/demonstrations, simulations, workbooks, self-instructional materials, and audiovisual resources. Includes problem-solving and classroom practice. Requires selection and development of an individual teaching problem or project for presentation, discussion, and evaluation.
3 credits Lecture

HAS 563 Computer Case Studies in Health Care Management
Examines problem solving in health care management through the application of personal computers and case studies. Prerequisite: Knowledge of spreadsheets
3 credits Lecture

HAS 564 Health Information and Communication Systems
Course acquaints students with the types of information systems available in health care and their applications to health care delivery. Includes an overview of various health care network-centered information systems and imaging systems. Reviews system platforms, electronic medical records and computer assisted instruction. Students discuss the integration of health information systems with community health programs. Prerequisite: Knowledge of spreadsheets
3 credits Lecture

HAS 568 HIV/AIDS: A Continuing Societal and Medical Challenge
Examines the social, psychological and medical issues of the HIV/AIDS epidemic in relation to the concerns of health care professionals and educators. Explores and assesses how personal values and attitudes impact on the delivery of health care and/or educational programs. This is offered as both CEM 568 and HAS 568.
3 credits Lecture

HAS 570 Business Aspects of Managed Care
Introduces the students to and expands on their knowledge of the business, ethical, and financial aspects of the managed care delivery system. Trends in the financing of health care will be explored, as well as the practical application of developing and writing a formal business plan.
3 credits Lecture

HAS 571 Issues in Health Care Management
The course is designed to introduce the student to current trends in the United States health care system, including trends in medical-legal issues, labor relations, cost accounting and managed care. Models of progressive programs and health care delivery systems will be reviewed and discussed.
3 credits Lecture

HAS 572 Ambulatory Care Management
Familiarizes the student with areas of ambulatory care management. Identifies national and local trends and practical applications needed to administer outpatient care programs and facilities.
3 credits Lecture

HAS 574 Group Practice Management
Introduces the student to the practices and theories of Group/Physician Practice Management. Provides fundamental understanding of the financial and regulatory issues that influence today's medical practice. Presents issues such as leadership, operations, compensation, and clinical productivity for review.
3 credits Lecture

HAS 575 Long Term Care
Enhances the student's understanding of health care options for the elderly, the existing system of long term care delivery and particularly, the administrative aspects of operating a nursing home. The course will include actual exposure to clinical and operational departments in a nursing home and their effect on outcomes. Students will analyze a review of the rules and regulations governing nursing homes in New York State and the financial implications and reimbursement methodologies that impact upon them.
3 credits Lecture

HAS 576 Workplace 2010
Provides an overview of issues affecting the American workplace in the future through the year 2010. Expected working conditions, human resources, schedules and technology are explored as students learn how to plan for advances and changes in the health system. Through the use of case studies, introduces students to early experiments in organizational evolution and resulting applications to the health care environment. Discusses issues related to diversity, team building and employee education.
3 credits Lecture

HAS 577 e-Healthcare: e-Commerce and e-Care
Introduces students to e-trends and their impact on health care. Revisits the traditional models of healthcare delivery and disease management. Introduces students to the evolution of e-care models. Addresses the use of the Web in healthcare organizations, hospitals, medical facilities, and pharmaceutical companies. Includes e-business strategies, planning and development, e-health and law concepts related to e-services in healthcare.
3 credits Lecture

HAS 578 Leadership in Health Care
Focuses on the future role of the leader in the emerging society of organizations. Reviews lessons learned from the past, in both theory and practice. Examines the impact of leadership, the future of management, business, learning institutions and society. Defines difference between management and leadership skills and strategies for balancing and developing each skill set.
3 credits Lecture

HAS 579 Advanced Seminar in Health Policy
Analyzes the principle of health policy-making. The goal of the seminar is to develop a health policy statement/paper deliverable to the appropriate policy-maker/legislator. Students will have to read and discuss several relevant studies and discussions on public health policy issues. Lecture and seminar.
3 credits Lecture

HAS 580 International Seminar
Compares United States health care systems with those of another country. Includes visits to health facilities, educational institutions, and agencies. Focuses on health promotion and disease prevention in that country as compared to the United States programs. Lectures and seminars by STLM faculty and participants from foreign universities.
1-4 credits Lecture

HAS 582 Seminar in Curriculum Design
Discusses problems and processes of curriculum design in the health fields. Includes developing a rationale for curricular design, components and levels of educational design, implementation problems, and evaluation for curriculum improvement.
3 credits Lecture

HAS 583 Scientific Writing for Thesis and Publication
Provides basic skills and information to plan, research and execute the writing of a scientific abstract, thesis outline, research proposal and develop current literature and raw data into a form for written presentation to support or refute a hypothesis. Focuses on scholarly writing and logical treatment of the data (whether from the literature or the research data book) to support an argument. Permission of instructor required.
3 credits Lecture

HAS 584 Practicum: Community Health Education
Open only to degree candidates in the community health planning and education track. Allows students to apply theory learned while functioning as a manager in health practice.
1-6 credits Tutorial

HAS 586 Practicum: Health Professions Management
Open only to degree candidates in the management track. Allows students to apply theory learned while functioning as a manager in health practice.
1-6 credits Tutorial

HAS 588 Practicum: Health Policy
Open only to degree candidates in the research track. Allows students to apply and demonstrate knowledge of research methodology by either conducting or participating in a major research effort under the supervision of an experienced researcher.
1-6 credits Tutorial

HAS 590 Independent Study
Independent study proposals in health sciences. Must have the approval of the Division and Dean and the Committee of the School of Health Technology and Management prior to registration.
1-6 credits Tutorial

HAS 591 Independent Readings
Supplementary specialized readings for graduate students under faculty supervision. Topic is limited to: community and public health, mental health, health policy, health care management, health care ethics, gerontology, patient education, health economics and policy. Approval must be obtained from the Research and Directed Study Committee of the School of Health Technology and Management prior to registration.
1-6 credits Tutorial

HAS 598 Thesis Seminar
Complements thesis research. Includes presentation by degree candidate of research purpose, methodology and findings and culminates in presentation and discussion of final results.
Corequisite: HAS 599
1 credit Tutorial

HAS 599 Thesis Supervision
Topic, statement of intent, and thesis committee membership must be approved prior to registration.
Corequisite: HAS 598
4-6 credits Tutorial

Division of Diagnostic and Therapeutic Sciences
Chair: James A. Ganetis
Department of Clinical Laboratory Sciences

Chair: Kathleen Finnegan
Professors: Craig J. Lehmann, Martin H. Rosenfeld (emeritus), George T. Tortora

Associate Professors: Donna D. Castellone, Kathleen Finnegan, Deborah T. Finnegan, Vivien A. Odd P. Rueb, Marie I. Soo, Joseph Moreschi, Guglielmo, Mary Hotaling, M. Guglielmo, Mary Hotaling, Joseph Moreschi, Christine Pitocco, Vivien A. Soo, Marie I. Soo, Joseph Moreschi

Instructors: Robert J. Barley, Christine A. Munz, Alfred Palma, Todd P. Ruot

Program in Clinical Laboratory Sciences Leading to the Bachelor of Science Degree

Program Director: Kathleen Finnegan

Medical Advisor: Jay Bock

The Department of Clinical Laboratory Sciences offers an upper-division program leading to the Bachelor of Science degree. Stony Brook freshmen are given the option to declare a lower-division clinical laboratory sciences major. To advance to junior status, they must meet the upper-division admission requirements of the School of Health Technology and Management. In addition, the following courses are required for successful completion of the upper-division program leading to the baccalaureate degree.

Basic Science Courses/Other Health Technology and Management Courses (Junior and Senior Year)

Course# Title Credits
HAS 300 Issues In Health Care 2
HAD 332 Management Concepts for Health Professionals 2
HAS 335 Medical Ethics 1
HAS 350 Introduction to Statistics 2
HAS 351 Research Literacy/Research Design 1
HAS 390 Research Tutorial** 2
HBC 331 Introductory Biochemistry 2
HIP 310 Pathology 3
HIP 401 Physiology 4
HIP 450 Physiology 4

Professional Courses (Junior Year)

Course# Title Credits
HAD 313 Clinical Biochemistry I 3.5

HAD 315 Hematology I 4
HAD 316 General Microbiology 2
HAD 317 Medical Microbiology 2
HAD 320 Foundations in Phlebotomy 1.5
HAD 340 Foundations in Clinical Laboratory Sciences 1.5
HAD 363 Computer Applications in Clinical Laboratory Sciences 2
HAD 380 Clinical Microbiology I 2.5
HAD 381 Clinical Microbiology II 2.5
HAD 387 Clinical Microbiology Practicum* 6
HAD 388 Clinical Hematology Practicum I* 3

Professional Courses (Senior Year)

Course# Title Credits
HAD 403 Medical Molecular Biology 3
HAD 411 Clinical Biochemistry III 2.5
HAD 412 Clinical Biochemistry IV 2
HAD 414 Coagulation, Urinalysis and Body Fluids 2
HAD 416 Immunohematology 3.5
HAD 425 Parasympathetic/Myxology 3.5
HAD 432 Pharmacology 1.5
HAD 460 Clinical Laboratory Quality Management 1
HAD 493 Advanced Seminar in Clinical Laboratory Sciences 2
HAD 494 Clinical Chemistry Practicum* 4
HAD 496 Histocompatibility Practicum (elective)* 1
HAD 497 Immunohematology Practicum* 3
HAD 498 Clinical Coagulation/Urinalysis/Body Fluids Practicum* 1

Special Academic Requirements

In addition to the specific policies of the school, specific academic policies of the program specify that all SHTM and required professional (HAD) courses must be successfully passed in order to remain matriculated in the program. In addition, all professional (HAD) courses with a laboratory component must be passed with a grade of C- or better to remain matriculated in the program. Failure to pass all SHTM and required professional (HAD) courses, or failure to achieve a minimum grade of C- in all professional (HAD) courses with a laboratory component, will require a student to repeat the course.

Elective Track Courses

Forensic Medical Diagnostics

Course# Title Credits
HAD 384 Introduction to Criminalistics 1
HAD 435 Seminar in Forensic Science 1
HAD 438 Forensic Biology Clinical 1.5
HAD 439 Forensic Toxicology Clinical* 3
HAD 440 Forensic Science Practicum* 3.5
HAD 445 Topics in Toxicology 1.5

Diagnostic Instrumentation

Course# Title Credits
HAD 352 Introductory Electron Microscopy and Optical Instrumentation 1
HAD 353 Diagnostic Instrumentation 2
HAD 453 Electrophoresis 2
HAD 458 Diagnostic Instrumentation 2

Laboratory Information Systems

Contact the Clinical Laboratory Sciences Department for specific course list, which includes a Laboratory Information Systems Internship (HAD 460).

Courses

All basic science, professional and other required courses must be passed in order to graduate.

HAD 210 Introduction to Clinical Laboratory Sciences

Introduces the student to forensic science. Describes the interesting and diverse disciplines that comprise the field of investigation for evidence in criminal and civil investigations. Open to open campus students.

1 credit Lecture

HAD 304 Introduction to Criminalistics

Introduces the student to forensic science. Describes the interesting and diverse disciplines that comprise the field of investigation for evidence in criminal and civil investigations. Open to open campus students.

1 credit Lecture

HAD 310 Clinical Lab Practice

Lecture and laboratory exercises in general clinical laboratory practice. Topics include general hematology, coagulation, urinalysis, blood banking, and clinical chemistry. For health professions students not enrolled in the clinical laboratory sciences program.

2 credits Lecture, Laboratory

HAD 313 Clinical Biochemistry I

Examines the physiological, biochemical and mathematical relationships involved in the establishment and utilization of laboratory procedures in the clinical chemistry laboratory. Includes, principles of routine clinical chemistry analytical methods of analysis and the clinical significance of routine clinical chemistry analytes.

3.5 credits Lecture

** Students may be exempt from HAS 450 after successful completion of elective track in either Diagnostic Instrumentation or Laboratory Information Systems.

*A conditional acceptance may be granted if, upon the judgment of department faculty, there are exceptional circumstances concerning department prerequisites.

HAD 450 after successful completion of elective track in either Diagnostic Instrumentation or Laboratory Information Systems.
HAD 315  Hematology I
A comprehensive study of the human hematopoietic system and its relationship to other organ systems. Includes morphologic identification and biochemical characteristics of erythrocytes and leukocytes in normal vs. disease states. Includes principles and applications of current methods in hemostatic analysis, techniques and technology. 
2 credits Lecture, Laboratory

HAD 316  General Microbiology
Introduces the student to important issues in clinical labora-
tory sciences. Addresses personal and professional develop-
ment of current methods in hemostatic analysis, techniques and technology. 
1 credit Lecture, Laboratory

HAD 317  Medical Microbiology
Acquaints the student with the use and application of basic
microorganisms commonly encountered by physician assistants in clinical practice. 
2 credits Lecture

HAD 319  Medical Microbiology for
Physician Assistants
Prerequisite: HAD 316
1 credit Lecture

HAD 330  Foundations in Phlebotomy
Introduces the student to the theory, principles and proce-
dures of blood collection. Course is divided into a didactic por-
tion for theory and principles of blood collection and a labora-
atory portion for blood collection procedures and tech-
niques. 
1.5 credits Lecture, Laboratory

HAD 340  Foundations in Clinical Laboratory Sciences
Introduces the student to relevant concepts in clinical labora-
tory sciences. Addresses personal and professional develop-
ments facing the clinical laboratory scientist. Includes the performance of basic laboratory techniques. 
1.5 credits Lecture

HAD 352  Introductory Electronics and Test Equipment
Introduces students to introductory electronics and electronic
test equipment. Includes basic current and voltage theory; electronic components (i.e., resistors, capacitors); parallel and series network transistor theory; operational amplifiers; digital components; basic microprocessors; digital computers and electronic test equipment. 
2 credits Lecture

HAD 363  Computer Applications in Clinical Laboratory Sciences
Introduces the student to the use and application of basic
computers and laboratory information systems in the clinical
laboratory. Includes utilization and multiple functions of the
computer in the medical laboratory. The laboratory compo-
technique. 
2 credits Lecture, Laboratory

HAD 380  Clinical Microbiology I
Lectures on the morphologic and biochemical differentiation
of commonly isolated microorganisms in the clinical laboratory as well as the biochemical isolation of all media, reagents, tests and antimicrobials used in clinical microbiology. Simulated clinical laboratory includes practical experience in the isola-
tion, identification and antimicrobial susceptibility testing of
microorganisms commonly encountered. Includes morpho-
logic, biochemical and serologic clinical laboratory techniques
using microorganisms involved in human disease. 
2.5 credits Lecture, Laboratory

HAD 381  Clinical Microbiology II
A continuation of HAD 380. 
Prerequisite: HAD 380 
2.5 credits Lecture, Laboratory

HAD 390  Independent Study in Diagnostic Technologies
Students can choose to study one of the following areas:
1-credit Tutorial

HAD 397  Clinical Microbiology Practicum
Full-time instruction and practice of laboratory procedures in
clinical microbiology in an approved hospital laboratory for a
six-week period. Prerequisite: HAD 380. 
Prerequisite: HAD 380 
2 credits Clinical

