



# COLLEGE OF HEALTH SCIENCES

## UNDERGRADUATE PROGRAMS

- **Advisement and Academic Enrichment Opportunities**
- **Pass/Fail Courses**
- **Dean's Scholar Program**
- **Health, Nutrition, and Exercise Sciences**
- **Health Studies**
- **Medical Technology**
- **Nursing**

The College of Health Sciences includes the Departments of Health, Nutrition, and Exercise Sciences, and Medical Technology, and the School of Nursing. Undergraduate major degree programs are offered in Applied Nutrition, Athletic Training, Dietetics, Exercise Science, Health and Physical Education, Health Behavior Science, Health Studies, Medical Technology, Nursing, Nutritional Sciences, and Sport Management.

Students in the college are encouraged to engage in undergraduate research projects, internships, study abroad, seminars, and the college's numerous student organizations. Students interested in such opportunities should consult with their faculty advisor. For more information, contact Dean Betty Paulanka, 345 McDowell Hall, or send email to [ud.chns@udel.edu](mailto:ud.chns@udel.edu) or visit [www.udel.edu/health](http://www.udel.edu/health)

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### ADVISEMENT AND ACADEMIC ENRICHMENT OPPORTUNITIES

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Students are assigned a faculty advisor in their major department to provide advice on course selection, degree requirements, career opportunities, and graduate study. Faculty advisors can also assist with setting up special opportunities such as internships and research experience. It is recommended that students meet with their faculty advisors at least once each semester. The Office of the Assistant Dean for Student Services, 343 McDowell Hall also provides advisement to students who experience academic difficulties or who require additional guidance or information.

Students in most of the college's majors are eligible to participate in the University's Honors Program, undergraduate research, and Degree with Distinction. Honors Degrees are available to students in programs offered by the Departments of Health, Nutrition, and Exercise Sciences, and Medical Technology, and the School of Nursing.

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### PASS/FAIL COURSES

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Courses taken pass/fail cannot be used to complete major requirements in the College of Health Sciences unless those courses only are offered on a pass/fail basis. Pass/fail courses can be counted only as free electives.

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### DEAN'S SCHOLAR PROGRAM

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The Dean's Scholar Program exists to serve the needs of students whose clearly defined educational goals cannot be effectively achieved by pursuing the standard curricula for all existing majors, minors, and interdepartmental majors sponsored by the University. Driven by an overarching passion or curiosity that transcends typical disciplinary bounds and curricula, a Dean's Scholar's intellectual interests may lead to broad interdisciplinary explorations of an issue or to more intense, in-depth studies in a single field at a level akin to graduate work. In consultation with faculty advisors and the Associate or Assistant Dean of their college, Dean's Scholars design an imaginative and rigorous individual plan of study to meet the total credit hours required for graduation. Contact the Assistant/Associate Dean in the college or go to [www.udel.edu/deansscholar/](http://www.udel.edu/deansscholar/) for more information and the application.

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### HEALTH, NUTRITION, AND EXERCISE SCIENCES

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Telephone: (302) 831-2265

<http://www.udel.edu/HNES>

Faculty Listing: [http://www.udel.edu/HNES/fac\\_list.htm](http://www.udel.edu/HNES/fac_list.htm)

The Department of Health, Nutrition, and Exercise Sciences offers undergraduate majors in Applied Nutrition, Athletic Training, Dietetics, Exercise Science, Health and Physical Education, Health Behavior Science, Nutritional Sciences, and Sport Management, all with Honors Degree options, as well as minors in Coaching Science, Nutrition, Figure Skating Coaching, and Strength and Conditioning. The programs integrate background coursework in the natural and physical sciences, and, for some programs, courses in business, with the study of the major field. This broad spectrum of undergraduate programs prepares students for a variety of careers in the arenas of health care, education, recreation, and sport/fitness/nutrition management, as well as business, industry, and public, private, or government agencies.

Each student's academic advisor, a faculty member with expertise in the student's field of interest, will assist in selecting courses and experiences that focus on the student's interests and professional goals. Careful selection of liberal arts requirements and elective courses allows students to pursue a minor or an area of

interest outside of the college, a double degree, double major, or interdepartmental major. Students are encouraged to meet with their faculty advisors at least once each semester. Failure to meet regularly with a faculty advisor can result in a delay in graduation if program requirements have not been met.

Students are encouraged to enrich their academic programs by participating in study abroad experiences, seminars, and student organizations. To enhance prospects for employment and obtaining internships, students are encouraged to seek experiences outside the classroom. For those planning to pursue a graduate program, research apprenticeships are available. Opportunities exist for students to participate as student members of national, regional, and statewide professional organizations related to each major.

There are several special academic opportunities for exceptionally talented and highly motivated students. Students in most majors may participate in the University's Honors Program, undergraduate research, and the Degree with Distinction program. The College's Dean's Scholar Program also provides qualified students with the opportunity to develop individualized programs of study.

### MAJOR DEGREE PROGRAMS

The Applied Nutrition major is designed for the student who can creatively combine the study of nutrition with other academic areas. The curriculum is flexible so that a concentration such as Gerontology, Food Service Management, Pediatrics, Health and Exercise, or Weight Management may be incorporated.

The Athletic Training major is accredited by the Commission on Accreditation of Athletic Training Education (CAATE). This major prepares students for taking the BOC exam for certification as an Athletic Trainer (ATC.)

The completion of the Dietetics major is the first step leading to the attainment of certification as Registered Dietitian by the American Dietetic Association (ADA). The University of Delaware's Didactic program in Dietetics is currently granted accreditation status by the Commission on Accreditation for Dietetics Education (CADE) of the American Dietetic Association, 120 South Riverside Plaza, Suite 2000, Chicago IL 60606-6995, 312-899-0040. Students in this major complete the professional practice requirement after the Bachelor of Science degree by completing an ADA dietetic internship. See the Graduate section of the Catalog for information on the Dietetic Internship Program.

Concentrations within the Exercise Science major allow students to further specialize in Biomechanics and Motor Control, or Exercise Physiology. Graduates of the program in Biomechanics are prepared to work in Gait Analysis laboratories or to go on for further graduate or professional study in Physical Therapy. The Exercise Physiology concentration is designed primarily for students interested in going on to graduate school, Physical Therapy School, or Medical School.

The Health and Physical Education program is accredited by the National Council for Accreditation of Teacher Education (NCATE). This comprehensive program prepares students to teach both health education and physical education in grades K-12. Students in this major begin regular exposure to teaching students in the schools early in the program.

Students in the Health Behavior Science major select a concentration in Fitness Management or Leisure Service Management. Internships, practicums, and clinical experiences are available in each program. The Fitness Management curriculum prepares students for work in the health and fitness industry. Leisure Service Management prepares students for leadership positions in the recreation industry.

The Nutritional Sciences major is for students who want to focus strongly on the science aspects of human nutrition. As a premedical program, it prepares students for careers in dentistry, veterinary and human medicine, laboratory research in nutrition, or positions with

companies or agencies requiring the extensive use of a strong science and human nutrition background.

The Sport Management major is for students interested in managerial or administrative positions in the sport industry or collegiate level athletics. Practicums, internships, and selected courses from the Lerner College of Business and Economics are required.

### LIFETIME ACTIVITIES PROGRAM

A varied activity program is available to all students on a pass/fail credit basis in HESC 120 courses. The objectives of the lifetime activities program are: (1) to provide knowledge and skills essential for leisure-time enjoyment, (2) to develop healthy exercise habits as well as a sound knowledge base in the scientific principles of physical activity, and (3) to provide an enjoyable atmosphere for learning skills that encourage lifetime participation. Regular attendance is required in order to receive credit in HESC 120 courses with a passing grade.

### HONORS DEGREES IN THE DEPARTMENT OF HEALTH, NUTRITION, AND EXERCISE SCIENCES

Students can earn an Honors Bachelor of Science Degree by completing the following requirements:

1. All requirements for the Bachelor of Science Degree in the respective major.
2. All of the University's generic requirements for the Honors Baccalaureate Degree (see p. 48).

### APPLICATION PROCEDURES

Entering freshmen and transfer students may be admitted directly into the majors in Applied Nutrition, Dietetics, and Nutritional Science. Freshmen seeking admission to the majors in Athletic Training, Exercise Science, Health and Physical Education, Health Behavior Science, and Sport Management are admitted to interest groups associated with each major. Freshmen participating in an interest group are eligible to apply for admission to one of these majors at the end of the freshman year.

The department reviews applications from University of Delaware students who wish to change majors twice a year, with applications due on December 15th and June 1st. Applications are available 30 days prior to each due date. Students are notified of admission decisions after semester grades are posted. Students not admitted to a major may apply again the following semester.

To be eligible for admission to a department major, students must have completed at least 12 credits at the University of Delaware with a minimum GPA of 2.50 and must have met the criteria for admission to each respective major. Some majors have more stringent GPA requirements and some majors are restricted due to enrollment limits.

Enrollment in HESC major courses is restricted to majors. Non-majors are allowed to register for 100- and 200-level courses through the drop/add process if space is available. Non-majors are not normally permitted in 300- and 400-level courses.

### DEGREE REQUIREMENTS FOR MAJORS WITHIN THE DEPARTMENT OF HEALTH, NUTRITION, AND EXERCISE SCIENCE

#### GENERAL STUDIES REQUIREMENTS

##### UNIVERSITY REQUIREMENTS

ENGL 110 Critical Reading and Writing (minimum grade C-)	3
First Year Experience (see p. 64)	0-4
Discovery Learning Experience (see p. 64)	3

Multicultural course:  
 Three credits in an approved course or courses stressing multi-cultural, ethnic, and/or gender-related course content. . . . . 3  
*This course can be used in the Breadth Requirements, Major Requirements, or Electives.*

**BREADTH REQUIREMENTS**

**HUMANITIES AND COMMUNICATION SKILLS**

Students choose selected courses from the following departments: Art, Art History, Communication, Comparative Literature, English, Foreign Language (including: CHIN, FREN, GREK, GRMN, HEBR, ITAL, JAPN, LATN, PORT, RUSS, SPAN), Foreign Languages and Literatures, Jewish Studies, Linguistics, Museum Studies, Music, Philosophy, Theatre, Women’s Studies (WOMS 203, 205, 210, 216, 222, 318, 320, 326, 328, 330, 353, 380, 382, 389, 465, 480), Science and Culture (CSCC 229, 241, 246, 250, 330, 365, 368, 369, 444).