HAD 398  Clinical Hematology I Practicum
Full-time instruction and practice of laboratory procedures in
hematology and special hematology in an approved hospital
laboratory for a three-week period. Prerequisite: HAD 315 
2 credits Clinical

HAD 403  Medical Molecular Biology
Provides an overview of the structure and function of genes.
Includes theory and laboratory practice of diagnostic molecu-
lar biology techniques utilized in the clinical laboratory to ana-
yze DNA. 
2 credits Lecture, Laboratory

HAD 411  Clinical Biochemistry II
A continuation of HAD 318. 
Prerequisite: HAD 318 
2.5 credits Lecture

HAD 412  Clinical Biochemistry III
Covers the clinical significance and analytical methods for spe-
cial biochemistry analytes commonly seen in the clinical laboratory. 
Prerequisite: HAD 318, HAD 411 
2 credits Lecture

HAD 414  Coagulation, Urolithy and Body Fluids
A comprehensive study of the function and disorders of hemo-
static and thrombosis and anticoagulant therapy. Laboratory
diagnosis and laboratory applications are presented. Includes the fundamental principles of urine and body fluid analysis with correlation of laboratory methods and practice. 
Prerequisite: HAD 308 and HAD 315 
2 credits Lecture, Laboratory

HAD 416  Immunohematology
Examines basic immunology, the human blood groups and
blood group genetics, hemolytic disease of the newborn, trans-
fusion therapy and current blood bank practice. Includes the
performance of clinical laboratory techniques that are
routinely performed in an immunohematology laboratory and
the interpretation of results. 
Prerequisite: HAD 345 
2.5 credits Lecture, Laboratory

HAD 425  Parasitology/Mycology
Encompasses two specialty areas in clinical microbiology, par-
sitology and mycology. The first part of the course consists of
a comprehensive study of parasites of humans and related
hosts with a special emphasis on those of medical importance.
Host-parasite relationships and the role of the parasite in pathoge-
neses are addressed in lecture. Laboratory exercises
demonstrate current methods for identification of parasites of
medical importance using prepared slides. The second part of
the course consists of lecture and laboratory studies of fungi of
medical importance. 
Prerequisite: HAD 181 
2.5 credits Lecture, Laboratory

HAD 426  Pharmacology
Describes the basic concepts in pharmacology as they relate to
the clinical toxicology laboratory. Presents principles and
applications of therapeutics in clinical pharmacology. 
2 credits Lecture

HAD 427  Seminar in Forensic Biology
Describes the basic concepts in forensic science as they relate to
the forensic science laboratory. Offers hands-on experience in forensic science. 
Prerequisite: HAD 304, HAD 435 and permission of CLS faculty
1-6 credits Clinical

HAD 432  Immunologic Identification
A comprehensive study of the human hematopoietic system
with correlation of laboratory methods and practice. 
Prerequisite: HAD 308 and HAD 315 
2 credits Lecture, Laboratory

HAD 439  Forensic Toxicology Clinical
Introduces students to methodologies of analysis and inter-
pretation of data in a clinical toxicology laboratory. 
Prerequisite: HAD 301, HAD 445 and permission of CLS faculty
1-5 credits Clinical

HAD 440  Forensic Sciences Practicum
Full-time instruction and practice in a section of the medical
examiner’s office (e.g., forensic biology, forensic toxicology) to
acquire hands-on experience with techniques utilized in the
medical examiner’s office. 
Prerequisite: HAD 304, HAD 435 and permission of CLS faculty
3.5 credits Clinical

HAD 445  Selected Topics in Toxicology
Familiarizes students with basic concepts of pharmacology and
toxicology. Covers methods of analysis and interpretation of
laboratory data. 
Prerequisite: HBC 301 and HAD 442 
1.5 credits Lecture

HAD 453  Electronic Troubleshooting
Introduces students to methods of troubleshooting electronic
devices. Topics include essential principles and methods of
electronic troubleshooting, test equipment, digital circuitry,
aw well as sequential digital circuitry and principles, applica-
tions and procedures for repair of medical and therapeutic
devices. 
Prerequisite: HAD 352 
2 credits Lecture

HAD 458  Diagnostic Instrumentation Internship
Full-time instruction and practice with electronic equipment
and medical electronic devices, service repair and
electronic troubleshooting. 
Prerequisite: HAD 352, HAD 455 and permission of CLS faculty
2 credits Clinical

HAD 460  Clinical Laboratory Quality Management
Introduces students to total quality managed environments and
provides tools to access quality management programs as
their careers progress into leadership roles. 
1 credit Lecture

HAD 468  Laboratory Information Systems Internship
Familiarizes students with responsibilities of a laboratory
information systems (LIS) manager. Provides exposure to var-
ious operations involved with developing, maintaining and
troubleshooting an LIS in the laboratory and medical infor-
mation systems. 
Prerequisite: HAD 304 
2 credit Lecture

HAD 470  Laboratory Research
Familiarizes students with responsibilities of a laboratory
information systems (LIS) manager. Provides exposure to var-
ious operations involved with developing, maintaining and
troubleshooting an LIS in the laboratory and medical infor-
mation systems. 
Prerequisite: HAD 304 
2 credit Lecture

HAD 471  Research Seminar
Introduces students to the research process, including
research design, data collection and interpretation, report-
generating, and thesis writing. 
1 credit Lecture
SCHOOL OF HEALTH TECHNOLOGY AND MANAGEMENT

matrices setting. Prerequisites: HAD 363; additional prerequi- site track coursework, permission of CLS instructor 1 credit Clinical

HAD 490 Independent Study/ Clinical Laboratory Sciences

Proposals for special projects in clinical laboratory sciences involving readings, research, and laboratory problems must be submitted to the program director for approval prior to registration for this course. 1-6 credits Tutorial

HAD 493 Advanced Seminar in Clinical Laboratory Sciences

Guided discussions about laboratory problems and case stud- ies. Integrates all areas of clinical laboratory sciences for a comprehensive coverage of laboratory medicine. 2 credits Lecture

HAD 494 Clinical Chemistry Practicum

Full-time instruction and practice of laboratory procedures in clinical chemistry and automation in an approved hospital lab- oratory. Prerequisites: HAD 413 and HAD 411 4 credits Clinical

HAD 496 Histocompatibility Practicum

Full-time instruction and practice to introduce and expose the student to various methodologies and instrumental techniques used in a histocompatibility laboratory. Prerequisites: HBP 431, permission of instructor 1 credit Clinical

HAD 497 Immunohematology Practicum

Full-time instruction and practice of laboratory procedures in immunohematology (blood banking) in an approved labora- tory. Emphasizes laboratory techniques used in the identifica- tion and resolution of problems encountered in current blood bank practice. Prerequisite: HAD 416 2 credits Clinical

HAD 498 Coagulation and Urinalysis Practicum

Full-time instruction and practice of laboratory procedures in coagulation and urinalysis in an approved hospital laboratory. Prerequisite: HAD 414 1 credit Clinical

HAD 499 Clinical Toxicology Practicum

Familiarizes students with instrumental methods of analysis in a clinical toxicology laboratory and the interpretation of laboratory data. Prerequisites: HAD 445, permission of instructor 1 credit Clinical

HAD 590 Independent Study/ Clinical Laboratory Sciences

Proposals for special projects in clinical laboratory sciences must be submitted to the program director for approval prior to registration. 1-6 credits Tutorial

HAD 596 Seminar in Immunohematology

For graduate clinical laboratory scientists involved with deci- sion making in immunohemotology. Includes the immune system, immunogenetics, perinatal immunohematology prob- lems, unfavorable effects associated with transfusion, compo- nent therapy, and the administrative policy and practices of blood banking. 3 credits Lecture

Patient Services Training (Phlebotomy/EKG) Program Leading to a Certificate

Program Director: Kathleen Finnegan

The patient services training program is a non-degree, non- credit ASP (American Society of Phlebotomy Technicians) accredited program designed to train students in effective phlebotomy and cardiographic techniques and EKG interpreta- tions. Graduates can be employed in a variety of settings including hospitals, private laboratories and physician's offices. The phlebotomy portion of the program consists of 60 hours of lecture and 30 hours of professional laboratory prac- tice followed by 100 hours of clinical training at a local hospi- tal. The EKG portion of the program consists of 15 hours of lecture and 15 hours of professional laboratory practice.

Admission Requirements

Applicants must be 18 years of age or older; have a high school diploma (or an equivalent), and a minimum grade point aver- age of 80 (on a scale of 100) or 2.5 (on a scale of 4.0). Upon suc- cessful completion of the program, students receive a certificate of achievement and are eligible to take a national certifying examination in phlebotomy.

Program in Cytotechnology Leading to the Bachelor of Science Degree

Program Director: Catherine M. Vetter

Medical Director: Alan Heimann

Associate Professors: Era Khurana, Jelveh Ziba

Assistant Professors: David H. W. Bell II, Kathleen A.M. DaSilva, Catherine M. Vetter

Instructors: Ina Chan, Emily H.G. Gu, Gary Maini

The Program in Cytotechnology offers an upper -division program designed to lead to the Bachelor of Science degree. Cytotechnologists are skilled laboratory scientists who employ microscopic and other analytic methods to evaluate clinical biological cellular specimens for the presence of dis- ease. Detecting changes in cells that may lead to early, life-saving treatment, cytotechnologists are employed as prac- titioners in hospital and private laboratories, and as researchers, managers and educators. The School's Certificate of Professional Achievement and the university's baccalaureate degree are awarded upon satis- factory completion of all coursework. This program is accred- ited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP), in conjunction with the Cytotechnology Programs Review Committee (CPRC) of the American Society of Cytopathology (ASC).

Admission Requirements

Candidates for the Cytotechnology Program must meet the upper -division admission requirements of the School of Health Technology and Management. The requirements may be ful- filled through previously completed college studies. In addi- tion to the general academic requirements for junior status in the School of Health Technology and Management, the program requires candidates to meet the school's natural science requirement by successfully completing 12 credits of biology with laboratories, 8 credits of chemistry with laboratories and 3 credits of college level mathematics. All science courses must be designated for science majors.

The program strongly recommends courses in genetics, cell biology, anatomy, general microbiology, organic chemistry, computer literacy, sociology and human sexuality.

Program Requirements

All cytotechnology students must complete the core course requirements of the School of Health Technology and Management. In addition, the following courses are required for successful completion of the upper -division program lead- ing to the baccalaureate degree.

Basic Science Courses/Other Health Technology and Management Courses (Junior and Senior Year)

<table>
<thead>
<tr>
<th>Course#</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>HAS 300</td>
<td>Issues In Health Care</td>
<td>2</td>
</tr>
<tr>
<td>HAS 332</td>
<td>Management Concepts for Health Professionals</td>
<td>1</td>
</tr>
<tr>
<td>HAS 333</td>
<td>Medical Ethics</td>
<td>1</td>
</tr>
<tr>
<td>HAS 350</td>
<td>Introduction to Statistics</td>
<td>2</td>
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<tr>
<td>HAS 355</td>
<td>Research Literature/Research Design</td>
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<tr>
<td>HAS 490</td>
<td>Research Tutorial</td>
<td>2</td>
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<tr>
<td>HBA 460</td>
<td>Regional Human Anatomy</td>
<td>3</td>
</tr>
<tr>
<td>HBC 351</td>
<td>Introduction to Biochemistry</td>
<td>3</td>
</tr>
<tr>
<td>HBF 310</td>
<td>Pathology</td>
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<tr>
<td>HBF 330</td>
<td>Physiology</td>
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Professional Courses (Junior Year)

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<th>Course#</th>
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<th>Credits</th>
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<tbody>
<tr>
<td>BTO 310</td>
<td>Cell Biology*</td>
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<tr>
<td>BTO 311</td>
<td>Techniques in Molecular Cell Biology*</td>
<td>3</td>
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<tr>
<td>BTO 315</td>
<td>Hematology</td>
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<td>BTO 316</td>
<td>General Microbiology</td>
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<td>BTO 317</td>
<td>Medical Microbiology</td>
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<td>BTO 340</td>
<td>Foundations in Laboratory Sciences</td>
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<td>BTO 390</td>
<td>Clinical Microbiology</td>
<td>2.5</td>
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<tr>
<td>HTO 300</td>
<td>Current Trends in Cancer Care</td>
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Professional Courses (Senior Year)

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<tbody>
<tr>
<td>HTO 410</td>
<td>Microscopic Techniques</td>
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<tr>
<td>HTO 415</td>
<td>Basic Cytologic Diagnosis</td>
<td>3</td>
</tr>
<tr>
<td>HTO 416</td>
<td>Advanced Laboratory Diagnosis</td>
<td>3.5</td>
</tr>
<tr>
<td>HTO 425</td>
<td>Gynecologic Cytology</td>
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<td>HTO 427</td>
<td>Non-Gynecologic Cytology</td>
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<td>HTO 428</td>
<td>Fine Needle Aspiration Cytology</td>
<td>4</td>
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<td>HTO 431</td>
<td>Specimen Preparation Techniques</td>
<td>2</td>
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<td>HTO 432</td>
<td>Applied Cytology Techniques</td>
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<td>HTO 480</td>
<td>Cytopathology Case Studies</td>
<td>3</td>
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<td>HTO 482</td>
<td>Cytology Previews**</td>
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<td>HTO 484</td>
<td>Advanced Cytologic Pracitum I **</td>
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<tr>
<td>HTO 486</td>
<td>Advanced Cytologic Pracitum II**</td>
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<td>HTO 490</td>
<td>Cytology Research</td>
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<tr>
<td>HTO 491</td>
<td>Issues in Cytopathology I</td>
<td>2</td>
</tr>
<tr>
<td>HTO 494</td>
<td>Issues in Cytopathology II</td>
<td>2.5</td>
</tr>
</tbody>
</table>

Courses

HTO 360 Current Trends in Cancer Management

Introduces current trends in cancer treatment and manage- ment. Examines the social implications of cancer treatment, such as insurance coverage, work capability and quality of life. 2 credits Lecture

HTO 410 Microscopic Techniques

Familiarizes students with various types of microscopes used to analyze biological materials with emphasis on the light microscope. Presents appropriate uses and basic concepts of the scanning electron and transmission microscopes. 1.5 credits Lecture

HTO 415 Basic Cytologic Diagnosis

Prepares students to systematically approach the analysis of cytologic specimens. Involves case material of a routine and unusual nature. Students learn techniques of daily specimen slide screening. Requires students to prepare and present case specimens at cytodiagnostic criteria. 3 credits Lecture

HTO 416 Advanced Laboratory Diagnosis

A continuation of HTO 415, the course presents more complex material for cytologic diagnosis. Students develop advanced evaluative skills, specifically for gynecologic and fine needle aspiration specimens. Prerequisite: HTO 415 3.5 credits Lecture

HTO 425 Gynecologic Cytology

Presents histology, endocrinology, normal cytology, abnormal cytology, and disease processes of the female genital tract.

*See University Undergraduate Bulletin
**Clinical practice consists of full-time clinical instruction and practice at the clinical affiliates and other affiliated patient-care facilities.

www.stonybrook.edu/clsbulletin www.stonybrook.edu/clsbulletin
Includes a review of female genital tract anatomy. Examines the biological processes seen under the microscope.

HTO 427 Non-Gynecologic Cytology
Examines the anatomy, histology, and cytology of body sites. Emphasizes needle aspiration specimens such as central nervous system, breast, liver, lymph nodes, thyroid, salivary glands. Presents biological processes ranging from inflammation to neoplasia. Discusses normal cellular preparation from abnormal samples and addresses differential diagnosis. Requires extensive microscopic specimen evaluation.

HTO 431 Specimen Preparation Techniques
Practical experience in the preparation of biological material for microscopic evaluation. Includes cell concentration and fixation techniques, staining procedures, specimen preservation, and quality control measures.

HTO 432 Applied Cytology Techniques
Students accompany and observe cytotechnologists and physicians during fine needle aspiration procedures. Familiarizes students with the operation of specialized instrumentation related to diagnostic cytology. Emphasizes quality control.

HTO 450 Laboratory Management
Provides knowledge and skills to function optimally in and guide the operation of, a cytology laboratory. Students will undertake an organizational plan for a cytology laboratory.

HTO 480 Cytology Case Studies
Introduces the students to diagnostic clinical material and the formal systematic evaluation leading to a final report. Discusses diagnostic agreement and review of clinical assessment. Corequisite: HTO 421 Prerequisites: HTO 425 2 credits Laboratory

HTO 482 Cytology Practicum
Clinical instruction in a medical center/cytology laboratory. Emphasizes slide screening accuracy and speed, as well as fine needle aspiration, and specimen collection, preparation, interpretation and sign out. Students will observe and participate in fine needle aspiration procedures. Prerequisite: HTO 420 5 credits Clinical

HTO 484 Advanced Advancement Practicum I
Full-time instruction and practice in cytologic procedures and evaluations in an approved cytology laboratory for a five week period. Prerequisite: HTO 421 5 credits Clinical

HTO 486 Advanced Practicum II
A continuation of HTO 484. Prerequisite: HTO 484 5 credits Clinical

HTO 488 Health Review
Discusses problems in cytology practice as presented by facility and guest lecturers. Emphasizes students with the operation of specialized instrumentation related to diagnostic cytology. Emphasizes quality control.

HTO 490 Cytology Research
Allows investigation of a topic of choice in gynecologic cytology. Students, with faculty assistance, pursues the investigation, delivers an oral report, and submits a written report.

HTO 491 Cytology Project II
Involves a more in-depth study than HTO 490. Resulting paper is to be potentially publishable.

HTO 493 Issues in Cytodiagnosis I
Discussion of areas of major interest in cytology, including medical and legal issues, ethics, government regulations, the role of specimen evaluation in health care management, and health care research as related to diagnostic cytology. Laboratory management issues, Journal Club and presentations from national meetings will be included.

Program in Respiratory Care Leading to the Bachelor of Science Degree
Program Director: James A. Ganets
Medical Director: Gerald Smaldone Clinical Education Director: Lisa M. Johnson

Associate Professors: Edgar L. Anderson, Jr. (emeritus), William J. Treaunor (emeritus)
Assistant Professors: Kenneth L. Acton Jr., Ingrid Boznet, James A. Ganets, Joseph F. Hock, Kenneth W. Hughes, Lisa M. Johnson, Michael McPeck, James M. O’Connor, Thomas R. Smalling, Stephen G. Smith


The respiratory care program offers a full-time upper-division program leading to the Bachelor of Science degree. A certificate in respiratory therapy is also offered to students who complete the optional senior year courses in polysomnography. Stony Brook freshmen are given the option to declare respiratory care as a lower-division major.

Respiratory therapists utilize a variety of sophisticated medical equipment and therapies in the diagnosis and management of patients with a wide range of cardiorespiratory disorders. The knowledge and skills of the respiratory therapist are utilized in many aspects of health care including medical, surgical intensive care, neonatal intensive care, pediatrics, emergency and trauma care, card iopulmonary diagnostic laboratories and in rehabilitation and home care. Individuals who graduate from the program are employed as clinicians, managers, educators and researchers.

The program is accredited by the Commission on Accreditation for Respiratory Education Programs (CAAREP), in cooperation with the Committee on Accreditation for Respiratory Care (CoARC), and the New York State Board of Regents.

The school’s Certificate of Professional Achievement and the University’s baccalaureate degree are awarded upon satisfactory completion of all coursework.

Admission Requirements
Candidates for the respiratory care program must complete the upper-division admission requirements of the School of Health Technology and Management. The requirements may be fulfilled through completion of college level courses.

In addition to the general academic requirements for junior status in the School of Health Technology and Management, candidates must have a minimum grade point average (GPA) of 2.5 and a minimum science GPA of 2.0. The program also requires candidates to meet the school's natural science and biology requirements by successfully completing 11 credits of biological sciences (including 3 credits of microbiology), 8 credits of chemistry with laboratories, 4 credits of physics with 3 credits of college level mathematics and 4 credits in basic life support (BLS) from the American Heart Association. An additional physics course, as well as courses in anatomy and physiology, is also recommended.

Science courses designated for science majors are preferred.

To advance to junior status, Stony Brook students who declared a respiratory care major as freshmen must meet the requirements described above, maintain a 2.5 cumulative GPA, and successfully complete HAT 219 with a grade of B or higher.

Program Requirements
All respiratory care students must complete the core course requirements of the School of Health Technology and Management. In addition, the following courses are required for successful completion of the upper-division program leading to the Bachelor of Science degree.

Basic Science/Other Health Technology and Management Courses

<table>
<thead>
<tr>
<th>Course #</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>HAS 800</td>
<td>Issues in Health Care</td>
<td>2</td>
</tr>
<tr>
<td>HAS 922</td>
<td>Management</td>
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<tr>
<td>HAS 813</td>
<td>Medical Ethics</td>
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<tr>
<td>HAS 821</td>
<td>Introductory Biostatistics</td>
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</tr>
<tr>
<td>HAS 851</td>
<td>Computer Literacy for Health Professionals</td>
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</tr>
<tr>
<td>HBA 561</td>
<td>Human Gross Anatomy</td>
<td>5</td>
</tr>
<tr>
<td>HHB 109</td>
<td>Fundamentals of Pharmacology I</td>
<td>5</td>
</tr>
<tr>
<td>HHB 311</td>
<td>Fundamentals of Pharmacology II</td>
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<tr>
<td>HBP 310</td>
<td>Pathology</td>
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<tr>
<td>HBY 350</td>
<td>Physiology</td>
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Professional Courses (Junior Year)

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<tbody>
<tr>
<td>HAT 304</td>
<td>Cardiopulmonary Physiology</td>
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<tr>
<td>HAT 306</td>
<td>Patient Evaluation</td>
<td>2</td>
</tr>
<tr>
<td>HAT 320</td>
<td>Cardiopulmonary Diagnosis and Treatment I</td>
<td>2</td>
</tr>
<tr>
<td>HAT 331</td>
<td>Pulmonary Pathology</td>
<td>2</td>
</tr>
<tr>
<td>HAT 333</td>
<td>Respiratory Care Techniques I</td>
<td>3</td>
</tr>
<tr>
<td>HAT 340</td>
<td>Pulmonary Diagnostic Techniques</td>
<td>3</td>
</tr>
<tr>
<td>HAT 350</td>
<td>Cardiovascular Clinical</td>
<td>2</td>
</tr>
<tr>
<td>HAT 355</td>
<td>Basic Respiratory Care Clinical</td>
<td>4</td>
</tr>
<tr>
<td>HAT 356</td>
<td>Pulmonary Diagnostic Clinical</td>
<td>4</td>
</tr>
<tr>
<td>HAT 354</td>
<td>Airway Management Clinical</td>
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Professional Courses (Senior Year)

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<tr>
<td>HAT 402</td>
<td>Advanced Cardiac Life Support</td>
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<tr>
<td>HAT 404</td>
<td>Neonatal Resuscitation</td>
<td>1</td>
</tr>
<tr>
<td>HAT 410</td>
<td>Introduction to Clinical Education</td>
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</tr>
<tr>
<td>HAT 411</td>
<td>Clinical Skills</td>
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<tr>
<td>HAT 415</td>
<td>Instrumentation in Respiratory Care</td>
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<td>HAT 420</td>
<td>Cardiovascular Diagnostics</td>
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<tr>
<td>HAT 431</td>
<td>Respiratory Care Techniques II</td>
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<td>HAT 432</td>
<td>Perinatal Respiratory Care</td>
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<tr>
<td>HAT 450</td>
<td>Critical Care Clinical</td>
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<tr>
<td>HAT 451</td>
<td>Perinatal Care Clinical</td>
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<tr>
<td>HAT 482</td>
<td>Physiologic Monitoring Clinical</td>
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</tr>
<tr>
<td>HAT 487</td>
<td>Cardiopulmonary Rehabilitation Clinical</td>
<td>2</td>
</tr>
</tbody>
</table>

*Clinical practice consists of full-time clinical instruction and practice at the clinical affiliates and other affiliated patient-care facilities.
HAT 493 Seminar/Readings in Respiratory Care I 1
HAT 494 Seminar/Readings in Respiratory Care II 1

Optional Polysomnography Certificate Courses

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<tr>
<th>Course#</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>HAT 470</td>
<td>Polysomnographic Technology I</td>
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<tr>
<td>HAT 471</td>
<td>Polysomnographic Technology II</td>
<td>2</td>
</tr>
<tr>
<td>HAT 475</td>
<td>Technology I Clinical*</td>
<td>2</td>
</tr>
<tr>
<td>HAT 476</td>
<td>Polysomnographic Technology II Clinical*</td>
<td>2</td>
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</tbody>
</table>

Courses

HAT courses are given for respiratory care (RC) majors. The courses are sequential and require successful completion of prior courses. Non-RC students may take selected HAT courses, with the exception of clinical practica, with permission of instructor.

HAT 210 Introduction to Respiratory Care
An introduction to the science of respiratory care. Current trends in professional practice are discussed and students have the opportunity to observe clinical practice at a variety of affiliated health care facilities. This course is specifically designed for lower-division four year respiratory care majors. Open to West campus students.
1 credit Lecture

HAT 304 Cardiopulmonary Physiology
Presents a detailed study of the physiology of human respiration and circulation. Topics include functional cardiopulmonary anatomy, embryology, ventilation, diffusion, blood flow, gas transport, acid-base states, mechanics and regulation of ventilation and basic cardiac function.
3 credits Lecture

HAT 306 Patient Evaluation
Provides concept of data base, historical information, medical terminology, chief complaint and present illness, and chest physical examination. Applies problem based learning to the study of clinical assessment skills.
2 credits Lecture, Laboratory

HAT 320 Cardiovascular Diagnosis and Treatment I
Provides the basic technical and interpretive skills required to execute and read an electrocardiogram. Covers basic electro-physiology and presents the etiology, diagnosis and treatment of arrhythmias, as well as common cardiovascular pathologies, including congenital heart disease. The laboratory component includes EKG's, Holter monitoring and stress testing.
2 credits Lecture, Laboratory

HAT 330 Pulmonary Pathology
A comprehensive study of the etiology, diagnosis, pathogenesis, pathophysiology, illness, treatment, and prognosis of various types of pulmonary pathologies.
3 credits Lecture

HAT 331 Respiratory Care Techniques I
Covers the basic therapeutics modalities of respiratory therapy including oxygen therapy, humidification, aerosol therapy, chest physical therapy, incentive spirometry, intermittent positive pressure breathing, blood gases, and airway management. Includes application of techniques of infection control, rehabilitation and home care, and patient education. Prerequisites: HAT 304, HAT 306
3 credits Lecture, Laboratory

HAT 333 Pulmonary Diagnostic Techniques
Provides the basic technical skills of pulmonary function testing, including an introduction to the instrumentation and clinical principles of clinical measurement and procedures for measuring the lung functions of ventilation, mechanics, diffusion, gas distribution and exchange; and interpretation of tests results and their relation to various pathophysiologies. Prerequisite: HAT 304
3 credits Lecture, Laboratory

HAT 340 Cardiovascular Clinical
Provides clinical practice in cardiovascular technology, including both invasive and noninvasive techniques. Students will be introduced to clinical Ekg's, Holter scanning, stress testing, and general noninvasive cardiology.
Prerequisite: HAT 320
2 credits Clinical

HAT 350 Basic Respiratory Care Clinical
An introduction to the clinical application of basic respiratory procedures such as oxygen administration, aerosol therapy, IPPB, arterial punctures and other monitoring and diagnostic procedures. Additional experience is provided in the home care setting. Prerequisite: HAT 351
3 credits Lecture, Laboratory

HAT 353 Pulmonary Diagnostic Clinical
Clinical application of spirometry, diffusion studies, blood gas analysis, flow volume loops, body plethysmography, helium dilution, nitrogen washouts, and bronchodilator responses. Prerequisite: HAT 353
3 credits Clinical

HAT 354 Airway Management Clinical
Introduces the use of mechanical, cognitive, and decisional skills required in managing the airways of critically ill patients. Introduces students to actual patient management under supervision. Prerequisite: HAT 351
3 credits Clinical

HAT 390 Advanced Cardiac Life Support
Prepares the Respiratory Care student to be a participating member of the Advanced Cardiac Life Support team. The content of this course is modeled after the ACLS course offered by the American Heart Association.
1 credit Lecture

HAT 404 Neonatal Resuscitation
Provides students with knowledge and skills to perform neonatal resuscitation utilizing simulated situations for practice. Demonstrates the use of resuscitation equipment on manikins.
1 credit Lecture

HAT 410 Introduction to Clinical Education
Introduces clinical teaching to senior students. Modalities include the decision making process, teaching strategies, classroom management, instructional design, and formative and summative evaluation.
2 credits Lecture

HAT 411 Clinical Teaching in Respiratory Care
An extension of HAT 410. Develops skills for senior students to conduct clinical teaching strategies under faculty supervision. Prerequisite: HAT 410
3 credits Clinical

HAT 412 Cardiovascular Diagnosis and Treatment II
Examines the theory and practical applications of invasive physiologic monitoring, including metabolic and hemodynamic monitoring, Swan-Ganz catheterization, cardiac output measurement and aseptic technique. Also contains an in depth study of the etiology, pathology and treatment of advanced cardiovascular disease, including congestive heart disease. Prerequisite: HAT 320
3 credits Lecture, Laboratory

HAT 420 Cardiopulmonary Diagnosis and Treatment II
Examines the diagnosis and treatment of respiratory care as well as other areas related to the holistic care of the newborn. Emphasizes specific technical procedures that differ from the adult patient. Prerequisite: HAT 432
3 credits Clinical

HAT 421 Infection Control
Introduces the concepts of infection control in respiratory care.
1 credit Lecture

HAT 422 Critical Care Clinical
Develops clinical skills and knowledge of clinical infection control. Includes specialized learning experiences in therapeutic modalities, mechanical ventilation, cardiovascular monitoring and home care ventilation. Prerequisites: HAT 350, HAT 431
3 credits Clinical

HAT 431 Respiratory Care Techniques II
Introduces the concepts of advanced airway management and mechanical ventilation used in the respiritory support of the critically ill patient. Emphasizes the physiological basis for ventilator use, indications for ventilation, parameters monitored during ventilation, and ventilator design, function and clinical application. Prerequisite: HAT 351
2 credits Lecture, Laboratory