**SOCIAL SCIENCES**

Students choose selected courses from the following departments: Anthropology, Black American Studies, Business Administration, Criminal Justice, Economics (including FREC 150), History, Individual and Family Studies (IFST 201, 221, 230, 329, 401, 403, 405), Political Science, Psychology (except 209 and 314), Sociology, Women’s Studies (WOMS 201, 202, 206, 207, 211, 212, 213, 233, 240, 291, 298, 299, 300, 305, 323, 333, 350, 363, 407, 413, 415, 430, 436, 460, 484, 498), Science and Culture (CSCC 233, 311, 355, 382).

**BIOLOGICAL AND NATURAL SCIENCES AND MATHEMATICS**

Students choose selected courses from the following departments: Accounting, Animal Science, Biological Sciences, Chemistry, Computer and Information Science, Computer Engineering, Electrical Engineering, Engineering Technology, Materials Science, Mechanical Engineering, Entomology and Wildlife Ecology, Food Science, Geography, Geological Sciences, Marine Studies, Mathematics, Medical Technology, Psychology (PSYC 209 and 314), Physics and Astronomy, Plant and Soil Sciences, Science, and Statistics.

**DEGREE: BACHELOR OF SCIENCE  
 MAJOR: ATHLETIC TRAINING**

CURRICULUM CREDITS

**UNIVERSITY REQUIREMENTS**

ENGL 110 Critical Reading and Writing (minimum grade C-) . . . . . 3  
 First Year Experience (see p. 64) . . . . . 0-4  
 Discovery Learning Experience (see p. 64) . . . . . 3

Multicultural course:  
 Three credits in an approved course or courses stressing multi-cultural, ethnic, and/or gender-related course content. . . . . 3

**BREADTH REQUIREMENTS**

*Humanities and Communication Skills\** . . . . . 9  
 Including: PHIL 444 (3 credits; required ethics course)  
 \*Must include courses from at least two different departments.

*Social Sciences* . . . . . 6  
 Including: PSYC 100 (3 credits)

*Natural/Biological Sciences and Mathematics*  
 MATH course at the 100-level or higher . . . . . 3  
 BISC 207 Introductory Biology I . . . . . 4  
 NTD 200 Nutrition Concepts . . . . . 3  
 CHEM 103 General Chemistry . . . . . 4

**MAJOR REQUIREMENTS (minimum grade C- in each)**

BISC 276 Human Physiology . . . . . 3  
 STAT 200 Basic Statistical Practice . . . . . 3  
 HESC 155 Personal Health Management . . . . . 3  
 HESC 210 Emergency Management of Injuries and Illnesses . . . . . 3  
 HESC 220 Anatomy and Physiology . . . . . 3  
 HESC 240 Introduction to Athletic Training . . . . . 3  
 HESC 257 Athletic Training Practicum I . . . . . 3  
 HESC 258 Advanced Taping and Bracing Methods . . . . . 1  
 HESC 317 Strength and Conditioning Laboratory . . . . . 1  
 HESC 320 Principles of Strength/Conditioning . . . . . 3  
 HESC 350 Basic Concepts in Kinesiology . . . . . 3  
 HESC 357 Athletic Training Practicum II . . . . . 3  
 HESC 358 Athletic Training Practicum III . . . . . 3  
 HESC 395 Sports Medicine Pharmacology . . . . . 3  
 HESC 400 Research Methods . . . . . 3

HESC 405 Rehabilitation of Athletic Injuries . . . . . 3  
 HESC 407 Prevention/Recognition/Athletic Injuries . . . . . 3  
 HESC 409 Therapeutic Modalities . . . . . 4  
 HESC 420 Functional Human Anatomy . . . . . 4  
 HESC 425 Biomechanics of Human Movement . . . . . 4  
 HESC 430 Physiology of Activity . . . . . 3  
 HESC 431 Physiology of Activity Lab . . . . . 1  
 HESC 448 Organization & Administration/Athletic Training . . . . . 3  
 HESC 449 Advanced Topics in Sports Medicine . . . . . 3  
 HESC 457 Athletic Training Practicum IV . . . . . 3  
 HESC 458 Athletic Training Practicum V . . . . . 3  
 HESC 459 Athletic Training Practicum VI . . . . . 3  
 HESC 480 Upper Extremity and Spine Evaluation . . . . . 3  
 HESC 481 Lower Extremity and Spine Evaluation . . . . . 3

**ELECTIVES**

After required courses are completed, sufficient elective credits must be taken to meet the minimum credits required for the degree.

**CREDITS TO TOTAL A MINIMUM OF . . . . . 120**

**ATHLETIC TRAINING:  
 ADMISSION REQUIREMENTS AND APPLICATION PROCEDURE**

Incoming freshmen and transfer students interested in the athletic training major are admitted to “Athletic Training Interest” program. At the completion of the freshman year, students seeking admission into the athletic training major must have completed the following:

Freshman Year – Athletic Training Curriculum:

General Studies (CHEM 103) . . . . . 4  
**HESC 155** . . . . . 3  
**HESC 220** . . . . . 3  
 General Studies (PSYC 100) . . . . . 3  
 General Studies . . . . . 3  
 16

General Studies (ENGL 110 - Spring Only) . . . . . 3  
 General Studies (MATH course) . . . . . 3  
 General Studies (NTDT 200) . . . . . 3  
**HESC 210** . . . . . 3  
**HESC 240** (Spring only) . . . . . 3  
 15

Those courses in **BOLD** are used to calculate the *Prerequisite Courses GPA*.

**TECHNICAL STANDARDS FOR ADMISSION**

The Athletic Training Education Program at the University of Delaware is a rigorous and intense program that places specific requirements and demands on the students enrolled in the program. An objective of this program is to prepare graduates to enter a variety of employment settings and to render care to a wide spectrum of individuals engaged in physical activity. The technical standards set forth by the Athletic Training Education Program establish the essential qualities considered necessary for students admitted to this program to achieve the knowledge, skills and competencies of an entry-level athletic trainer, as well as meet the expectations of the program’s accrediting agency (Commission on Accreditation of Athletic Training Education Programs – “CAATE”). The following abilities and expectations must be met by all students admitted to the Athletic Training Education Program. In the event a student is unable to fulfill these technical standards, with or without reasonable accommodation, the student will not be admitted into the program.

Compliance with the program’s technical standards does not guarantee a student’s eligibility for the Board of Certification (BOC) examination.

Candidates for selection to the Athletic Training Education Program must demonstrate:

1. The mental capacity to assimilate, analyze, synthesize, integrate concepts and problem solve to formulate assessment and therapeutic judgments and to be able to distinguish deviations from the norm;
2. Sufficient postural and neuromuscular control, sensory function, and coordination to perform appropriate physical examinations using accepted techniques; and accurately, safely, and efficiently use equipment and materials during the assessment and treatment of patients;
3. The ability to communicate effectively and sensitively with patients and colleagues, including individuals from different cultural and social backgrounds; this includes, but is not limited to, the ability to establish rapport with patients and communicate judgments and treatment information effectively. Students must be able to understand and speak the English language at a level consistent with competent professional practice;

4. The ability to record the physical examination results and a treatment plan clearly and accurately;
5. The capacity to maintain composure and continue to function well during periods of high stress;
6. The perseverance, diligence and commitment to complete the athletic training education program as outlined and sequenced;
7. Flexibility and the ability to adjust to changing situations and uncertainty in clinical situations;
8. Affective skills and appropriate demeanor and rapport that relate to professional education and quality patient care.

Candidates for selection to the Athletic Training Education Program will be required to verify that they understand and meet these technical standards or that they believe, with certain accommodations, they can meet the standards.

The Director of Affirmative Action and Multicultural Programs will evaluate a student who states he/she could meet the program's technical standards with accommodation and confirm that the stated condition qualifies as a disability under applicable laws.

If a student states he/she can meet the technical standards with accommodation, then the University will determine whether it agrees that the student can meet the technical standards with reasonable accommodation; this includes determination as to whether the accommodations requested are reasonable, taking into account whether accommodation would jeopardize clinician/patient safety, or the educational process of the student or the institution, including all coursework, clinical experiences and internships deemed essential to graduation.

### CRITERIA FOR ADMISSION

Eight criteria are evaluated as part of the admission process in accepting students into the ATEP:

1. Overall GPA
2. Prerequisite Courses GPA
3. Directed Observation Hours
4. Letters of Recommendation
5. Interview
6. Essay
7. Clinical Evaluations
8. Clinical Competency Evaluation and Palpation Checklist

In evaluating the criteria, different ranking scales (1-5, 1-10, etc) are used. In each case the top student in each criteria would receive the lowest number awarded.

The **eight criteria** are evaluated in the following manner:

**Overall GPA** – The total number of candidates applying for admission to the program is divided by (10). For example, if twenty students apply, 20 is divided by 10 and the result is 2. In cases where a number falls between whole numbers (i.e. 2.6) the number would either be rounded up or down depending on where it fell on the scale. 2.5 would be rounded upward to 3, whereas 2.4 would be rounded downward to 2. We then rank the overall GPA of the students from high to low. The students would then be placed in groups of 2 with the top two students receiving a score of (1). The next two highest GPAs would receive a score of (2). We continue scoring the students until everyone receives a score.