HAT 432 Perinatal Respiratory Care
Examines anatomy, physiology, and pathology relating to management of the neonate/pediatric patient. Includes analysis of neonatal and pediatric ventilator function in terms of mechanics and suitability in clinical application. Corequisites: HAT 430, HAT 431
3 credits Lecture, Laboratory

HAT 450 Critical Care Clinical
Examines the concepts of advanced medical and surgical care as well as other areas related to the holistic care of the newborn. Emphasizes specific technical procedures that differ from the adult patient. Prerequisite: HAT 432
3 credits Clinical

HAT 470 Polysomnographic Technology I
Designed to provide entry-level personnel with both didactic and laboratory training in polysomnographic technology. Presents medical terminology, instrumentation setup and calibration, recording and monitoring techniques, documentation, professional issues and patient-technologist interactions. Lab sessions will provide practical experience in the skills in the skills required of an entry-level polysomnographic technologist. Prerequisites: Completion of all junior year courses
2 credits Lecture, Laboratory

HAT 471 Polysomnographic Technology II
Provides training in more advanced aspects of polysomnographic technology. Students become familiar with the skills and knowledge needed to obtain and evaluate high quality sleep recordings. Covers all the aspects of sleep scoring and event recognition, recording and monitoring techniques, documentation, professional issues, therapeutic interventions, and patient-technologist interactions related to polysomnographic technology.
3 credits Lecture, Laboratory

HAT 475 Polysomnographic Technology I Clinical
Provides clinical training in the basics of polysomnographic technology. Familiarizes students with instrumentation setup and calibration, recording and monitoring techniques, documentation, professional issues, and patient-technologist interactions related to polysomnographic technology. Provides patient contact in a sleep lab. Presents opportunity to observe, perform (under supervision) and evaluate sleep studies.
2 credits Clinical
HAT 476 Polysomnographic Technology II Clinical
Provides student with patient contact in a sleep lab through observation, performance under supervision, and evaluation of sleep studies. Familiarizes student with skills required to obtain and evaluate quality sleep recordings. Prerequisite: HAT 471, HAT 475
1 credit Clinical

HAT 482 Physiologic Monitoring Clinical
Provides a clinical experience in the hemodynamic and metabolic monitoring of patients in critical care units/labs. Covers invasive diagnostic cardiovascular procedures, including cardiac catheterization, intra-arterial pressure monitoring, and indwelling arterial catheter insertion and monitoring. Prerequisites: HAT 420, HAT 431
1 credit Clinical

HAT 487 Cardiopulmonary Rehabilitation Clinical
A clinical experience concentrating on program planning and evaluation of patients with chronic cardiopulmonary disorders. Includes discharge planning, rehabilitative services, stress testing, graded exercise and other supportive techniques. Prerequisites: HAT 320, HAT 331
2 credits Clinical

HAT 490 Independent Study
Proposals for independent study in respiratory care must be submitted through the program director to the Committee on Research and Directed Study for approval prior to registration for this course.
1-6 credits Tutorial

HAT 493 Seminar/Readings in Respiratory Care I
A journal club offering that is designed to assist the student in the development of a professional knowledge base. Each student is expected to review and critically analyze current research publications in the field of respiratory care and report those findings to the faculty and their peers in an informal discussion setting.
1 credit Seminar

HAT 494 Seminar/Readings in Respiratory Care II
A practical discussion and seminar course that prepares the student to take the national certification and registry examinations. Each student will take self-assessment exams that will be analyzed and technical and clinical skills in the areas of data collection and interpretation, as well as decision making skills.
1 credit Lecture

Division of Rehabilitation Sciences
Chair: Richard W. Johnson

Department of Physical Therapy
Chair: Richard W. Johnson

Director of Academic Administration: Janice M. Sniffen

Director of Curriculum and Faculty Development: Anita M. Santansier

Associate Professors: William E. DeTurk, Richard W. Johnson, Eric Lambreg, Raymond F. McHenna, Margaret A. McNlain, Clifton S. Metress (emeritus), Lisa M. Muratori, Margaret M. Plack, Anita M. Santansier, Jacob S. Schleichkorn (emeritus), Janice M. Sniffen, Ten Tiso


Lecturers: Gina Alaimo, Robert Biaggi, Elizabeth A. Budd, Paul Neil Ciziko, Barbara W. DeTurk, Agnes McConiglie Ferro, Barbara V. Lee, Jeannine Van Moerser, Deborah L. Wengarten

Instructors: Ann Arcery, Christine M. Caldeore, Daniel R. Cammarata, Christopher K. Carden, Donald S. Doherty, Donald S. Handeck, Raymond F. Matfleed, James Megna, Diana M. Nicholson, Maureen O’Reurhe

Program in Physical Therapy Leading to the Entry-Level Doctor of Physical Therapy Degree

Chair: Richard W. Johnson

Academic Coordinators of Clinical Education: Dawn Blatt, Cheri Gostic and Rose Ortega

Recent trends in health care have precipitated the development of a three-year entry-level graduate clinical doctorate program in physical therapy. These changes in health care include:

• Shorter lengths of stay in traditional environments.
• Higher acuity and survival as a result of medical science and technological advances.
• The need for health management via intervention, prevention and maintenance, as well as the management of disease, impairments and disabilities.
• Eole and practice adaptations by physical therapists in anticipation of and in response to market changes.
• The development of strategies by payers that demand evidence-based justifications for interventions.
• Health care models that require greater risk assessment and accountability for outcomes of care.

The three-year graduate program consists of 109.5 didactic credits and 40 clinical credits. Graduates of the program are prepared to provide care in a multitude of physical therapy settings.

The program develops leaders who demonstrate evidence-based practice, critical inquiry skills and clinical decision making skills needed for differential diagnosis and autonomous practice. In addition to direct patient care, graduates can pursue careers in research, administration, consultation, and community health.

The Doctor of Physical Therapy Program is accredited by the Commission on Accreditation in Physical Therapy Education of the American Physical Therapy Association (CAPTE/APTA). Graduates are eligible to sit for the national license exam. In addition to the doctor of physical therapy degree, the school’s Certificate of Professional Achievement in Physical Therapy is awarded upon satisfactory completion of all course work.

Admission Requirements
Applicants for the entry-level doctor of physical therapy program must have completed baccalaureate degree prior to enrollment in the program. Candidates must meet the school’s basic science requirement by successfully completing eight credits each of chemistry, physics, and biology. Each course must be designated for science majors and have a laboratory component. A three credit 300 or 400 level physiology course or eight credits of Anatomy and Physiology is also required.

Completion of required science courses must be within the past five years. In addition, the department requires 9 credits in social and behavioral sciences, 9 credits in arts and humanities, 3 credits in English composition and 3 credits in statistics. Candidates must complete required course work by the end of the spring term of the year for which the application is made. Certification in cardiopulmonary resuscitation (CPR) and adult advanced cardiac life support is required. A minimum of a 3.0 cumulative grade point average and a 3.0 grade point average for the required prerequisite science courses is preferred. Applicants must submit Graduate Record Examination (GRE) scores. At least 100 hours of volunteer or work experience within a physical therapy facility is required. A varied exposure to the field is recommended.

Program Requirements
All physical therapy students must complete the following required courses.

Professional Courses (Year One)

Course# Title Credits
HAY 500 Neurophysiology for Physical Therapy 4
HAY 501 Growth and Development Across the Life Span 4
HAY 504 Introduction to Adult Rehabilitation 3.5
HAY 517 Exercise Physiology 1
HAY 518 Foundations of Exercise and Movement in Physical Therapy 3.5
HAY 519 Kinesiology 5
HAY 520 Clinical Medicine and Pharmacology I 3.5

Special Academic Requirements
In addition to the academic policies of the school, a minimum grade of C- in HAY 540 Regional Human Anatomy is required for continued matriculation in the physical therapy program. For the remaining professional courses, each student must achieve a minimum grade of C+. Failure to earn a minimum of a C+ will require a student to repeat the course and prevent the student from participating in clinical affiliations. Failure to successfully complete 3 or more courses during the three-year curriculum will result in a student being subject to termination from the program. Additionally, students must

*Clinical practice consists of full-time clinical instruction and practice at the clinical affiliates and other affiliated patient-care facilities.
maintain a 3.0 cumulative grade point average to remain in good academic standing and participate in clinical affiliations.

Program in Physical Therapy Leading to the Post-Professional (Transition) Doctor of Physical Therapy Degree

Chair: Richard W. Johnson
Program Director: Kyle Hewson
Associate Program Director: Sharon Martin

The Post-Professional (Transition) Doctor of Physical Therapy (DPT) is designed to enhance clinical decision making skills and promote evidence-based practice necessary for success in today's health care market. Coursework is designed to provide the current knowledge and theory of practice consistent with the demands of the doctoring profession. This program meets the contemporary needs of physiotherapists, managers, and educators. Specific areas of augmentation include: foundational sciences (pharmacology and medical imaging), clinical sciences (evidence-based practice, clinical decision making, differential diagnosis, health care management, and health, prevention and wellness), computer technology, and outcome measurement and analysis. Students are given the opportunity to pursue further study in areas of particular interest by enrolling in elective classes. These electives span current practice in the areas of musculoskeletal, neuromotor, and cardiopulmonary care as well as health, wellness and prevention, education and administration. Courses are offered in evening and weekend formats to accommodate the working clinician. Courses are offered at two sites, Stony Brook Long Island and Stony Brook Manhattan. Students admitted to the program are eligible to enroll in classes at either or both locations. Please note that any courses offered in the SHTM Advanced Certificate plan and implement an intervention for neurologic patient populations. Presents fundamental skills including documentation, body mechanics, heel mobility and patient positioning, wheelchair management, transfer and ambulation training. Introduces students to task-oriented practice and neuromotor-apetite techniques and applies exercise principles established in Foundations of Exercise and Movement systems. Provides presentations on relevant principles of organization and function of the peripheral and central nervous systems. Core: Candidates must complete the courses listed below

- Core: Candidates must satisfy all core and elective requirements (36.8 credits).
- Core: Candidates must complete the courses listed below
  - Hay 506 Outcomes Measurement and Analysis 3
  - Hay 558 Evidence Based Practice Seminar 3
  - Hay 276 Clinical Decision Making 3

- Electives
  - Candidates must select 3 courses for a total of at least 7 elective credits. Electives will vary and may include, but are limited to, the following:

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<tr>
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<td>Hay 529</td>
<td>Biomechanics</td>
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<td>Hay 521</td>
<td>Musculoskeletal Measurement</td>
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<th>Topics in Cardiopulmonary Physical Therapy</th>
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<tr>
<td>Course</td>
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<th>Topics in Health, Wellness, and Prevention</th>
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<tr>
<td>Course</td>
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<th>Courses</th>
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<td>Hay 500</td>
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- Integrated approach to general principles of organization and function of the peripheral and central nervous systems. Present these principles in a systems approach to neurosciences. Covers the anatomy of the system with its physiology and clinical relevance to rehabilitation. Clinical topics include neurology, neurological testing, control of posture and balance, locomotion, pain, muscle tone, feedback vs. feed-forward control mechanisms, control of reaching, perception and learning. Prerequisite: HIA 549 1 credit Lecture

| Hay 501 | Growth and Development Across the Life Span | 2 |

- Presents an integrative approach to norma human growth and development throughout the life span. Examines developmental norms and sequences with emphasis on biophysical (motor and sensory), cognitive, language and psychosocial tasks. Discusses social, cultural and environmental influences. Covers prennancy, infancy, child, adolescent, adult and elder geriatric development, as well as related aging issues. 3 credits Lecture

| Hay 502 | Psychosocial Aspects of Disability I | 3 |

- Emphasizes the psychosocial aspects of disability as they affect the life of the individual. Topics include identification of the pre-morbid factors that contribute to positive adjustment or maladaptive responses to disability; the influence of culture on individuals and family expectations of the healthcare system and patient perspectives as consumers of the healthcare care system; and changing roles in the family. Students will practice techniques of positive listening and role-play to develop skills in recognizing psychosocial factors during acquisition of patient history. Emphasizes utilization of psychosocial information in the development of a plan of care for patients across the life span. 1 credit Lecture, Laboratory

| Hay 503 | Psychosocial Aspects of Disability II | 3 |

- Explores the interactions of the individual with disability within the community. Focuses on concerns of the individual beyond biological rehabilitation. Topics include concomitant mental health issues; the mind-body connection; humor in medicine; complementary and alternative medicine; technoloy and disability; vocational rehabilitation; sexuality; domestic violence and interpersonal abuse; substance abuse; and terminal illness. Promotes identification and communication within self and with others; family counseling. Introduces individuals with disabilities to engage in recreational, vocational, or educational endeavors. Prerequisite: Hay 502 1 credit Lecture, Laboratory

| Hay 504 | Introduction to Adult Rehabilitation | 4 |

- A systems model of motor control and principles of motor learning will be utilized as a theoretical framework to prepare students to examine, evaluate, establish problem lists, determine and write appropriate goals, develop an intervention plan and implement an intervention for neurological patient

| Hay 505 | Psychosocial Aspects of Disability III | 3 |

- Explores the interactions of the individual with disability within the community. Focuses on concerns of the individual beyond biological rehabilitation. Topics include concomitant mental health issues; the mind-body connection; humor in medicine; complementary and alternative medicine; technoloy and disability; vocational rehabilitation; sexuality; domestic violence and interpersonal abuse; substance abuse; and terminal illness. Promotes identification and communication within self and with others; family counseling. Introduces individuals with disabilities to engage in recreational, vocational, or educational endeavors. Prerequisite: Hay 502 1 credit Lecture, Laboratory

| Hay 506 | Adult Neurological Rehabilitation | 3 |

- Uses the disabilment model to examine the impact of adult neurological or neuromuscular conditions on activities identified by an individual as essential to support physical, social, and psychological well-being and to create a personal sense of meaningful living. Students will continue practicing synthesis of examination data during the evaluation process; however, the major emphasis of the course will be to develop and implement appropriate intervention strategies based on the best evidence available for people with neurological or neuromuscular disorders. Prerequisites: Hay 500 and 504 3.5 credits Lecture, Laboratory

| Hay 507 | Orthopedic Physical Therapy I | 3 |

- Introduces concepts of musculoskeletal objective and objective examination. Emphasizes student's evaluation skills as clinical decision-making and differential physical therapy diagnosis, prognosis and treatment in the framework of musculoskeletal dysfunction. Applies these general skills to various musculoskeletal dysfunctions of the lower extremities, including the osteokinematics, arthrokinesics, myokinesics and myology of the lower extremities as they relate to surgical and nonsurgical musculoskeletal conditions. Prerequisite: Hay 519 3.5 credits Lecture, Laboratory

| Hay 508 | Orthopedic Physical Therapy II | 3 |

- Builds on the concepts and skills of Orthopedic Physical Therapy I by integrating clinical decision-making and differential physical therapy diagnosis, prognosis and intervention of the lower extremities with the spine and upper extremities. Various musculoskeletal dysfunctions of the trunk and upper extremities are explored. Functional anatomy, including the osteokinematics, arthrokinesics, myokinesics and myology of the trunk and upper extremities are discussed as they relate to surgical and non-surgical musculoskeletal conditions. Prerequisites: Hay 529 and 519 3.5 credits Lecture, Laboratory

| Hay 509 | Pediatric Rehabilitation | 3 |

- Emphasizes abnormal movement patterns in children. Presents developmental and long term effects of neuromuscular and musculoskeletal dysfunction as they relate to movement. Discusses examination and intervention techniques of selected movement problems. Explores use of adaptive equipment and the role of the pediatric physical therapist in a variety of contexts and environments. Students will assess and work with children with developmental disabilities in a local facility. Prerequisites: Hay 501 and 506 4 credits Lecture, Laboratory
HAY 510 Cardiopulmonary Rehabilitation
Emphasizes the patient-client management model for cardiac and pulmonary rehabilitation. Students will work with in-patient and home care settings. Includes interpretation of electrocardiograms, heart/lung auscultation, and the administration of graded exercise test protocols. Includes discussion of aerobic endurance exercise prescription and the use of appliances in elderly patients with congestive heart failure. Emphasizes the use of evaluative findings to develop a total plan of care.
Prerequisite: HAY 517, HAY 520, HAY 527, HAY 528
3 credits Lecture, Laboratory