**Prerequisite Courses GPA** – A total of four classes (HESC155, HESC210, HESC220 and HESC240) are used to calculate the *Prerequisite Courses GPA*. The candidates' GPAs are ranked from high to low. The student with the highest GPA receives a score of (1); this number is then multiplied by two (1 X 2=2) for a total score of two. We continue scoring the students until everyone receives a score. We weight this criterion more heavily than others because we believe the *Prerequisite Courses GPA* is a very good predictor for success in our program.

**Directed Observation Hours** – Student are assigned by the Coordinator of the "Athletic Training Interest" program to a variety of clinical venues to gain valuable directed observation hours. Students who obtain between 50-99 directed observation hours receive a score of four (4). Students who obtain between 100-149 directed observation hours receive a score of three (3). Students who obtain between 150-199 directed observation hours receive a score of two (2). Students who obtain over 200 directed observation hours receive a score of one (1).

**Letters of Recommendation** – Students seeking admission into the ATEP will be asked to secure three letters of recommendation from individuals who can attest for their personality and clinical abilities. Letters of recommendation are evaluated using a ranking scale of (1-5). Each athletic training faculty member reads the three letters of recommendation and gives them a numerical score of between (1-5). A score of one would be considered excellent, while a score of five would be poor. All letters of recommendation are read independently. The scores from all the evaluators are added together and then divided by the total number of evaluators. The averaged score is then recorded on the admission ranking form.

**Interview** – Candidates seeking admission into the ATEP are given a formal interview conducted by the athletic training faculty, in May of each year. Each evaluator uses a standardized form, worth 100 points. At the end of the interview process the score for each candidate is totaled and then divided by the number of evaluators to get an overall interview score. The student with the best average interview score receives a score of (1), next highest is given a score of (2) and so on until everyone has a score. This number is then multiplied by two (i.e. 1 x 2 = 2, 2 x 2 = 4, etc...). We weight this criterion more heavily than others because we believe the *Interview* is a very good predictor for success in our program.

**Essay** – The Essay criteria is scored using the same method as used for *Letters of Recommendation*.

**Clinical Evaluations** – Students are required to complete a series of four clinical rotations during the interest phase of the program. In doing so they are formally evaluated by the Approved Clinical Instructors ("ACI's") at each rotation. Clinical performance is critiqued on areas involving both "Skills/Abilities" and "Personal Attributes". A Likert scale (0-5) is used in this process. The overall evaluation score that combines both "Skills/Abilities" and "Personal Attributes" is averaged across all 4 rotations. Higher evaluation scores are best. The evaluation scores for each student would be rank ordered from highest to lowest. The *Clinical Evaluations* are scored using the same criteria used with *Overall GPA*.

**Clinical Competency Evaluation and Palpation Checklist** – Students are expected to complete the "Clinical Competency Evaluation Checklist" and the "Palpation Checklists" throughout the course of the academic year [September – May]. A percentage of the total number of possible "ACI check-offs" will be calculated to determine how many competencies were completed (e.g. - 112/156 = 71.8%). The percentage scores for each student would be rank ordered from highest to lowest. The *Clinical Competency Evaluation and Palpation Checklists* are scored using the same criteria used with *Overall GPA*.

When all the criteria have been scored/ranked, the 8 scores are added together, to make a grand total score. The candidate with the lowest (BEST) grand total score is ranked as the first candidate who will be offered admission to the ATEP.

Acceptance into the ATEP is based upon the stated criteria and the number of available openings in the program. Meeting the minimum admission requirements does not guarantee acceptance into the program. Offers of admission into the ATEP are presented on a competitive basis to those individuals who are most qualified. Students may apply for admission to the ATEP at the end of the spring semester. Acceptance/rejection letters will be mailed to each candidate by July 1st.

Students interested in transferring from another institution or from another major at the University of Delaware must meet University of Delaware and College of Health Sciences transfer requirements and complete the same requirements as freshmen in the "Athletic Training Interest - ATI" program.

Students enrolled in the ATEP meet with the Program Director and Clinical Coordinator to plan the clinical education experience. Clinical education experiences are initiated in the first year and required in each succeeding semester of the student's program and designed to provide the student with sufficient opportunity to develop specific competencies and proficiencies pertaining to the health care of the athlete and those involved in physical activity. The clinical experience provides the student with an opportunity for integration of psychomotor, cognitive and affective skills within the context of direct patient care. The skills are identified within the psychomotor and clinical proficiencies aspects of each of the domains included in the document "NATA - Athletic Training Educational Competencies – 3rd Edition." The development of psychomotor skills represents a significant focus of the student's clinical experience; ample opportunity is also provided for development and demonstration of competencies within the cognitive and the affective aspects of each domain identified in the above document.

A curricular requirement for all students in the ATEP is the satisfactory completion of six (6) Practicums. These Practicums (HESC 257, 357, 358, 457, 458, 459) are offered in sequence over six full semesters and coincide with the athletic training students' clinical assignments. Requirements for each of these Practicum experiences include: (1) **Clinical Hours**, (2) **Clinical Evaluations**, (3) **Completion of the Clinical Proficiencies**, (4) **Performance on the Clinical Proficiencies**, and (5) **Attendance at Required Meetings/Professional Functions**. The details of each of these requirements are clarified in the **UNIFORM PRACTICUM GRADING GUIDELINES** that are posted on the ATEP web site at - [http://www.udel.edu/HNES/AT/Site/clinical\\_education.html](http://www.udel.edu/HNES/AT/Site/clinical_education.html). Clinical assignments will include the University of Delaware athletic training room(s), athletic practices, and competitive events; community sports medicine clinics; high school venues in the greater Wilmington, DE area; and athletic training research environments for a minimum of three academic years under the direct supervision of a variety of qualified allied health professionals (Approved Clinical Instructors – ACI and/or Clinical Instructors – CI). The student will be exposed to upper

extremity, lower extremity, equipment intensive, and general medical experiences of both genders. Athletic training students are evaluated at the end of each clinical assignment.

Once students are admitted to the program, they are required to maintain the following minimum standards:

1. cumulative GPA of 2.0;
2. satisfactory completion of the required Practicum sequence;
3. meet the technical standards for admission.

Students who do not maintain the above minimum standards are placed on probation and are required to correct all deficiencies by the end of the next semester. Students who do not correct deficiencies are dropped from the curriculum.

**BOARD OF CERTIFICATION (BOC) REQUIREMENTS FOR CERTIFICATION**

In order to qualify as a candidate for the BOC certification examination, an individual must meet the following requirements:

- A. Endorsement of the examination application by the CAATE Accredited Program Director.
- B. Proof of current certification in EMERGENCY CARDIAC CARE. (Note: EMERGENCY CARDIAC CARE certification must be current at the time of initial application and any subsequent exam retake registration).
- C. Students who have registered for their last semester or quarter of college are permitted to apply to take the certification exam prior to graduation provided all academic and clinical requirements of the CAATE Accredited Curriculum have been satisfied or will be satisfied in their last semester or quarter of college.

**EXERCISE SCIENCE: BIOMECHANICS AND MOTOR CONTROL, AND EXERCISE PHYSIOLOGY CONCENTRATIONS**

**ADMISSION REQUIREMENTS AND APPLICATION PROCEDURE**

Incoming freshmen and transfer students interested in the Exercise Science major are admitted to "Exercise Science Interest." After the completion of the freshman year, students may apply for admission to the Exercise Science major and a concentration within the major. A faculty admission committee for each concentration will make decisions on acceptance based on the following criteria:

1. A competitive cumulative GPA. (Students admitted to the major in recent years have had GPAs of at least 3.0.)
2. Successful completion (minimum grade C-) of the following courses: CHEM 103, CHEM 104, BISC 207, BISC 208, and HESC 205.
3. Completion of the appropriate application form for the chosen concentration. Applications are accepted at the end of each Fall and Spring semester.
4. Students interested in Biomechanics and Motor Control also must have successfully completed (minimum grade C-) MATH 241.

**DEGREE: BACHELOR OF SCIENCE  
MAJOR: EXERCISE SCIENCE  
CONCENTRATION: BIOMECHANICS AND MOTOR CONTROL**

CURRICULUM	CREDITS
<b>UNIVERSITY REQUIREMENTS</b>	
ENGL 110 Critical Reading and Writing (minimum grade C-)	3
First Year Experience (see p. 64)	0-4
Discovery Learning Experience (see p. 64)	3
Multicultural course: Three credits in an approved course or courses stressing multi-cultural, ethnic, and/or gender-related course content.	3
<b>BREADTH REQUIREMENTS</b>	
<i>Humanities and Communication Skills</i>	9
<i>Social Sciences</i>	
PSYC 100 General Psychology	3
PSYC 325 Child Psychology	3
or	
PSYC 334 Abnormal Psychology	3

<i>Natural/Biological Sciences and Mathematics</i>	
CHEM 103 General Chemistry	4
CHEM 104 General Chemistry	4
MATH 241 Analytic Geometry and Calculus A	3
NTDT 200 Nutrition Concepts	3
BISC 207 Introductory Biology I	4
BISC 208 Introductory Biology II	4

**MAJOR REQUIREMENTS (minimum grade C- in each)**

BISC 276 Human Physiology	4
or	
BISC 306 General Physiology	3
STAT 200 Basic Statistical Practice	3
HESC 205 Freshman Seminar in Exercise Science	1
HESC 310 Pre-Clinical Anatomy and Physiology	4
HESC 375 Neuromechanical Basis of Human Movements	3
HESC 400 Research Methods	3
HESC 426 Biomechanics I	4
HESC 430 Physiology of Activity	3
HESC 431 Physiology of Activity Lab	1

**CONCENTRATION REQUIREMENTS (minimum grade C- in each)**

CISC 105 General Computer Science	3
HESC 250 Motor Development	3
HESC 427 Biomechanics II	3
MATH 242 Analytic Geometry and Calculus B	4
MATH 341 Differential Equations with Linear Algebra I	3
or	
MATH 349 Elementary Linear Algebra	3
MEEG 112 Statics	3
MEEG 211 Dynamics	3
PHYS 207 Fundamentals of Physics I	4
PHYS 208 Fundamentals of Physics II	4
HESC 428 Motor Control and Learning	3
HESC 429 Motor Control and Learning Laboratory	1

**ELECTIVES**

After required courses are completed, sufficient elective credits must be taken to meet the minimum credits required for the degree.

**CREDITS TO TOTAL A MINIMUM OF . . . . . 120**

**DEGREE: BACHELOR OF SCIENCE  
MAJOR: EXERCISE SCIENCE  
CONCENTRATION: EXERCISE PHYSIOLOGY**

CURRICULUM	CREDITS
<b>UNIVERSITY REQUIREMENTS</b>	
ENGL 110 Critical Reading and Writing (minimum grade C-)	3
First Year Experience (see p. 64)	0-4
Discovery Learning Experience (see p. 64)	3
Multicultural course: Three credits in an approved course or courses stressing multi-cultural, ethnic, and/or gender-related course content.	3
<b>BREADTH REQUIREMENTS</b>	
<i>Humanities and Communication Skills</i>	9
<i>Social Sciences</i>	
PSYC 100 General Psychology	3
PSYC 325 Child Psychology	3
or	
PSYC 334 Abnormal Psychology	3
<i>Natural/Biological Sciences and Mathematics</i>	
CHEM 103 General Chemistry	4
CHEM 104 General Chemistry	4
MATH 221 Calculus I	3
NTDT 200 Nutrition Concepts	3
BISC 207 Introductory Biology I	4
BISC 208 Introductory Biology II	4
<b>MAJOR REQUIREMENTS (minimum grade C- in each)</b>	
BISC 276 Human Physiology	4
or	
BISC 306 General Physiology	3

STAT 200	Basic Statistical Practice . . . . .	3
HESC 205	Freshman Seminar in Exercise Science . . . . .	1
HESC 310	Pre-Clinical Anatomy and Physiology . . . . .	4
HESC 375	Neuromechanical Basis of Human Movements . . . . .	3
HESC 400	Research Methods . . . . .	3
HESC 426	Biomechanics I . . . . .	4
HESC 430	Physiology of Activity . . . . .	3
HESC 431	Physiology of Activity Lab . . . . .	1

**CONCENTRATION REQUIREMENTS** (minimum grade C- in each)

HESC 305	Fundamentals of Athletic Training . . . . .	3
HESC 353	Seminar in Exercise Physiology . . . . .	1
HESC 432	Exercise Testing and Prescription . . . . .	4
or		
HESC 434	Exercise Test Technology . . . . .	3
PHYS 201	Introductory Physics I . . . . .	4
PHYS 202	Introductory Physics II . . . . .	4

**ELECTIVES**

After required courses are completed, sufficient elective credits must be taken to meet the minimum credits required for the degree.

**CREDITS TO TOTAL A MINIMUM OF . . . . . 120**

**HEALTH AND PHYSICAL EDUCATION: ADMISSION REQUIREMENTS AND APPLICATION PROCEDURE**

Incoming freshmen and transfer students interested in the Health and Physical Education teacher preparation program are admitted to "Health and Physical Education Interest." After the completion of the freshman year, students may apply for admission into the Health and Physical Education major. A faculty admission committee will make decisions on acceptance based on the following criteria: Successful completion (minimum grade C-) of the following required Freshman year courses:

PSYC 100 . . . . .	3
HESC 276 . . . . .	2
HESC 139 . . . . .	3
HESC 143 . . . . .	1
HESC 155 . . . . .	3
*BISC w/lab . . . . .	4
Total Credits . . . . .	16

ENGL 110 . . . . .	3
MATH course . . . . .	3
HESC 141 . . . . .	1
HESC 140 . . . . .	3
HESC 220 . . . . .	3
HESC 230 . . . . .	3
Total Credits . . . . .	16

\*BISC with lab is recommended during the first year in order for students to be able to complete the program in eight semesters, but are not required for admission to the program.

Minimum cumulative GPA of 2.5 and major GPA of 2.75.

Submission of a satisfactory Introductory Professional Portfolio that demonstrates a commitment to teaching (See Program Director for details).

Praxis I: Passing scores on the Praxis I test, all three subtests (reading, passing score = 175; writing, passing score = 173; and mathematics, passing score = 174) are required prior to admittance to the health and physical education major.

Completion of the appropriate application form for the major. Applications are accepted at the end of each Fall and Spring semester.

**REQUIREMENTS FOR PROGRESSION THROUGH THE PROGRAM**

- Criteria For Admission to the Methods Block (HESC414, 370, and 380)
- Minimum cumulative GPA of 2.50
  - Minimum GPA of 2.75 in the major
  - A grade of C- or better in all required courses within the major
  - Completion of all required HESC courses (with the exception of HESC 425, 430, 431, 465)
  - Completion of all required EDUC courses (with the exception of EDUC 420 and 400)
  - Submission of a satisfactory Working Portfolio (See Program Director for details)
- Criteria for Admission to Student Teaching in Health and Physical Education
- Minimum cumulative GPA of 2.50
  - Minimum GPA of 2.75 in the major

- A grade of C- or better in all required courses within the major.
  - Completion of all required HESC courses (with the exception of HESC 425, 430, 431, 465)
  - Completion of all required EDUC courses (with the exception of EDUC 400)
- Co-requisite for EDUC 400 - Student Teaching
- Proof of having taken an appropriate academic CONTENT area test (e.g., Praxis II in English, Praxis II in Elementary Content Knowledge or Fundamental Subject Area Test) or a state-designated academic content knowledge test (e.g., New York State test in the appropriate area, like the Elementary Multiple Subjects Test or the Social Studies test). A copy of the official score report must be submitted to the Delaware Center for Teacher Education, 200 Academy Street, during enrollment in EDUC 400 Student Teaching or no later than November 1 for January graduates and May 1 for June or summer graduates. An institutional recommendation for certification will not be issued until the candidate has presented the official score report.

**DEGREE: BACHELOR OF SCIENCE  
MAJOR: HEALTH AND PHYSICAL EDUCATION**

CURRICULUM CREDITS

**UNIVERSITY REQUIREMENTS**

ENGL 110	Critical Reading and Writing (minimum grade C-) . . . . .	3
First Year Experience (see p. 64) . . . . .		0-4
Discovery Learning Experience (see p. 64) . . . . .		3

Multicultural course:  
Three credits in an approved course or courses stressing multi-cultural, ethnic, and/or gender-related course content. . . . . 3

**BREADTH REQUIREMENTS**  
*Humanities and Communication Skills\** . . . . . 6  
\*Must include courses from two different departments.

*Social Sciences*  
PSYC 100 General Psychology . . . . . 3

*Natural and Biological Sciences and Mathematics* . . . . . 10  
Including:  
Mathematics  
Biology  
NTDT 200  
Note: The BISC (Biology) course must include a lab.

*Additional Breadth Requirements* . . . . . 3  
3 additional credits can be chosen from any area.

**MAJOR REQUIREMENTS** (minimum grade C- in each)

EDUC 400	Student Teaching . . . . .	9
EDUC 413	Adolescent Development and Educational Psychology . . . . .	4
EDUC 414	Teaching Exceptional Adolescents . . . . .	3
EDUC 419	Diversity in Secondary Education . . . . .	3
	(fulfills University multicultural requirement)	
EDUC 420	Reading in the Content Area . . . . .	1

Students must have a minimum cumulative GPA of 2.500, a GPA in the major of at least 2.750, and must apply to student teach at least one semester in advance.

HESC 121	Water Safety Instruction . . . . .	2
HESC 139	Curriculum in Physical Education . . . . .	3
HESC 140	Fundamental Skills Analysis . . . . .	3
HESC 141	Adventure Challenge and Outdoor Recreation . . . . .	1
HESC 143	Skills, Techniques and Knowledge of Stunts, Tumbling and Gymnastics . . . . .	1
HESC 155	Personal Health Management . . . . .	3
HESC 210	Emergency Management of Injuries and Illnesses . . . . .	3
HESC 220	Anatomy and Physiology . . . . .	3
HESC 230	Group Facilitation Skills in Health and Physical Education . . . . .	3
HESC 250	Motor Development . . . . .	3
HESC 251	Skills, Techniques and Knowledge of Rhythms and Dance . . . . .	1
HESC 252	Lifetime Leisure Activities . . . . .	1
HESC 255	Skills, Techniques and Knowledge of Racquet Sports . . . . .	1
HESC 275	Tactical Approach to Teaching Sports . . . . .	3
HESC 276	Technology in Health and Physical Education . . . . .	2
HESC 300	Issues in Physical Activity Studies and Sports . . . . .	3
HESC 315	Instructional Strategies for Drug Education . . . . .	3
HESC 319	Health-Related Fitness . . . . .	3

HESC 324	Measurement and Evaluation . . . . .	3
HESC 325	Instructional Strategies for Human Sexuality . . . . .	3
HESC 330	Teaching Community and Mental Health . . . . .	3
HESC 333	Health Theory and Program Planning . . . . .	3
HESC 342	Survey in Adaptive Physical Education/Recreation . . . . .	3
HESC 370	Practicum in Methods of Elementary Physical Education . . . . .	3
HESC 380	Practicum in Methods of Secondary Physical Education . . . . .	3
HESC 414	Methods and Materials in Health Education . . . . .	3
HESC 425	Biomechanics of Human Movement . . . . .	4
HESC 430	Physiology of Activity . . . . .	3
HESC 431	Physiology of Activity Lab . . . . .	1
HESC 465	Teaching Seminar in Health/Physical Education . . . . .	3

**CREDITS TO TOTAL A MINIMUM OF . . . . . 122**

**HEALTH BEHAVIOR SCIENCE:  
ADMISSION REQUIREMENTS AND APPLICATION PROCEDURE**

Incoming freshmen and transfer students interested in the Health Behavior Science major are admitted to "Health Behavior Science Interest." After the completion of the freshman year, students may apply for admission to the Health Behavior Science major and a concentration within the major. A faculty admission committee for each concentration will make decisions on acceptance based on the following criteria:

1. Successful completion of General Studies PSYC and SOCI courses, HESC 155, HESC 160, ENGL 110 and a MATH course.
2. A competitive cumulative GPA.
3. Submission of a resume.
4. Completion of the appropriate application form for the chosen concentration, including an essay. Applications are accepted at the end of each Fall and Spring semester.