HAY 520 Biomechanics
Biomechanics uses laws of physics and engineering to describe the motion and forces acting on these body parts during activities. Considers the application of classic mechanics, including statics, dynamics, and the analysis of machine and mechanical systems. Anatomical structures and the loads placed on biological tissue. Uses a quantitative biomechanical approach to analyze loads on joints and muscular forces. Students will choose a research project related to the testing of vitals and select exercise testing. Exercise prescription
Prerequisite: HAY 540
3 credits Lecture, Laboratory

HAY 521 Musculoskeletal Measurement
Presents measurement methodology of human motion including motion analysis, EMG, electrogoniometry, force plates and dynamometry. Reviews selected examples of methodology from current literature and the use of different instruments. Students will choose a research project related to the topics of record data. Requires a teaching project related to kinesio or kinetic measurement
Prerequisite: HAY 520
3 credits Lecture, Laboratory

HAY 523 Biomechanics and Measurement
Presents mathematical and technological tools used in biomechanical analysis of human movement. Through the study of kinematics, kinetics and electromyography, students describe and quantify appropriate variables used in studio exercises or in clinical examination. Students will choose a research project related to the topics of record data. Requires a teaching project related to kinesio or kinetic measurement
Prerequisite: HAY 520
3 credits Lecture, Laboratory

HAY 524 Health, Wellness and Prevention in Physical Therapy
Presents issues related to promotion of health and wellness in general practice assessment. Emphasizes the role of health promotion in the medical care setting. Includes the role of health promotion in the medical care setting. Includes the role of health promotion in the medical care setting. Includes the role of health promotion in the medical care setting.
Prerequisite: HAY 519
3.5 credits Lecture, Laboratory

HAY 519 Kinesiology
Explores the kinetics and kinematics of normal, norm-physiological movement. Integrates knowledge of human anatomy, physiology, mechanics and biomechanics as it applies to move-
HAY 536 Introduction to Motor Control
Establishes historical context for major explanatory concepts applied to issues of coordination and skill during the last century. Presents readings of original work on leading theories of movement and the roles they have made significant contributions during this period. Students will critically evaluate papers related to reflex theory, sensorial order, servomechanics, information processing theory, motor programs, dynamic pattern theory and computational models.
3 credits Lecture

HAY 537 Neuroplasticity
Presents an overview of function mechanisms. Students critically analyze animal and human research literature examining spinal cord, somatosensory cortex, motor cortex and neural plasticity. Addresses effectiveness of different human movement therapy strategies involving the issue of neural changes. Explores the effects of age, nature of lesion, environment and pharmacology on recovery of function. Links neural plasticity research to conceptual frameworks for clinical practice.
Prerequisite: HAY 536
3 credits Lecture

HAY 541 Physical Agents and Wound Care in Physical Therapy
Physical modalities including superficial and deep thermal agents, ultrasound, laser therapy, aquatic therapy, intermittent compression, mechanical traction, burn and wound care with aesthetic technique are presented in class. Emphasis will be placed on evidence-based procedures that the might be used to treat patients. Students will be expected to extract information from a case study, prior to presenting their findings.
3 credits Lecture

HAY 551 Introduction to Research Methods and Design
Introduces basic concepts of scientific design and methodological considerations for the critical examination of scientific literature. Explores the relevance of research application and evidence-based practice in physical therapy. Introduces concepts of research design, independent variables, hypothesis testing, sampling, and experimental controls. Addresses ethical issues, informed consent and human subject constraints. Measurement reliability and validity will be emphasized with an application to outcomes management. Explores a variety of research designs including experimental, quasi-experimental, descriptive, qualitative and single case study designs. Basic concepts of statistical analyses will be integrated through discussion and literature learning projects.
3 credits Lecture

HAY 552 Research Methods for Physical Therapists: Design and Statistics
Designed to teach entry level physical therapy students the fundamentals of reading and understanding research methods, design, and statistics. Includes reliability and validity, research design, descriptive statistics, statistical inference, test for experimental comparison, correlation, regressions, nonparametric tests, single subject design, and qualitative research. Addresses the relationship between research and practice and research design by introducing relevant research articles in the health care field.
3 credits Lecture

HAY 553 Computer Literacy and Evidence Based Practice
Addresses the foundation of how clinicians practicing therapists need to effectively manage, integrate, and communicate information for clinical practice, research and professional activities. This course exists in the three parts. Part I focuses on accessing and evaluating clinical information. Part II focuses on information organization and manipulation. Part III focuses on the management and dissemination of information.
2 credits Lecture

HAY 555 Outcomes Measurement and Analysis
Introduces students to various outcome measures relating to impairments, functional limitations and disability, general health status, and patient/client satisfaction used to guide physical therapy practice across the lifespan. Measurement properties will be explored and strategies discussed to appropriately assess and select various outcome measurement scales. Critical appraisal of the literature will provide the basis for making clinical decisions regarding selection of the most beneficial outcome measure for an individual patient/client, setting and analyzing program.
3 credits Lecture

HAY 558 Evidence Based Practice Seminar
Explores a broad spectrum of research literature examining physical therapy practice. Uses literature as a tool to integrate students critical inquiry skills and depth of knowledge in human movement, neuromusculoskeletal measurement, cardiopulmonary functions, motor control and motor learning theory. Students judge the strength of the evidence of each paper and analyze its relevancy regarding its clinical significance in neuromotor and musculoskeletal rehabilitation. When lacking evidence, challenges students to suggest ways to strengthen the current evidence. Requires each student to facilitate a class discussion.
3 credits Lecture

HAY 560 Foundations of Professional Practice in Physical Therapy
Explores the roles and responsibilities of the physical therapist in the present health care environment. Historical and ethical foundations of the profession, as well as current and emerging issues, are discussed. Explores the scope of practice of the Doctor of Physical Therapy. Introduces the format and function of the APTA Guide to Physical Therapist Practice. Strengths and limitations of professional practice, including active membership in the APTA. Explores the dynamics of professional relationships with patients, families, and other care providers.
2 credits Lecture

HAY 561 Teaching, Consulting, Communicating in Clinical Education
Examines different learning styles and their effect on the learning environment. The fundamentals of teaching as they apply to clinical education are explored. Emulates the educational model and professional environment. Social and professional behaviors, student responsibilities, are discussed in detail. 2 credits Lecture

HAY 562 Teaching Skills for Clinical Instruction
Principles of learning and applying the role of a clinical instructor. Includes the preplanning period, structuring the actual clinical experience, and types of evaluation provided to physical therapy clinicians. Discusses the expectations in the clinical setting. Explores legal aspects and alternative models of clinical education. Prerequisites: HAY 561, 595, and 596
1.5 credits Lecture

HAY 563 Teaching and Physical Therapy Practice
Introduces students to adult learning principles and strategies for teaching in the academic and clinical environments. Explores teaching/learning philosophies, characteristics of the adult learner, learning styles and reflective practice. Discusses the clinical environment as a community of practice, with emphasis on the student, clinical instructor and community. Students will be given the option to become credentialed clinical instructors through the American Physical Therapy Association.
3 credits Lecture

HAY 570 Physical Therapy Case Studies I
First phase in a 3-course sequence designed to develop the student’s ability to gather and utilize relevant knowledge and ideas, apply them appropriately within the patient management model, and assess the effectiveness of their interaction. In addition to examining, evaluating, predicting, diagnosing and developing and implementing intervention strategies, the students will observe, discover and rediscover how the four systems (neuromotor, cardiopulmonary, musculoskeletal and integumentary) work together to influence function. Faculty and lab assistants will design and mentor problem-based activities and case studies that require students to work in small groups or independently. Students will be expected to extract information from a case study, prioritize and sequence patient contact, and demonstrate professional behaviors including effective communication skills. Cases will incorporate patients from the community of diverse cultural backgrounds, patients with and without pathology of the neuromotor, cardiopulmonary, musculoskeletal and integumentary systems. Prerequisite: year 1 Fall course.
1 credit Lecture, Laboratory

HAY 571 Physical Therapy Case Studies II
Requires the development of evaluation, examination, and intervention plans for assigned patients in an acute care setting under faculty mentorship. Utilizes patients from the pedi- atric, orthopedic, general medicine, AIDS, neurological and surgical units. Requires independent learning, due diligence, research and reflective practice. Students are expected to perform self-directed learning, prioritize, and sequence clinical decision making. Requires student group presentations with defense of clinical decisions for assigned case studies at the
HAY 572 Physical Therapy Case Studies III
Third phase in a 3-course sequence designed to integrate course material throughout the first two years of the program currently in progress. Each course requires students to examine, evaluate, determine a differential diagnosis, prognosticate and develop and implement intervention strategies for case studies of individuals from diverse backgrounds with complex neuromotor, cardiopulmonary, musculoskeletal, and/or integumentary pathology/dysfunction. Prerequisites: all courses in years 1 and year 2.

1 credit Lecture, Laboratory

HAY 576 Clinical Decision Making
Explores various theories and concepts of clinical decision-making and physical therapy diagnosis. Clinical reasoning including hypotheses generation and refinement applied within the context of the NAGI Disabilization Model and patient/client management model as outlined in The Guide to Physical Therapy Practice. Clinical cases will be used to explore the diagnostic practice patterns across the lifespan.

3 credits Lecture

HAY 580 Practicum
A limited number of students may enroll in 3-6 credits of independent study in research, education, clinical practice, or management. Practicum seminar will be designed to meet the needs of the student. Mentored by faculty with expertise in the area of study. Acceptable projects must include design, implementation and analysis phases. 3-6 credits by permission of the Program Director.

3-6 credits Tutorial

HAY 595 Clinical Practice I
An eight-week course that provides students with their first full-time clinical experience. A licensed physical therapist is responsible for close supervision and guidance during the learning experience. Provides students with the opportunity to utilize the patient management model of care. Students participate in documentation, coordination of care and discharge planning. Students will perform reexaminations, measure patient outcomes, and modify interventions accordingly. Students will perform an in-service during this clinical experience. Prerequisite: year 1 courses 8 credits Clinical

HAY 596 Clinical Practice II
An eight-week course that provides students with their second full-time clinical experience. A licensed physical therapist is responsible for guidance and supervision during the learning experience. Provides students with the opportunity to utilize the patient management model of care. Students participate in documentation, coordination of care and discharge planning. Students will perform reexaminations, measure patient outcomes, and modify interventions accordingly. A written case study and an in-service are required by students during this clinical experience. Prerequisite: all courses in years 1 and 2 8 credits Clinical

HAY 599 Clinical Internship
This is a sixteen-week full-time capstone clinical experience, supervised by a licensed physical therapist. Students are expected to render evidence-based practice and perform as entry-level physical therapists upon completion of this clinical. Students are expected to fully participate in all aspects of physical therapy’s scope of practice including direct patient care, documentation, consultation, education, critical inquiry, and administration, as applicable. Clinical setting will reflect all aspects of this clinical practice, the student will be able to convert information needs into answerable questions and find the best evidence with which to answer these questions with maximum efficiency. Students will perform an in-service during this clinical experience. The students will also explore one area of interest outside of patient management through the completion of a project designed to meet the needs of the clinical practice and is coordinated by the PT program’s ACECs and the clinical site’s CUCE. Prerequisite: all course work and clinical I-3. 16 credits Clinical

HAY 601 Issues in Global Health Care
Examines theories of health and wellness in the context of national and international public health initiatives. Explores the interplay of personal and public health, and the social and political context of professional practice. Current and projected roles of the physical therapist and occupational therapist’s fundamental concern is the client’s developmental stage and role. Students will explore the evidence for various exercise interventions, through metabolic gas analysis, identify various exercise states, and examine the body’s immediate response and long-term adaptations. Nutrition and its impact on movement will be detailed. Information from metabolic gas analysis will be coupled with other clinical tests and measures to design exercise programs. Culminating in an eight-week rotation through a sheltered workshop, school and camp, private homes and community and residential facilities, and integrates general fitness. Prerequisites: HAY 595 and 596 3 credits Lecture

HAY 602 Issues in Health Care Administration
Provides an understanding of the role of manager/supervisor as it relates to the goals and objectives of a physical therapy practice or department. Topics include communication skills, supervision techniques, clinical decision making in physical therapy practice; delivery systems, legislation and regulation, business planning, marketing and public relations.

2 credits Lecture

HAY 603 Fitness and Wellness
Examines and integrates the principles of strength, endurance, flexibility, and injury prevention, and formulate a wellness screening and program design. These principles will be used as a framework to examine the physical therapist’s role in women’s health, sports medicine (pre-, post-, and in-season), obesity and athletic programs for the mentally and physically challenged. Students will explore the evidence for various fitness techniques.

3 credits Lecture

HAY 610 Sports and Exercise Nutrition
Integrates the concepts of nutrition, bioenergetics, and energy expenditure into a broad understanding of the role of nutrition in daily activity, wellness parameters, and exercise performance. Emphasis will be placed on the topics of macro- and micro-nutrients and their effects during exercise and training, nutrient bioenergetics, thermoregulation, ergonomic aids, body composition, energy balance and weight control, and optimal nutrition for healthy lifestyles.

3 credits Lecture

HAY 615 Applied Physiological Foundations of Exercise
Explores literature related to the physiological basis for exercise, in healthy and at risk populations, and in patients with disease, at the multi-system level. Moves from substrates and their effects on exercise, through metabolic processes, to the energy systems. Identifies various exercise states, and explores the body’s immediate response and long-term adaptations. Nutrition and its impact on movement will be detailed. Information from metabolic gas analysis will be coupled with other clinical tests and measures to design exercise programs. Culminating in an eight-week rotation through a sheltered workshop, school and camp, private homes and community and residential facilities. Integrates the concepts of nutrition, bioenergetics, and energy expenditure into a broad understanding of the role of nutrition in daily activity, wellness parameters, and exercise performance. Emphasis will be placed on the topics of macro- and micro-nutrients and their effects during exercise and training, nutrient bioenergetics, thermoregulation, ergonomic aids, body composition, energy balance and weight control, and optimal nutrition for healthy lifestyles.

3 credits Lecture

HAY 616 Exercise Prescription
Provides an overview of the role of manager/supervisor as it relates to the goals and objectives of a physical therapy practice or department. Topics include communication skills, supervision techniques, clinical decision making in physical therapy practice; delivery systems, legislation and regulation, business planning, marketing and public relations.