**DEGREE: BACHELOR OF SCIENCE  
MAJOR: HEALTH BEHAVIOR SCIENCE  
CONCENTRATION: FITNESS MANAGEMENT**

CURRICULUM	CREDITS
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**UNIVERSITY REQUIREMENTS**

ENGL 110	Critical Reading and Writing (minimum grade C-) . . . . .	3
First Year Experience	(see p. 64) . . . . .	0-4
Discovery Learning Experience	(see p. 64) . . . . .	3

Multicultural course:  
Three credits in an approved course or courses stressing multi-cultural, ethnic, and/or gender-related course content. . . . . 3

**BREADTH REQUIREMENTS**

*Humanities and Communication Skills.* . . . . 9  
Note: Must include courses from two different departments.

*Social Sciences*  
Psychology . . . . . 3  
Sociology . . . . . 3

*Natural and Biological Sciences and Mathematics.* . . . . 13  
Including:  
Mathematics  
Biology  
NTDT 200  
Note: The BISC course must include a lab.

*Additional Breadth Requirements* . . . . . 6  
Chosen from any area above.

**MAJOR REQUIREMENTS (minimum grade C- in each)**

FREC 201	Records and Accounts . . . . .	3
or		
ACCT 200	Survey of Accounting . . . . .	4
BUAD 100	Introduction to Business . . . . .	3
HESC 155	Personal Health Management An Approach for a Lifetime . . . . .	3
HESC 160	Health Behavior Science First Year Seminar . . . . .	1
HESC 200	Issues in Health Behavior Management . . . . .	3
HESC 210	Emergency Management of Injuries and Illnesses . . . . .	3
HESC 326	Research Methods and Statistics for Behavior Science . . . . .	3
HESC 332	Health Behavior Theory and Assessment . . . . .	3

HESC 335	Health and Aging . . . . .	3
HESC 342	Survey in Adaptive Physical Education . . . . .	3
HESC 354	Seminar in Fitness Management . . . . .	1
HESC 422	Organization and Administration of Leisure Services . . . . .	3
HESC 464	Internship . . . . .	9

**CONCENTRATION REQUIREMENTS (minimum grade C- in each)**

HESC 220	Anatomy and Physiology . . . . .	3
HESC 263	Leadership Practicum . . . . .	1
HESC 305	Fundamentals of Athletic Training . . . . .	3
HESC 317	Strength and Conditioning Laboratory . . . . .	1
HESC 320	Strength and Conditioning . . . . .	3
HESC 329	Dynamics of Team Problem Solving . . . . .	3
HESC 350	Basic Kinesiology . . . . .	3
HESC 430	Physiology of Activity . . . . .	3
HESC 431	Physiology of Activity Lab . . . . .	1
HESC 432	Exercise Testing and Prescription . . . . .	4
HESC 490	Development of Health Promotion Programs . . . . .	3
NTDT 310	Nutrition and Activity . . . . .	3

**ELECTIVES**

After required courses are completed, sufficient elective credits must be taken to meet the minimum credits required for the degree.

**CREDITS TO TOTAL A MINIMUM OF . . . . . 120**

**DEGREE: BACHELOR OF SCIENCE  
MAJOR: HEALTH BEHAVIOR SCIENCE  
CONCENTRATION: LEISURE SERVICE MANAGEMENT**

CURRICULUM	CREDITS
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**UNIVERSITY REQUIREMENTS**

ENGL 110	Critical Reading and Writing (minimum grade C-) . . . . .	3
First Year Experience	(see p. 64) . . . . .	0-4
Discovery Learning Experience	(see p. 64) . . . . .	3

Multicultural course:  
Three credits in an approved course or courses stressing multi-cultural, ethnic, and/or gender-related course content. . . . . 3

**BREADTH REQUIREMENTS**

*Humanities and Communication Skills.* . . . . 9  
Note: Must include courses from at least two departments.

*Social Sciences*  
Psychology . . . . . 3  
Sociology . . . . . 3

*Natural and Biological Sciences and Mathematics.* . . . . 13  
Including:  
Mathematics  
Biology  
NTDT 200  
Note: The BISC course must include a lab.

*Additional Breadth Requirements* . . . . . 6  
Chosen from any of the areas above.

**MAJOR REQUIREMENTS (minimum grade C- in each)**

FREC 201	Records and Accounts . . . . .	3
or		
ACCT 200	Survey of Accounting . . . . .	4
BUAD 100	Introduction to Business . . . . .	3
HESC 155	Personal Health Management: An Approach for a Lifetime . . . . .	3
HESC 160	Health Behavior Science First Year Seminar . . . . .	1
HESC 200	Issues in Health Behavior Management . . . . .	3
HESC 210	Emergency Management of Injuries and Illnesses . . . . .	3
HESC 326	Research Methods and Statistics for Behavior Science . . . . .	3
HESC 332	Health Behavior Theory and Assessment . . . . .	3
HESC 335	Health and Aging . . . . .	3
HESC 342	Survey in Adaptive Physical Education . . . . .	3
HESC 354	Seminar in Fitness Management . . . . .	1
HESC 422	Organization and Administration of Leisure Services . . . . .	3
HESC 464	Internship . . . . .	9

**CONCENTRATION REQUIREMENTS (minimum grade C- in each)**

HESC 207	Foundations of Leisure and Sport Management . . . . .	3
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HESC 261	Leadership in Leisure and Sport Management . . . . .	3
HESC 341	Principles of Outdoor Recreation . . . . .	3
HESC 347	Legal Aspects of Sport Management . . . . .	3

Plus, 18 credits reflecting a sub-discipline in recreation/leisure chosen under the direction of the faculty advisor and submitted for approval no later than the beginning of the second semester of the junior year

### ELECTIVES

After required courses are completed, sufficient elective credits must be taken to meet the minimum credits required for the degree.

**CREDITS TO TOTAL A MINIMUM OF . . . . . 120**

### DEGREE: BACHELOR OF SCIENCE

### MAJOR: SPORT MANAGEMENT

### ADMISSION REQUIREMENTS AND APPLICATION PROCEDURE

Incoming freshmen and transfer students interested in the sport management major are admitted to "Sport Management Interest". After completion of the freshman year, students may apply for admission to the sport management major. A faculty committee will make decisions on acceptance based on the following criteria:

1. Successful completion (minimum grade of C-) of a psychology or sociology course, HESC 202, HESC 155, ENGL 110 and a math course.
2. Minimum GPA of 2.7.
3. Completion of the appropriate application form. Applications are accepted at the end of each the fall and spring semester.
4. Demonstration of aptitude and commitment and understanding for career orientation.
5. Interview with Sport Management faculty.

### CURRICULUM CREDITS

#### UNIVERSITY REQUIREMENTS

ENGL 110 Critical Reading and Writing (minimum grade C-) . . . . . 3

First Year Experience (see p. 64) . . . . . 0-4

Discovery Learning Experience (see p. 64) . . . . . 3

#### Multicultural course:

Three credits in an approved course or courses stressing multi-cultural, ethnic, and/or gender-related course content. . . . . 3

#### BREADTH REQUIREMENTS

*Humanities and Communication Skills* . . . . . 12

Note: Must include courses from at least two departments.

*Social Sciences* . . . . . 6

Psychology

Sociology

*Natural and Biological Sciences and Mathematics* . . . . . 9

Mathematics

STAT 200

Natural or Biological Sciences

*Additional Breadth Requirements* . . . . . 9

Chosen from any group above.

#### MAJOR REQUIREMENTS (minimum grade C- in each)

HESC 155 Personal Health Management . . . . . 3

HESC 202 Foundations of Sport Management . . . . . 3

HESC 207 Leadership in Sport Management . . . . . 3

HESC 261 Administration in Sport Management . . . . . 3

HESC 302 Practicum I in Sport Management . . . . . 1

HESC 303 Practicum II in Sport Management . . . . . 1

HESC 340 Community and Media Relations in Sport . . . . . 3

HESC 344 Financial Aspects of Sport Management . . . . . 3

HESC 347 Legal Aspects of Sport Management . . . . . 3

HESC 437 Sport Marketing . . . . . 3

HESC 438 Sport Event and Facility Management . . . . . 3

HESC 439 Ethics and Issues in Sport Management . . . . . 3

HESC 464 Internship . . . . . 9

ACCT 200 Survey of Accounting . . . . . 4

BUAD 100 Introduction to Business . . . . . 3

FINC 200 Fundamentals of Finance . . . . . 3

ECON 100 Economic Issues and Policies . . . . . 3

#### MINOR REQUIREMENTS

An approved minor is required for the degree. Suggested minors are:

Legal Studies . . . . .	18
Leadership . . . . .	18
Educational Studies . . . . .	18
Coaching Science . . . . .	18
Business Administration . . . . .	39

### ELECTIVES

After required courses are completed, sufficient elective credits must be taken to meet the minimum credits required for the degree.