2 credits Lecture

HAY 618 Prescription
Examines and integrates the principles of strength, endurance, flexibility, and injury prevention, and formulate a wellness screening and program design. These principles will be used as a framework to examine the physical therapist’s role in women’s health, sports medicine (pre-, post-, and in-season), obesity and athletic programs for the mentally and physically challenged. Students will explore the evidence for various fitness techniques.

3 credits Lecture

Program in Occupational Therapy Leading to the Bachelor of Science in Health Science/Master of Science in Occupational Therapy Degrees

Interim Program Director: Donna M. Costa

Assistant Professors: Pamela Block, Alfred G. Bracciano, Donna M. Costa, Beverly P. Horowitz, Karen S. Jacobs

Assistant Professors: Marta M. Daly, Karen B. DeChello, Jamie M. Geraci, Alexander Lopez, Eva L. Rodriguez, Kathleen V. Pfitzer, Elizabeth Vanner

Instructor: Carol K. Chamoff, Elin Schold Davis, Tami A. McGowan

The Department of Occupational Therapy offers a upper-division three year program leading to the Bachelor of Science in Health Science/Master of Science in Occupational Therapy Degrees.

This degree program has two entry dates; students may apply for January or July entry. Students who apply for January entry must have completed 57 college credits and may have one to two outstanding program specific prerequisites (1-8 credits). These outstanding prerequisites must be completed in the spring prior to entering the program. Applicants for July entry must complete all prerequisites by the start of the academic year. Students who enter in either January or July, and remain in good standing, will graduate in June, three years post entry.

Occupational therapy is the art and science of directing an individual’s participation in selected tasks to restore, reinforce and enhance performance in activities that are important and meaningful to their health and well-being. Reference to occupation in the title is in the context of an individual’s goal directed use of time, energy, interest and attention. An occupational therapist’s fundamental concern is the client’s development and maintenance of the capacity to perform, throughout the life span, the activities of self-care, work and leisure, to the extent and within the limits of their health and well-being. Interests include those tasks and roles essential to productive living and to the mastery of self and the environment.

Occupational therapy provides service to those individuals whose abilities to cope with tasks of living are threatened or impaired by developmental deficits, the aging process, poverty, cultural differences, physical injury or illness, psychological and social disability.

Occupational therapy serves a diverse population in a variety of settings, such as hospitals and clinics, rehabilitation facilities, long-term care facilities, extended care facilities, sheltered workshops, schools and camps, private homes and community agencies.

SCHOOL OF HEALTH TECHNOLOGY AND MANAGEMENT

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The Occupational Therapy Program is accredited by the Accreditation Council for Occupational Therapy Education (ACOTE), American Occupational Therapy Association, 6110 Executive Blvd., Suite 1800, Bethesda, MD 20817, 301-652-2682. Graduates of the program will be eligible to sit for the national certification examination for the occupational therapist, administered by the National Board for Certification in Occupational Therapy (NBCOT). After successful completion of this exam, the individual will be an Occupational Therapist, Registered (OTR). In addition, most states require licensure in order to practice; however, state licenses are usually based on the results of the NBCOT certification examination. A felony conviction may affect a graduate’s ability to sit for the NBCOT certification examination or attain state licensure.

In addition to the baccalaureate and master’s degrees, the school’s Certificate of Professional Achievement in Occupational Therapy is awarded upon satisfactory completion of all required courses.

Admission Requirements
Candidates for the occupational therapy program must meet the upper-division admission requirements of the School of Health Technology and Management. The requirements may be fulfilled through previously completed college studies.

In addition to the general academic requirements of the School of Health Technology and Management, the Occupational Therapy Program requires candidates to meet the school’s natural science requirements by successfully completing eight credits of biology, eight credits of chemistry, and eight credits of physics, all with laboratories and designated for science majors. Preference is given to those candidates who have completed science courses within the past ten years.

A thorough introduction to psychology course and a three-credit abnormal Psychology course are required. Candidates must complete required course work by the end of the spring term of the year for which application is made. Preference is given to applicants with a grade point average of 3.0 or higher.

A minimum of 40 hours of observation and preparation is carried out at a site approved by the school. The observation must be supervised and documented in writing by the occupational therapist. The observation must be carried out at a place of employment. Current certification in cardiopulmonary resuscitation (CPR) and first aid are required.

Program Requirements
Occupational therapy students must complete the following course requirements of the School of Health Technology and Management.

Basic Science Courses/Other Health Technology and Management Courses

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<thead>
<tr>
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<td>HAS 300</td>
<td>Issues in Health Care</td>
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<td>HAS 335</td>
<td>Medical Ethics</td>
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<tr>
<td>HAS 363</td>
<td>Computer Literacy for Health Professionals</td>
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HAO 354 | Human Gross Anatomy | 5 |

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<td>HPH 380</td>
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<td>HPH 390</td>
<td>Physiology</td>
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<td>Neuroscience</td>
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<td>HAO 340</td>
<td>Introduction to Occupational Therapy</td>
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<td>HAO 355</td>
<td>Foundations of Occupational Therapy</td>
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<td>HAO 358</td>
<td>Kinesiology for Occupational Therapy</td>
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<td>HAO 359</td>
<td>Life Span Growth and Development for Occupational Therapy</td>
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<td>HAO 360</td>
<td>Mental Health Concepts</td>
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<td>Professional In Context I</td>
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<td>HAO 385</td>
<td>Conditions in Occupational Therapy</td>
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<td>HAO 386</td>
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<td>HAO 354</td>
<td>Acute Care</td>
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<td>HAO 358</td>
<td>Substance Abuse and Occupational Therapy</td>
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<td>HAO 340</td>
<td>Principles and Orthotics</td>
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<td>HAO 397</td>
<td>Fieldwork II*</td>
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<td>HAO 398</td>
<td>Fieldwork IC*</td>
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<td>HAO 421</td>
<td>Physical Modalities for the Occupational Therapist</td>
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<td>HAO 430</td>
<td>Sensory Integration Theory</td>
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<td>Gerontology and Occupational Therapy</td>
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<td>HAO 451</td>
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<td>HAO 485</td>
<td>Vision, Perception and Cognition</td>
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<td>HAO 516</td>
<td>Assistive Technology/Rehabilitation Design for Occupational Therapy</td>
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<td>HAO 518</td>
<td>Work Programs in Occupational Therapy</td>
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<td>HAO 530</td>
<td>Community, Occupation and Health</td>
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<td>Management Concepts</td>
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<td>HAO 542</td>
<td>Patient Education</td>
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<td>HAO 551</td>
<td>Research Design for Occupational Therapy</td>
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<td>HAO 574</td>
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<td>HAO 598</td>
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<td>HA0 330</td>
<td>Life Span Growth and Development for Occupational Therapy</td>
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<td>The Occupational Therapy Manager</td>
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<td>HAO 543</td>
<td>Grant Writing for Occupational Therapy</td>
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<tr>
<td>HAO 556</td>
<td>Statistics and Data Analysis for Occupational Therapy</td>
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<tr>
<td>HAO 552</td>
<td>Research Tutorial for Occupational Therapy</td>
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<td>HAO 562</td>
<td>Principles of Instruction</td>
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<td>HAO 575</td>
<td>Professional Transition Seminar</td>
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<td>HAO 565</td>
<td>Social Topics in Occupational Therapy</td>
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<td>HAO 585</td>
<td>Disability and Occupational Therapy</td>
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<td>HAO 580</td>
<td>Independent Study in Occupational Therapy</td>
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<td>Case Studies I</td>
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<td>HAO 607</td>
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<td>HAO 608</td>
<td>Fieldwork Level IIIC</td>
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Courses

**Fieldwork Level IA, IB and IC are full-time clinical experiences.**

HAO 330 | Neuroscience | 3 |

Presented an integrated approach to the general principles of organization and function of the autonomic, peripheral and central nervous system. Presents principles in a Systems Approach to Neuroscience. The anatomy of a system is followed with its physiology, pathophysiology and clinical relevance to the occupational therapist. Clinical topics include neurological testing, control of posture and balance, pain, muscle tone and spasticity, feedback vs. feedforward control, reflexes, vestibular system, control of reaching and locomotion, perception and learning. Prerequisites: HBA 461, HBY 550, HAO 110 | 2 credits | Lecture |

**Fieldwork Level IA** is 40 hours in length.

HAO 310 | Introduction to Occupational Therapy | 4 |

Introduces the history and essential aspects of occupational therapy. Examines philosophical base, definitions related to the practice, scope of practice and role delineation. Provides an understanding of professional organizations, statutes, and credentialing. Open to west campus students. 1 credit | Lecture |

HAO 319 | Foundations of Occupational Therapy | 3 |

Explores major theories and practice frameworks underlying contemporary occupational therapy practice. Reviews sociological and anthropological themes, as well as the impact of the delivery of health care services. Presents theoretical constructs of occupations, occupational activity and occupational science. Introduces activity analysis, structured observation and documentation. Professional terminology will be studied. 3 credits Laborator/Lecture |

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<td>HAO 530</td>
<td>Community, Occupation and Health</td>
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<td>HAO 531</td>
<td>Management Concepts</td>
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<td>HAO 597</td>
<td>Professional Behaviors II</td>
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**Fieldwork Level IIA** | 12 |

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<tr>
<td>HAO 331</td>
<td>Kinesiology for Occupational Therapy</td>
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Examines the kinetostics and kinematics of normal, purposeful human movement, integrates knowledge of human anatomy, physiology, and physics and biomechanics of the human body. Evaluation procedures such as manual muscle testing and measurement of joint range of motion are studied. Emphasis of human movement as it relates to human function in occupational roles. Prerequisite: HBA 461, Corequisite: HBY 550 | 1 credit | Lecture, Laboratory |

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<tr>
<td>HAO 300</td>
<td>Issues in Health Care</td>
<td>2</td>
</tr>
<tr>
<td>HAO 335</td>
<td>Medical Ethics</td>
<td>1</td>
</tr>
<tr>
<td>HAO 363</td>
<td>Computer Literacy for Health Professionals</td>
<td>1</td>
</tr>
</tbody>
</table>

SCHOOLS OF HEALTH TECHNOLOGY AND MANAGEMENT
HAO 334 Acute Care
This course covers the occupational therapist’s scope of prac- tice, as well as the current assessment, treatment, and docu- mentation methods utilized by occupational therapists in an acute care setting. Students are introduced to high technology equipment found in an acute care setting, i.e., life support, ICU, CPT, and NICU monitoring devices. Areas dis- cussed include acute care risk factors, the complicated diag- noses often seen in this setting, the role of occupational therapists within this setting, frames of reference and treat- ment techniques, modalities utilized.

HAO 461, HBP 310, HBY 350, HAO 319, 320, 324, 326, 327, 328
1 credit Lecture

HAO 338 Substance Abuse and Occupational Therapy
Utilizes a life-span approach to examining the physiological, psychological and societal effects of substance abuse on the individual and their family system. Reviews the major cate- gories of drugs, specific drugs in each category, and the effects and withdrawal symptoms. Discusses major theories of sub- stance abuse, specific drugs in each category, and the effects on occupational performance in the areas of work, self- care, and leisure. Emphasizes the importance of understanding the scope of diversity in healthcare.

1.5 credits Lecture, Laboratory

HAO 385 Conditions in Occupational Therapy
Provides foundation of clinical diagnoses, symptomatology, and prognosis of common medical conditions across the life span, including the implication of the conditions on occupational functioning. Emphasis on the impact of functional capabilities and individual physical, cognitive and emotional function.

2 credits Lecture

HAO 396 Fieldwork IA
The first of three introductory level clinical experiences. Offers opportunity to identify symptomology, observe treat- ment interventions, and formulate treatment plans in a men- tal health setting. Promotes effective communication skills used with patients and professionals. Uses reflective journals to monitor development of professional behaviors and skills.

1 credit Clinical

HAO 397 Fieldwork IB
The second of three introductory level clinical experiences. Offers opportunity to identify symptomology, observe treat- ment interventions, and formulate treatment plans in a pedi- atric practice setting. Promotes effective communication skills used with patients and professionals. Uses reflective journals to monitor development of professional behaviors and skills.

Prerequisites: HAO 310, 320, 324, 327, 328, 344
1 credit Clinical

HAO 398 Fieldwork IC
The third of three introductory level clinical experiences. Offers opportunity to identify symptomology, observe treat- ment interventions, and formulate treatment plans in an adult physical disabilities practice setting. Promotes effective communication skills used with patients and professionals. Uses reflective journals to monitor development of professional behaviors and skills.

Prerequisites: HAO 310, 320, 324, 327, 328, 334
1 credit Clinical

HAO 421 Physical Agent Modalities for the Occupational Therapist
Provides a foundation for future professional and scholarly activities and stresses the importance of research for informed practice decisions. Students learn to review published, peer-reviewed research, identify research topics of interest, and implement the literature review process. Students work collaboratively to develop research questions and hypotheses and to review literature pertinent to a topic. Requires the CORRHS human subjects research training. Emphasizes the importance of occupation as a precursor to health and illness research. Prerequisites: HAO 310, 315, 320, 385, 485
3 credits Lecture, Laboratory

HAO 424 Sensory Integration Theory and Practice in Occupational Therapist
Enhances basic knowledge and skills regarding sensory inte- gration theory and techniques. Identifies types of sensory integrative dysfunction, reviews approaches to clinical assess- ment, outlines characteristics of both direct and indirect modes of intervention, and addresses the issue of effective- ness research. Prerequisites: HAO 310, HAO 315, HAO 320, HAO 420
1.5 credits Lecture, Laboratory

HAO 440 Gerontology and Occupational Therapy
Focuses on the role of occupational therapists with older adults and families across the continuum of care. Addresses the influence of aging processes on physical, sensory, and cog- nitive function and their relationship to functional capabilities. Discusses psychosocial aspects of aging, and how environ- ment, culture, and values impact lifestyle and occupational performance. Techniques, issues, and clinical skills specific to practice in geriatric rehabilitation, home health care, long term care, adult day care programs, hospice, and community practice, including wellness and prevention programs are addressed. The role of practitioners with older adults with Alzheimer’s disease and related dementias, lifestyle redesign, the use of assistive technology to promote safety and func- tional capability, and the role of occupational therapy with the elderly driver is emphasized. Discusses the role of occupa- tional therapy in supporting older adults health, quality of life and community living. Students learn methods of assessment, use of EMD to help guide treatment, interdisciplinary approaches of providing treatment and methods of utilizing community resources to maximize the functional capabilities of older adults.

2 credits Lecture, Laboratory

HAO 451 Introduction to Research for Occupational Therapy
Provides a foundation for future professional and scholarly activities and stresses the importance of research for informed practice decisions. Students learn to review published, peer-reviewed research, identify research topics of interest, and implement the literature review process. Students work collaboratively to develop research questions and hypotheses and to review literature pertinent to a topic. Requires the CORRHS human subjects research training. Emphasizes the importance of occupation as a precursor to health and illness research. Prerequisites: HAO 310, 315, 320, 385, 485
3 credits Lecture, Laboratory

HAO 490 Independent Study
An elective learning experience that combines clinical obser- vation with an occupational therapist in a practice setting, with faculty mentored learning in a specialty area of the stu- dent’s choice.