**CREDITS TO TOTAL A MINIMUM OF . . . . . 120**

### DEGREE: BACHELOR OF SCIENCE

### MAJOR: APPLIED NUTRITION

### CURRICULUM CREDITS

#### UNIVERSITY REQUIREMENTS

ENGL 110 Critical Reading and Writing (minimum grade C-) . . . . . 3

First Year Experience (see p. 64) . . . . . 0-4

Discovery Learning Experience (see p. 64) . . . . . 3

Three credits in an approved course or courses stressing multi-cultural, ethnic, and/or gender-related course content (see p. 64-66) . . . . . 3

#### MAJOR REQUIREMENTS (minimum grade of C- required in BISC 276, CHEM 214, and CHEM 216)

*Humanities electives* . . . . . 6

CHEM 101/102 General Chemistry

or

CHEM 103/104 General Chemistry . . . . . 8

CHEM 213 Elementary Organic Chemistry . . . . . 4

CHEM 214/216 Elementary Biochemistry with Lab . . . . . 4

BISC 104 Principles of Biology

or

BISC 207/208 Introductory Biology I and II . . . . . 4-8

BISC 106 Elementary Human Physiology . . . . . 3

or

BISC 276 Human Physiology . . . . . 4

Students desiring to fulfill a Biology minor should take BISC 207, 208 and 276.

ECON 100 Economic Issues and Policies

or

ECON 151 Introduction to Microeconomics: Prices and Markets . . . . . 3

PSYC 100 General Psychology . . . . . 3

Sociology course . . . . . 3

BUAD 309 Management and Organizational Behavior . . . . . 3

FOSC 305 Food Science (minimum grade of C-) . . . . . 3

MATH 114 Elementary Mathematics and Statistics . . . . . 3

or

Successful performance on the Proficiency Test in Mathematics administered by Department of Mathematical Sciences.

A minimum grade of C- must be achieved for credits to count toward the fulfillment

of 28 credits in NTDT; a minimum grade of C- in 200-level courses must be

achieved to proceed to upper-level courses; only 300-level courses and a

maximum of four credits of Special Problems/Independent Study (NTDT x66) may

count toward the fulfillment of this requirement.

NTDT 103 Introduction to Nutrition Professions . . . . . 1

NTDT 200 Nutrition Concepts . . . . . 3

NTDT 201 Food Concepts . . . . . 3

NTDT 400 Macronutrients . . . . . 3

NTDT 401 Micronutrients . . . . . 3

NTDT 445 Teaching Methods: Nutrition and Food . . . . . 3

NTDT courses (300-level or higher) . . . . . 9

One of the following NTDT Restricted Electives (minimum grade of C-) . . . . . 3

NTDT 305 Nutrition in the LifeSpan

NTDT 350 Nutrition and Older Adults

NTDT 420 Maternal and Infant Nutrition

### ELECTIVES

After required courses are completed, sufficient elective credits must be taken to meet the minimum credits required for the degree.

May include Military Science, Music, or HESC 120 lifetime activity courses.. (Only two credits of HESC 120, four credits of Music , and four credits of 100- and 200-level courses in Military Science/Air Force may be counted toward the degree.)

**CREDITS TO TOTAL A MINIMUM OF . . . . . 120**



**DEGREE: BACHELOR OF SCIENCE  
MAJOR: DIETETICS**

CURRICULUM CREDITS

**UNIVERSITY REQUIREMENTS**

ENGL 110	Critical Reading and Writing (minimum grade C-)	3
First Year Experience (see p. 64)		0-4
Discovery Learning Experience (see p. 64)		3
Three credits in an approved course or courses stressing multi-cultural, ethnic, and/or gender-related course content (see p. 64-66)		3

**MAJOR REQUIREMENTS** (minimum grade of C- required in BISC 276, CHEM 214, and CHEM 216)

Humanities electives		6
CHEM 101/102	General Chemistry	4
or		
CHEM 103/104	General Chemistry	8
CHEM 213	Elementary Organic Chemistry	4
CHEM 214/216	Elementary Biochemistry with Lab	4
BISC 207/208	Introductory Biology I and II	8
BISC 276	Human Physiology	4
BISC 300	Introduction to Microbiology	4
ECON 100	Economic Issues and Policies	3
or		
ECON 151	Introduction to Microeconomics: Prices and Markets	3
PSYC 100	General Psychology	3
SOCI 201	Introduction to Sociology	3
BUAD 309	Management and Organizational Behavior	3
FOSC 305	Food Science (minimum grade C-)	3
Statistics course selected from: STAT 200, PSYC 209, FREC 408		3
MATH 114	Elementary Mathematics and Statistics	3

or  
Successful performance on the Proficiency Test in Mathematics administered by Department of Mathematical Sciences.

A minimum grade of C- must be achieved for credits to count toward the fulfillment of 47 credits in NTDT; a minimum grade of C- in 200-level courses must be achieved to proceed to upper-level courses; only 300-level courses and a maximum of four credits of Special Problems/Independent Study (NTDT x66) may count toward the fulfillment of this requirement.

NTDT 103	Introduction to Nutrition Professions	1
NTDT 200	Nutrition Concepts	3
NTDT 201	Food Concepts	3
NTDT 250	Introduction to the Nutrition Care Process	3
NTDT 321	Quantity Food Production and Service	3
NTDT 322	Management of Food and Nutrition Services	3
NTDT 326	Onsite Food Products	3
NTDT 330	Nutritional Counseling	3
NTDT 400	Macronutrients	3
NTDT 401	Micronutrients	3
NTDT 403	Dietetics Seminar	1
NTDT 421	Nutrition Assessment Methods	3
NTDT 445	Teaching Methods: Nutrition and Foods	3
NTDT 450	Medical Nutrition Therapy I	3
NTDT 451	Medical Nutrition Therapy II	3
NTDT 460	Community Nutrition	3

One of the following NTDT Restricted Electives (minimum grade of C-) . . . . . 3  
 NTDT 305 Nutrition in the LifeSpan  
 NTDT 350 Nutrition and Older Adults  
 NTDT 420 Maternal and Infant Nutrition

**ELECTIVES**

After required courses are completed, sufficient elective credits must be taken to meet the minimum credits required for the degree.

May include Military Science, Music, or HESC 120 lifetime activity courses.. (Only two credits of HESC 120, four credits of Music , and four credits of 100- and 200-level courses in Military Science/Air Force may be counted toward the degree.)

**CREDITS TO TOTAL A MINIMUM OF . . . . . 120**

**DEGREE: BACHELOR OF SCIENCE  
MAJOR: NUTRITIONAL SCIENCES**

CURRICULUM CREDITS

**UNIVERSITY REQUIREMENTS**

ENGL 110	Critical Reading and Writing (minimum grade C-)	3
First Year Experience (see p. 64)		0-4
Discovery Learning Experience (see p. 64)		3
Three credits in an approved course or courses stressing multi-cultural, ethnic, and/or gender-related course content (see p. 64-66)		3

**MAJOR REQUIREMENTS** (minimum grade of C- required in BISC 276, CHEM 214, and CHEM 216)

Humanities electives		6
CHEM 103/104	General Chemistry	8
CHEM 214/216	Elementary Biochemistry with Lab	4
CHEM 220/221	Quantitative Analysis I with Lab	4
CHEM 321/322	Organic Chemistry	8
BISC 207/208	Introductory Biology I and II	8
BISC 276	Human Physiology	4
BISC 300	Introduction to Microbiology	4
PHYS 201	Introductory Physics I	4
ECON 100	Economic Issues and Policies	3
or		
ECON 151	Introduction to Microeconomics: Prices and Markets	3
Social Science electives		9
FOSC 305	Food Science (minimum grade C-)	3
FREC 408	Research Methods	3
MATH 221/222	Calculus I and II	6-8
or		
MATH 241/242	Analytic Geometry and Calculus A and B	6-8

A minimum grade of C- must be achieved for credits to count toward the fulfillment of 30 credits in NTDT; a minimum grade of C- in 200-level courses must be achieved to proceed to upper-level courses; only 300-level courses and a maximum of four credits of Special Problems/Independent Study (NTDT x66) may count toward the fulfillment of this requirement.

NTDT 103	Introduction to Nutrition Professions	1
NTDT 200	Nutrition Concepts	3
NTDT 201	Food Concepts	3
NTDT 400	Macronutrients	3
NTDT 401	Micronutrients	3
NTDT 421	Nutrition Assessment Methods	3
NTDT courses (300-level or higher)		6

One of the following NTDT Restricted Electives (minimum grade of C-) . . . . . 3  
 NTDT 305 Nutrition in the LifeSpan  
 NTDT 350 Nutrition and Older Adults  
 NTDT 420 Maternal and Infant Nutrition

**ELECTIVES**

After required courses are completed, sufficient elective credits must be taken to meet the minimum credits required for the degree.

May include Military Science, Music, or HESC 120 lifetime activity courses.. (Only two credits of HESC 120, four credits of Music , and four credits of 100- and 200-level courses in Military Science/Air Force may be counted toward the degree.)