1.5 credits Tutorial

HAO 491 Case Studies I
This seminar-style course introduces the student to clinical reasoning through case study analysis. Students will be given basic information about a variety of clinical cases, and then in small groups will analyze data, obtain additional infor- mation, develop treatment plans. At completion each group will present cases in written and verbal formats with its accompa- nying rationale for their decisions. Prerequisites: HAO 315, 320, 324, 327, 328
1 credit Seminar

HAO 516 Assistive Technology/Rehabilitation Design for OT
Centers on adapting the environment to improve the client’s quality of life. Examines the therapist’s ability to help the patient reintegrate into society. Areas covered include the Americans with Disabilities Act, mobility, (power and manual), seating/postioning systems, adapted toys, augmentative communication systems, computer access, environmental control units, independent living aids, and vocational adaptations.

2 credits Lecture

HAO 518 Work Programs in Occupational Therapy
Economics consulting, welfare to work services have been identified as emerging practice areas for occupational therapists. Offers opportunity to learn basics of this practice area including knowledge of economics, work hardening, functional capacity evaluations, and vocational pro- grams. Presents information about the federal regulations for work-related programs, and the professional certification requirements for this practice area. Prerequisites: HAO 332, 338, 405
2 credits Lecture

HAO 530 Community, Occupation and Health
Presents the importance of occupation as a precursor to health, and of occupational therapy as a health promoting pro- fession. Examines the theories and applications of occupa- tional science through a review of the professional literature and class discussion. This occupational perspective of health will be the foundation for each student’s design of a commu- nity-based practice program. Reviews socio-economic, socio-cultural and socio-political trends that impact the individual’s health status and the delivery of health care services. Offers experience in designing/administering needs assessments in the community, and in organizing outcome data.

1 credit Seminar

HAO 531 Management Concepts
Introduces the student to the practices and theories of health care management. Presents an overview of management con- cepts, techniques, and service management functions. Prerequisites: successful completion of undergraduate Occupational Therapy curriculum.

1 credit Lecture

HAO 532 Emerging Areas of Practice
Discusses the delivery of occupational therapy services in emerging areas of practice. Provides students with alterna- tive models of service delivery and occupational therapy prac-
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAO 534</td>
<td>The Occupational Therapy Manager</td>
<td>1</td>
<td>Lecture</td>
</tr>
<tr>
<td>HAO 542</td>
<td>Patient Education</td>
<td>2</td>
<td>Lecture</td>
</tr>
<tr>
<td>HAO 547</td>
<td>Grant Writing for Occupational Therapy</td>
<td>2</td>
<td>Tutorial</td>
</tr>
<tr>
<td>HAO 555</td>
<td>Research Design for Occupational Therapy</td>
<td>3</td>
<td>Lecture</td>
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<tr>
<td>HAO 550</td>
<td>Statistics and Data Analysis for Occupational Therapy</td>
<td>3</td>
<td>Lecture</td>
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<tr>
<td>HAO 575</td>
<td>Professional Transitional Seminar</td>
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<td>Seminar</td>
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<td>HAO 580</td>
<td>Special Topics in Occupational Therapy</td>
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<td>HAO 585</td>
<td>Disability and Occupational Therapy</td>
<td>2</td>
<td>Lecture</td>
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<td>HAO 598</td>
<td>Fieldwork II</td>
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<tr>
<td>HAO 599</td>
<td>Independent Study in Occupational Therapy</td>
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<td>Tutorial</td>
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<tr>
<td>HAO 592</td>
<td>Case Studies II</td>
<td>10</td>
<td>Clinical</td>
</tr>
</tbody>
</table>

The third in a series of three clinical reasoning seminars, this course will focus on the synthesis of all clinical and academic coursework in formulating a comprehensive plan of care. Greater emphasis on students responding spontaneously to case presentations in class, much as they would be expected to do in the clinical setting.
The Athletic Training Education Program, offered by the School of Health Technology and Management, is accredited by the Commission on Accreditation of Athletic Training Education (CAATE).

The program is designed for students interested in becoming a Certified Athletic Trainer (ATC®). The ATC works with patients to develop, implement, and coordinate efficient and responsive health care delivery systems. Athletic trainers are integral members of the health care team in secondary schools, colleges and universities, professional sports programs, sports medicine clinics, agencies and other health care settings.

Athletic training students must complete the following required courses:

**Program Requirements**

**Professional Courses (Year One)**

<table>
<thead>
<tr>
<th>Course#</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAL 304</td>
<td>Prevention and Care of Athletic Injuries</td>
<td>3</td>
</tr>
<tr>
<td>HAL 306</td>
<td>Prophylactic Taping, Bracing and Equipment Fitting</td>
<td>2</td>
</tr>
<tr>
<td>HAL 320</td>
<td>Evaluation and Assessment of the Lumbar Spine and Lower Extremity</td>
<td>3</td>
</tr>
<tr>
<td>HAL 345</td>
<td>Athletic Training Practicum I</td>
<td>2</td>
</tr>
<tr>
<td>HAL 346</td>
<td>Athletic Training Practicum II</td>
<td>2</td>
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<tr>
<td>HAL 347</td>
<td>Athletic Training Practicum III</td>
<td>2</td>
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</table>

**Professional Courses (Year Two)**

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<tbody>
<tr>
<td>HAL 350</td>
<td>Kinesiology</td>
<td>3</td>
</tr>
<tr>
<td>HAL 351</td>
<td>Research Methods and Biostatistics</td>
<td>3</td>
</tr>
<tr>
<td>HAL 352</td>
<td>General Medical Conditions and Disabilities in the Physically Active</td>
<td>3</td>
</tr>
<tr>
<td>HAL 353</td>
<td>Athletic Training Practicum I</td>
<td>2</td>
</tr>
<tr>
<td>HAL 354</td>
<td>Athletic Training Practicum II</td>
<td>2</td>
</tr>
<tr>
<td>HAL 355</td>
<td>Athletic Training Practicum III</td>
<td>2</td>
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</tbody>
</table>

**Courses**

- **HAL 205 Introduction to Athletic Training**
  - Introduction to the health care profession of athletic training.
  - The course explores the history and development of the profession and the concept of the sports medicine team, as well as medical terminology. Students will be required to complete a 50 hour clinical observation. Open to west campus students.

- **HAL 210 Emergency Care of Athletic Injuries**
  - Recognition and management of medical emergencies with emphasis on those conditions that are most commonly suffered by athletes. Successful completion of the course leads to Professional level Cardio-Pulmonary Resuscitation (CPR) at the professional level is required. A minimum of a 2.5 cumulative grade point average is required. Fifty observational hours with a certified athletic trainer is also required for admission.

- **HAL 305 Prevention and Care of Athletic Injuries**
  - This course will cover common injuries and their prevention and treatment. Students will learn the importance of injury prevention and the role of the athletic trainer in this process.

- **HAL 306 Prophylactic Taping, Bracing and Equipment Fitting**
  - This course introduces the student to the use of taping, bracing, and equipment in the prevention of athletic injuries.

- **HAL 320 Evaluation and Assessment of the Lumbar Spine and Lower Extremity**
  - The student will learn the importance of the lumbar spine and lower extremity in athletic performance and the role of the athletic trainer in the assessment and treatment of injuries to these areas.

- **HAL 321 Evaluation and Assessment/ Head, Cervical Spine and Upper Extremity**
  - The student will learn the evaluation and assessment of the head, cervical spine, and upper extremity in athletic performance.

- **HAL 330 Athletic Training Practicum I**
  - The student will learn the role of the athletic trainer in the prevention and care of athletic injuries.

- **HAL 345 Athletic Training Practicum II**
  - The student will learn the role of the athletic trainer in the prevention and care of athletic injuries.

- **HAL 346 Athletic Training Practicum III**
  - The student will learn the role of the athletic trainer in the prevention and care of athletic injuries.
students regular conferences with the athletic training supervisor.

Students assist faculty members teaching Athletic Training classes. In addition to providing a laboratory setting that will re-evaluate the students previous skills through psychomotor and scenario simulations. This meeting will also act as a venue to discuss current situations arising at the various sites that will provide for a grand rounds forum.

2 credits Clinical

HAL 499 Athletic Training Teaching Practicum

Advanced students assist faculty members teaching Athletic Training classes. In addition to providing a laboratory setting that will re-evaluate the students previous skills through psychomotor and scenario simulations. This meeting will also act as a venue to discuss current situations arising at the various sites that will provide for a grand rounds forum.

7 credits Clinical

Program Requirements

Program Director: Peter G. Angelo

Instructors: Jennifer A. Champagne, Gregory W. Laub, Winston Lee, Jeannean M. Mercuri

The field of adapted aquatics uses water as a medium for the rehabilitation of a great variety of musculoskeletal, neuromuscular, and neurological problems. Lectures in the Adapted Aquatics Program are presented by Health Sciences Center professionals, who are experts in their fields, such as pediatrics, geriatrics, cardiology, internal medicine, occupational therapy, orthopedics, orthotics, pharmacology, physical therapy, respiratory care, and hydrotherapy.

The Minor in Adapted Aquatics offers coursework that promotes career options in the health sciences. The specialized academic background and applied instructor training program provide students with skills needed for careers in rehabilitation, and offers experiences relevant for admission to graduate programs in the health professions. The Adapted Aquatics Minor allows students to receive a variety of credentials, licenses, and certifications that are mandated for individuals working in this complex and specialized field. Credentials include Adapted Aquatics Aide Training; Adapted Aquatics Instructor Training; American Red Cross Water Safety Instructor; American Red Cross Lifeguard Training; Basic Life Support for the Health Care Provider; CPR for the Professional Rescuer; Automated External Defibrillation Certification; American Red Cross and American Heart Association CPR Instructor Certification; and American Red Cross Responding to Emergencies Instructor Certification.

The minor is designed to include the variety of interrelated courses necessary for a person to be fully certified to work at any aquatic facility in the country.

Admission Requirements

Admission to the minor is by permission of the program director. It is required that students declare their intent to minor in adapted aquatics no later than the beginning of the sophomore year.

Program in Adapted Aquatics Leading to a Minor

SCHOOL OF HEALTH TECHNOLOGY AND MANAGEMENT

Admission to the minor is by permission of the program director. It is required that students declare their intent to minor in adapted aquatics no later than the beginning of the sophomore year.

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Admission Requirements
issues; disease transmission and prevention; wound care; drugs, alcohol, and other substance abuse; cardiovascular and respiratory disease; and nutrition. Certifications issued meet the required standards for admission to undergraduate and graduate health sciences programs. An extra curricular program in aquatic sciences.

3 credits Lecture

HSQ 271 Instructor of Cardiopulmonary Resuscitation

Covers the Red Cross certification requirements for Instructors of CPR for the Professional Rescuer and Instructors of Basic Life Support Cardiopulmonary Resuscitation and First Aid. Emphasizes time-saving methods and protocols of cardiopulmonary resuscitation, including infant, child, adult and two-rescuer procedures.

2 credits Lecture

HSQ 272 Instructor of First Aid

Covers the Red Cross certification requirements for Instructor of Responding to Emergencies Aid. The course includes teaching methods and protocols for effective first response techniques in various emergencies, including treatment of bleeding, burns, fractures and dislocations, and sudden illness.

2 credits Lecture

HSQ 325 Instructor of Adapted Aquatics I

One course of a two-semester sequence in the adaptation of the aquatic environment and aquatic skills to teach the disabled, leading to instructor and/or aid certification in adapted Aquatics. Focus on a wide spectrum of disabilities including physical, mental, emotional, and multiple disorders in children through adults. Consideration of motor movement and learning theories, development of normal versus impaired motor cogitation, skill, hydrodynamics and aquatic adaptation, and related anatomy, physiology, and disease etiologies. Class time is equally divided between lecture/recitation and clinical work in the swimming pool. The sequence may be completed in either order for certification.

2 credits Lecture

HSQ 326 Instructor of Adapted Aquatics II

Second course of a two-semester sequence of instructor training in the adaptation of the aquatic environment and aquatic skills for teaching the physically, mentally, emotionally, or multiple challenged, leading to instructor and/or aid certification in adapted Aquatics. Focus on the general physiological and psychological etiologies of disabilities as well as the commonly used surgical treatments, drug therapies, and prosthetic devices for the disabled. Class time is equally divided between lecture/recitation and clinical work in the swimming pool. The sequence may be completed in either order for certification.

2 credits Lecture, Laboratory

HSQ 329 Fieldwork in Adapted Aquatics Instruction

Provides the Adapted Aquatics Instructor or Aid candidate the possibility of concentrating on a specific disability. Students study full case histories and medical files and prepare scribed physical, occupational, and/or respiratory therapy regimens for specific disabled individuals. Students develop knowledge of aqua-therapy and aquatic rehabilitation. Certification is required for the individual. May be repeated to a maximum of 3 credits.

1 credit Laboratory

HSQ 475 Adapted Aquatics Teaching Practicum I

Students assist faculty members teaching Adapted Aquatics and/or Emergency Response classes. In addition to working as tutors during instructional periods, students have regular conferences with a faculty supervisor. Students may not serve as teaching assistants in the same course twice.

2 credits Tutorial

HSQ 476 Adapted Aquatics Teaching Practicum II

Advanced students assist faculty members teaching Adapted Aquatics and/or Emergency Response classes. In addition to working as tutors during instructional periods, students have regular conferences with a faculty supervisor. Students may not serve as teaching assistants in the same course twice.

2 credits Tutorial

Division of Clinical Sciences

Department of Physician Assistant Education

Chair: Peter Lombardo

Vice Chair: Peter D. Kuenmmel

Medical Director: Gail Cohan

Associate Professor: Robert S. Kaufman, Paul Lombardo


Program in Physician Assistant Education Leading to the Master of Science Degree

Program Director: Paul Lombardo

Medical Director: Gail Cohan

The department of physician assistant education currently offers a graduate program leading to the Master of Science degree and the school’s Certificate of Professional Achievement in Physician Assistant Education. The program meets the program standards of approximately 110 weeks of pre-clinical and clinical instruction presented over a 27-month period.

The program educates professionals who, with physician supervision, practice medicine in all specialties and settings. Emphasis is placed on preparing graduates to work with physicians across a wide range of primary and specialty care settings. Students learn to take medical histories, perform physical examinations, order/performance diagnostic procedures and management plans. Patient education, counseling, and health risk appraisal are also important aspects of physician assistant education and practice, as is preparation for responsibilities related to the prescribing of medications. Students and graduates are educated and employed in settings such as private and group practices, hospitals, managed care settings, nursing homes, rural and urban out-patient clinics, correctional facilities, medical research facilities and health administration.

Physician assistants (PAs) are well utilized in health care because of the accessible, quality, cost effective care they provide. The physician assistant profession’s contribution to providing primary and specialty care services to underserved areas and populations is well recognized. In keeping with this commitment, PA education at Stony Brook is heavily directed toward preparing medicine involvement in the provision of medical services and graduates are encouraged to work in areas of medical need.

The physician assistant education program is fully accredited by the Accreditation Review Commission on Education for the Physician Assistant (ARC-PA) and the New York State Department of Education. Graduates are eligible to sit for the national certification examination for physician assistants, administered by the National Commission on Certification of Physician Assistants.

Admission Requirements

The program website, accessed through www.hsc.stonybrook.edu/hsa, provides comprehensive information on the program. For questions that are not addressed by the web site, please contact the program directly.

Candidates for the physician assistant education program must meet the admission requirements of the School of Health Technology and Management. The requirements may be fulfilled through previously completed college studies.

In addition to the general academic requirements for graduate status in the school, the department of physician assistant education specifies that fulfillment of the natural science requirement consists of completion of 11 or more credits in the biological sciences, including three credits in microbiology, completion of at least eight credits in chemistry, three credits in organic or biochemistry, and three credits in mathematics for a total of at least ten credits in the natural sciences. All science and chemistry courses must be offered for science and/or pre-med majors. Preference will be given to applicants whose natural science coursework has been completed during the last seven years and who have completed prior course work in anatomy and physiology. Certification in cardiology, pulmonology revascularization (CPR) is required; ACLR is preferred.

The department also requires a minimum of one year of experience in direct patient care or a broad range of health related experience. This requirement can be fulfilled by paid or volunteer experience as a registered nurse, medical, corpsman, ordinary, nurses’ aide, medical technician, or medical assistant, etc. Our program participates in the CASPA (centralized application service for physician assistants). For an application please visit www.csapainfo.org or call (240) 457-1055.

Program Requirements

The following professional courses are required for successful completion of the Physician Assistant program:

Didactic Courses

Course# Title Credits

HAP 501   Evidence Based Medicine 2

HAP 510   Clinical Assistant Medicine 3

HAP 511   Physiology I 2

HAP 521   Clinical Medicine I 10

HAP 522   Clinical Medicine II 15

HAP 523   Clinical Medicine III 10

HAP 524   Diagnostic Imaging 2

HAP 534   Introduction to Clinical Psychiatry 3

HAP 549   Clinical Assistant and Population Health 1

HAP 551   Research Design and Evaluation 2

HAP 561   Masters Project I 1

HAP 562   Masters Project II 1

HAP 563   Masters Project III 1

HAP 585   Ethics and Health Care 3

HBA 561   Human Gross Anatomy 5

HBB 510   Pharmacology: Principles and Practice I 2

HBB 511   Pharmacology: Principles and Practice II 4

HBI 570   Pathobiology 3

IBI 595   Physiology 2

Required Courses

Course# Title Credits

HAP 570   Internal Medicine Clerkship 5

HAP 571   Obstetrics and Gynecology Clerkship 5

HAP 572   General Surgery Clerkship 5

HAP 574   Emergency Medicine Clerkship 5

HAP 575   Psychiatry Clerkship 4

HAP 576   Medicine Preceptorship 5

HAP 577   Pediatrics Preceptorship 5

HAP 579   Geriatrics Clerkship 5

HAP 580   Orthopedic Clerkship 4

HAP 581   Clinical Elective 4

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Special Academic Requirements

In addition to the academic policies of the school, each of the following courses must be passed with a minimum grade of C- before a student is permitted to enter clinical clerkships:

<table>
<thead>
<tr>
<th>Course#</th>
<th>Title</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>HBA 561</td>
<td>Human Gross Anatomy</td>
<td>3</td>
</tr>
<tr>
<td>HBB 510</td>
<td>Pharmacology: Principles and Practice I</td>
<td>2</td>
</tr>
<tr>
<td>HBB 511</td>
<td>Pharmacology: Principles and Practice II</td>
<td>4</td>
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<tr>
<td>HBB 512</td>
<td>Pathobiology</td>
<td>3</td>
</tr>
<tr>
<td>HBB 513</td>
<td>Physiology</td>
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Each of the following courses must be passed a minimum grade of C:

<table>
<thead>
<tr>
<th>Course#</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAP 504</td>
<td>Professional Practice Issues</td>
<td>2</td>
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<tr>
<td>HAP 510</td>
<td>Clinical Laboratory Medicine</td>
<td>3</td>
</tr>
<tr>
<td>HAP 512</td>
<td>Diagnostic Imaging</td>
<td>2</td>
</tr>
<tr>
<td>HAP 534</td>
<td>Introduction to Clinical Psychiatry</td>
<td>2</td>
</tr>
<tr>
<td>HAP 551</td>
<td>Clinical Prevention and Population Health I</td>
<td>3</td>
</tr>
<tr>
<td>HAP 555</td>
<td>Research Design and Evidence Based Medicine</td>
<td>2</td>
</tr>
<tr>
<td>HAP 561</td>
<td>Masters Project I</td>
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<tr>
<td>HAP 562</td>
<td>Masters Project II</td>
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<td>HAP 563</td>
<td>Masters Project III</td>
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</tr>
<tr>
<td>HAP 545</td>
<td>Ethics and Health Care</td>
<td>3</td>
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</table>

Clinical Medicine courses must be passed with a minimum grade of B-. Students must achieve a minimum grade of C for each clinical clerkship/preceptorship/externship, maintain a minimum 2.0 cumulative grade point average for all clinical clerkships, and successfully complete the summative evaluation examination.

Preclinical and Clinical Course Descriptions

HAP 504 Professional Practice Issues

Provides critical information to understand the developing and organization of the physician assistant profession in the United States. Explores the dynamics of PA practice, including such issues as responsibilities to patients and the public, professional regulation and involvement, team care, cultural diversity, and developing trends in PA practice. Encourages the exploration, critiques, and evaluation of preprofessional issues related to the quality, delivery and cost-effectiveness of our nation's health care system.

2 credits Lecture

HAP 510 Clinical Laboratory Medicine

Presents fundamental principles of laboratory medicine. Strengthens the student’s ability to select, perform and interpret the results of basic laboratory procedures to aid in formulating a preliminary diagnosis and management plan. The course is offered after students have acquired a foundation in human biology and anatomy.

3 credits Lecture, Laboratory

HAP 521 Clinical Medicine I

Focuses on mastery of the knowledge, skills, and attitudes necessary to construct a comprehensive patient database and management plan. Students are introduced to, and become proficient in, medical interviewing and performing a physical examination. Emphasizes the process of synthesizing data to formulate a diagnostic plan through learning activities such as lectures, small group process, problem based learning, case studies, and clinical skills laboratories. Data gathering and recording are taught in the problem oriented medical record format. The diagnostic process is taught in an organ systems or (medical subspecialty) approach. Students learn to recognize and manage physical and mental health problems. Students are encouraged to think critically as an integral part of developing a logical, sequential and humanistic approach to their patient responsibilities and mastering medical information. The ultimate goal of these clinical medicine courses is to insure that students are optimally prepared to participate in the delivery of high quality medical care in both an in-patient and out-patient setting.

4.5 credits Lecture

HAP 522 Clinical Medicine II

Focuses on mastery of the knowledge, skills, and attitudes necessary to construct a comprehensive patient database and management plan. Students are introduced to, and become proficient in, medical interviewing and performing a physical examination. Emphasizes the process of synthesizing data to formulate a diagnostic plan through learning activities such as lectures, small group process, problem based learning, case studies, and clinical skills laboratories. Data gathering and recording are taught in the problem oriented medical record format. The diagnostic process is taught in an organ systems (or medical subspecialty) approach. Students learn to recognize and manage physical and mental health problems. Students are encouraged to think critically as an integral part of developing a logical, sequential and humanistic approach to their patient responsibilities and mastering medical information. The ultimate goal of these clinical medicine courses is to insure that students are optimally prepared to participate in the delivery of high quality medical care in both an in-patient and out-patient setting.

4.5 credits Lecture

HAP 532 Diagnostic Imaging

Provides an overview of common diagnostic imaging modalities and clinical questions, limitations, benefits and potential risks. Students learn how to utilize plain radiographs and other imaging studies in the diagnosis of disease with an emphasis on the recognition of normal findings and their comparison to the abnormalities found in disease processes.

2 credits Lecture

HAP 534 Introduction to Clinical Psychiatry

Prepares students to understand the psychiatric evaluation and interview including the mental status exam. Focuses on psychiatric symptoms seen in primary care. Presents the differential diagnosis and treatment of major psychiatric disorders such as anxiety, mood, and disorders, psychosis, substance abuse, and somatiform disorders. Fosters awareness of social patterns that exert an impact on mental functioning.

2 credits Lecture

HAP 540 Clinical Prevention and Population Health

Provides students with an understanding of health promotion, disease prevention, and population health across a spectrum of issues including chronic diseases management, emerging infectious diseases, emergency preparedness, disparities in health care services, and the impact of behavior and lifestyle choices. Students analyze these issues within the framework of the evidence base for practice, clinical prevention services, health promotion, health systems and health policy, and community assets of practice.

1 credit Lecture

HAP 551 Research Design and Evidence Based Medicine

Provides students with basic knowledge and skills needed to formulate research questions and hypotheses, develop research protocols, critically evaluate and analyze scientific and medical journals, and to conduct computerized searches and literature reviews. Describes principles of Evidence Based Medicine and emphasizes various types of clinical questions and their research design. By the end of this course, students should have the paper in its final form and be able to present this to the faculty conference. Students will present this to the faculty conference.

5 credits Lecture

HAP 552 Evidence Based Medicine

Provides students with basic knowledge and skills needed to formulate research questions and hypotheses, develop research protocols, critically evaluate and analyze scientific and medical journals, and to conduct computerized searches and literature reviews. Describes principles of Evidence Based Medicine and emphasizes various types of clinical questions and their research design. By the end of this course, students should have the paper in its final form and be able to present this to the faculty conference. Students will present this to the faculty conference.

5 credits Lecture

HAP 571 Obstetrics and Gynecology Clerkship

Provides students with practical clinical experience in the diagnosis and treatment of gynecologic and obstetric disorders. Students will gain skills in obtaining patient histories, physical diagnosis and medical decision making through exposure to a broad base of patients with a wide variety of present and past medical issues that influence patient care. Pre-requisite: Successful completion of preclinical year courses.

3 credits Clinical

HAP 572 General Surgery Clerkship

Provides students with practical clinical experience in the evaluation and management of surgical patients. Through exposure to a broad base of surgical patients, students will master the knowledge, attitudes and skills necessary to obtain focused patient histories and physical exams, construct a dif-
HAP 574 Emergency Medicine Clerkship
Provides students with practical clinical experience in the medical care of acutely ill or injured patients. Students will enhance skills in obtaining focused patient histories, performing focused physical examinations, mastering emergency medical management and decision making, and effective consultation and referral. Emphasis is placed on student recognition of life threatening situations and the response to such situations. Students will learn to address a wide variety of personal and social issues that influence the care of the emergency medicine patient. Prerequisite: Successful completion of preclinical year courses.

HAP 575 Psychiatry Clerkship
Provides students with practical experience in the recognition, evaluation and management of patients with mental illness. Through clinical interaction with mental health patients and workers, students will develop an understanding of the biological and psychosocial factors that influence a variety of psychiatric conditions, and effectively consult with other professionals and refer patients to the support services that are required to optimize the care of the psychiatric patient. Students will learn to address a wide variety of personal and social issues that influence the care of this patient population. Prerequisite: Successful completion of preclinical year course. 4 credits Clinical

HAP 576 Medicine Preceptorship
Provides students with practical clinical experience working with the ambulatory medical patient. This preceptorship augments and develops directed data collection skills emphasizing a wide range of primary care medical problems and their management. Cognitive and affective skills that enable the student to recognize normal and assess abnormal findings and effectively consult and refer are a key aspect of learning during this experience. Students will learn to address a wide variety of personal and social issues that influence the care of the medical patient. Prerequisite: Successful completion of preclinical year courses. 5 credits Clinical

HAP 577 Pediatric Preceptorship
Provides students with practical clinical experience working with ambulatory pediatric patients. Through exposure to a wide variety of primary care pediatric problems, students will develop directed data collection and patient management skills and learn how to effectively consult and refer. The preceptorship stresses those cognitive and affective skills that enable the student to recognize normal findings and assess abnormal findings. Students will learn to address a wide variety of personal and social issues that influence the care of the pediatric patient. Prerequisite: Successful completion of preclinical year courses. 5 credits Clinical

HAP 579 Geriatrics Clerkship
Provides students with practical clinical experience in working with elderly patients. Augments and strengthens student skills in developing a thorough database and enhances student understanding of when to request a consultation or make a referral. Students work with a wide variety of common geriatric problems and learn how to appropriately modify their management approach to the indications, limitations, and methodology of diagnostic procedures and therapeutic regimens in the elderly. Students will also learn to address a wide variety of personal and social issues that influence the care of the geriatric patient. Prerequisite: Successful completion of preclinical year courses. 5 credits Clinical

HAP 580 Orthopedic Clerkship
Provides students with practical experience in the care of patients with musculoskeletal disorders and acute injuries in the primary care setting. Students will develop the knowledge, attitudes and skills necessary to obtain directed patient histories, perform focused physical exams, make sound clinical decisions, and effectively consult and refer through exposure to patients with a wide variety of orthopedic problems. Students will learn to address a wide variety of personal and social issues that influence the care of the orthopedic patient. Prerequisite: Successful completion of preclinical year courses. 5 credits Clinical

HAP 581 Clinical Elective
Provides students with the opportunity to explore an area of medical or surgical practice beyond basic required rotations. Students are encouraged to choose an area of emerging importance in health care and PA practice and their management approach to the indications, limitations, and methodology of diagnostic procedures and therapeutic regimens. Students will learn to address a wide variety of personal and social issues that influence the care of many patients. Prerequisite: Successful completion of preclinical year courses. 5 credits Clinical

Program in Emergency Medical Technician-Paramedic Training Leading to a Certificate

Program Director: Paul A. Werfel
Medical Director: Scott Johnson, M.D.
Assistant Professor: Paul A. Werfel

Lecturers: John Arline Jr., Malcolm D. Devine, Peter C. Flanagan Jr., Theodore J. LaMonica, Robert B. Marks, Henry M. Messana, William J. O'Connor, Yvonne Reyes, Michael G. Rubin, Brian P. Scarpati, Donna M. Stapleton, Lawrence M. Zacarese

The EMT-paramedic training program is a non-degree, non-credit program designed to train effective and compassionate paramedics in accordance with the 1998 standards established by the United States Department of Transportation. Upon successful completion of the program all students will be eligible to take examinations for certification as:

- New York State AEMT-I Paramedic
- Nationally Registered EMT-Paramedic
- New York City MAC-EMS Paramedic

Certification in Advanced Cardiac/Pediatric Life Support and Basic Life Support is also part of the curriculum. The program, offered every year, consists of 556 hours of didactic training and 648 hours of clinical practicum in the emergency department, paramedic ambulance, CCU, ICU and other applicable venues.

Admission Requirements

Applicants must be 18 years of age or older, have a high school diploma, be a currently certified New York State EMT or AEMT and have EMS experience at or above the EMT level. Admission is based on a standardized written test of math and English skills, a written test of medical knowledge at the basic EMT level and a personal interview.

Continuing Professional Education

The School of Health Technology and Management recognizes its responsibility to provide continuing education and training to health care professionals and the community at large. To meet this responsibility the school offers a variety of courses and workshops.

The school provides faculty development and professional, executive, corporate, international and community health education. An important focus of the continuing professional education effort is aimed at calling upon experts from outside the University to provide a range of approaches and views to health related issues. Formats include conferences, workshops and specialized training.