**CREDITS TO TOTAL A MINIMUM OF . . . . . 120**

**OPTIONAL CONCENTRATIONS**

The following optional concentrations are available to students in the **Applied Nutrition, Dietetics, and Nutritional Science** majors:

**HEALTH AND EXERCISE . . . . . 18 credits**  
 (Minimum grade of C- in each)

HESC 220	Anatomy and Physiology	3
HESC 317	Strength and Conditioning Laboratory	1
HESC 320	Principles of Strength and Conditioning	3
HESC 430	Physiology of Activity	3
HESC 431	Physiology of Activity Lab	1
HESC 432	Basic Exercise Prescription	4
NTDT 310	Nutrition and Activity	3

**GERONTOLOGY . . . . . 18 credits**

(Minimum grade of C- in each)	
HESC 335	Health and Aging . . . . . 3
HESC 342	Survey in Adaptive Physical Education and Recreation . . . . . 3
HESC 490	Development of Health Promotion Programs . . . . . 3
IFST 405	Aging and the Family . . . . . 3
NTDT 350	Nutrition and Older Adults . . . . . 3
NTDT 460	Community Nutrition . . . . . 3

**PEDIATRICS . . . . . 18 credits**

(Minimum grade of C- in each)	
IFST 201	Life Span Development . . . . . 3
IFST 221	Child Development . . . . . 3
IFST 329	Adolescent Development . . . . . 3
NTDT 420	Maternal and Infant Nutrition . . . . . 3
Plus <b>two</b> of the following:	
IFST 202	Foundations of Family Studies . . . . . 3
IFST 270	Families and Development Disabilities . . . . . 3
IFST 410	The Hospitalized Child . . . . . 3
IFST 470	Families and Children at Risk . . . . . 3

**WEIGHT MANAGEMENT . . . . . 16 credits**

(Minimum grade of C- in each)	
HESC 332	Health Behavior Theory and Assessment . . . . . 3
HESC 430	Physiology of Activity . . . . . 3
HESC 432	Basic Exercise Prescription . . . . . 4
NTDT 330	Nutrition Counseling . . . . . 3
NTDT 410	Overweight/Obesity Prevention and Management . . . . . 3

The following optional concentration is available to students in the **Applied Nutrition**, and **Nutritional Science** majors:

**FOODSERVICE MANAGEMENT . . . . . 20 credits**

(Minimum grade of C- in each)	
ACCT 200	Survey of Accounting . . . . . 4
BISC 300	Introduction to Microbiology . . . . . 4
HRIM 381	Management of Food and Beverage Operations . . . . . 3
NTDT 321	Quantity Food Production and Service . . . . . 3
NTDT 322	Management of Food and Nutrition Services . . . . . 3
NTDT 326	Onsite Food Production . . . . . 3

**MINOR IN COACHING SCIENCE**

This minor is designed to help students develop an understanding of the instructional, psychological, and management aspects of coaching, as well as a personal philosophy of coaching. Successful completion of the minor prepares students to take the American Sport Education Program (ASEP) Coaching Certification examination.

Students applying for the minor are expected to have had previous athletic experience and must have completed at least one semester of full time study with a minimum GPA of 2.25. The application process involves an interview with the faculty director of the minor. A grade of C- or better in required courses is needed for successful completion of the minor.

CURRICULUM	CREDITS
HESC 210	Emergency Management of Injuries and Illnesses . . . . . 3
HESC 220	Anatomy and Physiology . . . . . 3
HESC 317	Strength and Conditioning Laboratory . . . . . 1
HESC 320	Principles of Strength and Conditioning . . . . . 3
HESC 390	Principles of Coaching . . . . . 3
HESC 440	Strategies for Athletic Peak Performance . . . . . 3
HESC 460	Coaching/Performance Practicum . . . . . 3
HESC 460	Coaching/Performance Practicum . . . . . 3

**MINOR IN FIGURE SKATING COACHING**

This minor is for students who are highly proficient at figure skating and have an interest in becoming a figure skating instructor or coach. Admission to the minor requires a minimum GPA of 2.0 based on at least 12 credits of coursework and permission of the program director. Applications are accepted at the end of each fall and spring semester. A minimum grade of C- is required for all courses in the minor.

CURRICULUM	CREDITS
HESC 207	Introduction to Recreation and Sport Management . . . . . 3
HESC 220	Anatomy and Physiology . . . . . 3
HESC 320	Principles of Strength and Conditioning . . . . . 3
HESC 355	Figure Skating Practicum I . . . . . 3
HESC 356	Figure Skating Practicum II . . . . . 3
HESC 440	Strategies for Athletic Peak Performance . . . . . 3

HESC 455	Figure Skating Practicum III . . . . . 3
HESC 456	Figure Skating Practicum IV . . . . . 3

Proof of First Aid certification by either the American Red Cross or the American Heart Association is also required.

**MINOR IN NUTRITION**

A minor in nutrition requires NTDT 200, NTDT 400, NTDT 401 plus 6 credits in Nutrition and Dietetics at the 300-level or higher. A 2.0 GPA is required for admission; a minimum grade of C- is required in all courses in the minor. Note that CHEM 214 and CHEM 216 are necessary prerequisites for NTDT 400 and NTDT 401.

**MINOR IN STRENGTH AND CONDITIONING**

This minor is designed to provide students with in depth understanding of the theory and practical considerations associated with physical training to enhance strength and conditioning. Students successfully completing the minor will be prepared to take the Strength and Conditioning Specialist Certification examination offered by the National Strength and Conditioning Association.

Students applying for the minor must have completed at least one semester of full time study with a minimum GPA of 2.25. Enrollment in the minor for at least four semesters is necessary due to sequencing of courses. A grade of C- or better in required courses is needed for successful completion of the minor.

CURRICULUM	CREDITS
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**Prerequisite Courses:**

The following courses are identified as prerequisites for selected courses in the minor. It is not necessary to take all of the prerequisite courses prior to enrolling in the first course in the minor. See course descriptions for the required courses to identify individual course prerequisites.

HESC 220	Anatomy and Physiology . . . . . 3
HESC 350	Basic Concepts in Kinesiology . . . . . 3
HESC 425	Biomechanics of Human Movement
or	
HESC 426	Biomechanics I . . . . . 4
HESC 430	Physiology of Activity . . . . . 3
HESC 431	Physiology of Activity Laboratory . . . . . 1
NTDT 200	Nutrition Concepts . . . . . 3

**Required Courses:**

HESC 317	Strength and Conditioning Laboratory . . . . . 1
HESC 320	Principles of Strength/Conditioning . . . . . 3
HESC 432	Exercise Testing and Prescription . . . . . 4
HESC 440	Strategies for Athletic Peak Performance . . . . . 3
HESC 447	Advanced Topics in Strength and Conditioning . . . . . 3
HESC 462	Practicum in Strength and Conditioning . . . . . 3
NTDT 310	Nutrition and Activity . . . . . 3

**HEALTH STUDIES**

Telephone: (302) 831-8371

This major provides a broad-based degree for students interested in a health-related career in any number of settings within the health services arena. Foundation courses from the sciences, humanities, and social sciences are combined with courses from departments in the College of Health Sciences. Students in the Health Studies major can select a concentration area or an existing University minor outside the college in order to meet individual personal and career objectives and interests.

**DEGREE: BACHELOR OF SCIENCE  
MAJOR: HEALTH STUDIES**

CURRICULUM	CREDITS
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**UNIVERSITY REQUIREMENTS**

ENGL 110	Critical Reading and Writing (minimum grade C-) . . . . . 3
First Year Experience (see p. 64) . . . . . 0-4	

Discovery Learning Experience (see p. 64) . . . . . 3

Three credits in an approved course or courses stressing multi-cultural, ethnic, and/or gender-related course content (see p. 64-66) . . . . . 3

**BREADTH REQUIREMENTS**

*Creative Arts and Humanities.* . . . . . 6  
Includes all Arts and Sciences Group A courses as well as art courses and foreign language courses not used in the Communication/Foreign Language requirement

*Social Sciences* (4 of the following 6 choices) . . . . . 12  
PSYC100, ECON100 or ECON151, SOCI201, IFST201, BUAD309, Social Science/History Elective (as listed for Arts & Sciences Group B or C

*Sciences*  
(3 of the following 4 choices; must include a biology course with lab) . . . . . 11  
BISC104 or 207, CHEM101 or CHEM103 or CHEM105, 100-level or higher MATH, BISC208, and other natural science courses.

**MAJOR REQUIREMENTS** (minimum grade C- in each)

Second Writing Course . . . . . 3  
An approved course taken after completion of 45 credit hours (listed as "Section satisfies A&S writing requirement" in the registration booklet).

Communication or Foreign Language Course . . . . . 3  
Statistics Course at the 200 level or above . . . . . 3  
CSCC/PHIL 241 Ethical Issues in Healthcare . . . . . 3  
BISC 276 Human Physiology . . . . . 4  
CNST 404 (prerequisite required CNST 100) or HESC 422 . . . . . 3

MEDT 100 Introduction to Medical Technology  
or  
NURS 100 New Student Connections . . . . . 1

NURS 101 Basic Human Anatomy . . . . . 2  
or  
HESC 220 Anatomy and Physiology . . . . . 3

HESC 155 Personal Health Management . . . . . 3  
or  
HESC 214 Wellness: A Way of Life . . . . . 3

NTDT 200 Nutrition Concepts . . . . . 3  
HESC 210 Emergency Management of Injuries and Illnesses . . . . . 3

MEDT 210 Information Technologies and Communication Skills . . . . . 2  
or  
HESC 276 Technology in Health and Physical Education . . . . . 2

NTDT 305 Nutrition in the Lifespan . . . . . 3  
HESC 400 Research Methods . . . . . 3  
MEDT 375 Clinical Laboratory Principles and Statistics . . . . . 2  
NURS 411 Topics in Health Care Delivery . . . . . 3

And, one course from each group:  
HESC 200 Issues in Health Behavior Management . . . . . 3  
HESC 300 Issues in Physical Activity Studies . . . . . 3  
HESC 329 Dynamics of Team Problem Solving . . . . . 3

NTDT 255 Multicultural Food Habits . . . . . 3  
NTDT 310 Nutrition and Activity . . . . . 3  
NTDT 350 Nutrition and Older Adults . . . . . 3

Additional HESC, MEDT, NTDT, or NURS  
(3 credits must be at the 400 level) . . . . . 15

HLTH 495 Health Studies Practicum: Capstone Course: Student will be required to complete a Service Learning Experience . . . . . 6

**CONCENTRATION AREA** (minimum grade C- in each course. Courses cannot be used as part of the major or breadth requirements)

Minor outside College of Health and Nursing Sciences . . . . . MINIMUM 15  
or  
Concentration . . . . . MINIMUM 15  
(No more than 9 credits at the 100 and 200 level and 3 credits at the 400 level)

**Family and Personal Health:** (COMM200, FOSC102, HESC335, IFST329, IFST339, IFST401, IFST410, NTDT310, NTDT350, NTDT452, PSYC325, PSYC334, SOCI418)

**Health Ethics and Decision-Making:** (CNST332, CSCC/HIST382, ECON390, HESC200 or HESC300 (only one can satisfy requirements), HESC329, NTDT255, NTDT452, PHIL/BAMS/WOMS327, PHIL/CSCC444, POSC/SOCI/CSCC343, SOCI/CSCC311, WOMS/CSCC389, IFST405)

**Science-Based Health Information:** (BISC105, BISC110, BISC152, BISC171/300, CHEM102 or CHEM104 or CHEM106, CHEM213, CHEM214 & 216, HESC220, HESC350, HESC425 or HESC426, HESC430 & HESC431, NTDT201, PHYS201, PHYS202, PSYC314)

**ELECTIVES**

After required courses are completed, sufficient elective credit must be taken to meet the minimum credits required for the degree.

**CREDITS TO TOTAL A MINIMUM OF . . . . . 120**

**MEDICAL TECHNOLOGY**

Telephone: (302) 831-2849  
http://www.udel.edu/medtech  
Faculty Listing: http://www.udel.edu/medtech/faculty\_profiles.html

The Department of Medical Technology offers a major in Medical Technology, as well as an Honors Degree and Honors courses. Medical Technology (Biomedical Sciences) is clinical laboratory science related to the prevention, diagnosis and therapy of disease. The Medical Technology major is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (8410 West Bryn Mawr Ave., Suite 670, Chicago, IL 60631-3415; telephone 773-714-8880). The four-year B.S. degree curriculum offers an undergraduate professional education designed to prepare students for career entry positions in hospital clinical laboratories and industry as well as graduate study in medical technology and related areas.

During the first two years at the University, students interested in medical technology should take courses in the basic sciences and liberal arts, including prerequisite courses in biology and chemistry. The professional and clinical courses in the third and fourth years include a final period of supervised clinical education in the Christiana Care Health Services and other affiliated institutions. One required Winter Session is included in the B.S. curriculum.

During the clinical rotation period (fall of junior year and winter and spring terms of the senior year), students should plan for the possibility of 1) added expense for transportation and uniforms and 2) added expense for living off-campus at the clinical site for at least a five-week rotation during the senior year when the commuting distance is excessive.

For exceptionally talented and highly motivated students, several special academic opportunities are available. Students may pursue the Honors Degree with Distinction, the Honors Degree, the Degree with Distinction, or undergraduate research through independent study.

Freshmen or transfer students may be admitted to the University with a declared interest in medical technology. Students will be evaluated for admission to the Medical Technology major after completion of the prerequisite courses. Priority will be given to full-time University sophomores.

Class size is limited to 26 medical technology majors, and any interested student should talk with the Department Chair as early as possible.

Eligibility for admission to the junior year of the Medical Technology major will be based on the following criteria:

1. Minimal GPA of 2.0 in first four semesters of coursework.
2. Minimal grade point index of 2.0 computed from specified courses in biological sciences and chemistry, including laboratories: BISC 207, 208, 276, 300, and CHEM 103, 104, 213, and 214-216.
3. Completion of at least 60 credits, including the courses listed above.

- 4. Within the pool of eligible students, admission to the major courses will be determined by academic achievement. All applicants will be evaluated by the Medical Technology Undergraduate Program Committee.

The following course sequence is recommended. These courses may be subject to change, so it is essential that students meet regularly with their faculty advisors. Courses taken pass/fail cannot be used to complete major requirements. Pass/fail courses are for free electives only. A minimal grade of C- is required in each MEDT course in the Medical Technology major. In order to meet degree requirements, medical technology majors must have a minimum cumulative GPA of 2.0 to progress in the medical technology sequence. A student who earns a grade lower than C- in a medical technology course must repeat the course and achieve a grade of at least C- before enrolling in any medical technology course which has the prior course as a prerequisite. Students are not permitted to repeat any medical technology course more than once. Further, students who earn a grade lower than C- in more than one medical technology course will not be permitted to continue in the major.

**DEGREE: BACHELOR OF SCIENCE  
MAJOR: MEDICAL TECHNOLOGY**

CURRICULUM CREDITS

**UNIVERSITY REQUIREMENTS**

ENGL 110 Critical Reading and Writing (minimum grade C-) . . . . . 3

First Year Experience (see p. 64) . . . . . 0-4

Discovery Learning Experience (see p. 64) . . . . . 3

Three credits in an approved course or courses stressing multi-cultural, ethnic, and/or gender-related course content (see p. 64-66) . . . . . 3

**MAJOR REQUIREMENTS**

Writing: (minimum grade C-) . . . . . 3

A second writing course involving significant writing experience including two papers with a combined minimum of 3,000 words to be submitted for extended faculty critique of both composition and content. This course must be taken after completion of 45 credit hours. Appropriate writing courses are normally designated in the semester's Registration Booklet. (See list of courses approved for second writing requirement, pages 89-91.)

One of the following . . . . . 3-4

MATH 114 College Mathematics and Statistics (for students who do not intend to continue the study of mathematics)

MATH 115 Pre-Calculus

MATH 117 Pre-Calculus for Scientists and Engineers (for students who intend to continue the study of mathematics)

MATH 221 Calculus I

MATH 241 Analytic Geometry and Calculus A

Successful performance on the college proficiency exam(0 credits awarded).

**BREADTH REQUIREMENTS**

(follow College of Arts and Sciences standards, See pages 91-97.)

Group A: Understanding and appreciation of the creative arts and humanities . . . . . 6

Group B: The study of culture and institutions over time . . . . . 6

Group C: Empirically based study of human beings and their environment . . . 6

Three credit Pathways Course may be substituted for one Breadth Requirement.

(minimum grade of C- required in all MEDT courses)

MEDT 100 Introduction to Medical Technology . . . . . 1

MEDT 210 Information Technologies and Communication Skills . . . . . 2

MEDT 370 Phlebotomy Practicum . . . . . 1

MEDT 375 Clinical Laboratory Principles and Statistics . . . . . 2

MEDT 380 Clinical Immunology and Medical Virology . . . . . 4

MEDT 390 Introduction to Molecular Diagnostics . . . . . 2

MEDT 391 Introduction to Molecular Diagnostics Laboratory . . . . . 1

MEDT 400 Urinalysis and Body Fluids . . . . . 2

MEDT 401 Clinical Physiological Chemistry I . . . . . 3

MEDT 411 Clinical Physiological Chemistry I Laboratory . . . . . 2

MEDT 404 Hematology I . . . . . 2

MEDT 414 Hematology I Laboratory . . . . . 1

MEDT 406 Medical Microbiology . . . . . 3

MEDT 416 Medical Microbiology Laboratory . . . . . 2

MEDT 403 Clinical Physiological Chemistry II . . . . . 4

MEDT 413 Clinical Physiological Chemistry II Laboratory . . . . . 2

MEDT 418 Medical Technology Senior Seminar . . . . . 0

MEDT 405 Hematology II . . . . . 2

MEDT 415 Hematology II Laboratory . . . . . 2

MEDT 409 Immunohematology . . . . . 1

MEDT 419 Immunohematology Laboratory . . . . . 1

MEDT 420 Immunohematology II . . . . . 1

MEDT 421 Immunohematology II Laboratory . . . . . 1

MEDT 430 Diagnostic Bacteriology and Medical Mycology . . . . . 2

MEDT 431 Diagnostic Bacteriology and Medical Mycology Laboratory . . . . . 2

MEDT 461 Laboratory Practice and Leadership I . . . . . 1

MEDT 471 Laboratory Practice and Leadership II . . . . . 1

MEDT 472 Clinical Urinalysis Practicum . . . . . 1

MEDT 473 Clinical Chemistry Practicum . . . . . 3

MEDT 475 Clinical Hematology Practicum . . . . . 3

MEDT 477 Clinical Microbiology Practicum . . . . . 3

MEDT 479 Clinical Immunohematology Practicum . . . . . 3

BISC 207/208 Introductory Biology I and II . . . . . 8

BISC 276 Human Physiology . . . . . 4

BISC 300 Introduction to Microbiology . . . . . 4

CHEM 103/104 General Chemistry . . . . . 8

CHEM 213 Elementary Organic Chemistry and CHEM 214/216 Elementary Biochemistry with Lab or CHEM 321/322 Organic Chemistry . . . . . 8

**CREDITS TO TOTAL A MINIMUM OF . . . . . 123**

**HONORS BACHELOR OF SCIENCE: MEDICAL TECHNOLOGY**

The recipient must complete:

1. All requirements for the Bachelor of Science degree in Medical Technology.
2. All the University's generic requirements for the Honors Baccalaureate degree (see p. 48).

**NURSING**

Telephone: (302) 831-2193  
<http://www.udel.edu/nursing>  
 Faculty Listing: <http://www.udel.edu/nursing/faculty/faculty.html>  
 e-mail: [ud-nursing@udel.edu](mailto:ud-nursing@udel.edu)

The School of Nursing offers a traditional baccalaureate degree program in nursing and an accelerated degree program for those who already hold a baccalaureate degree in another field. There is also a baccalaureate degree program (BRN) for registered nurses with associate degrees or diplomas. Returning nurses may complete the majority of their course work at home or in the worksite in a distance-learning format.

In addition, the School offers a master's program in nursing, with concentrations in Family Nurse Practitioner, Adult Nurse Practitioner, Neonatal Nurse Practitioner, Health Services Administration, and Clinical Nurse Specialist.

**TRADITIONAL BACHELOR OF SCIENCE IN NURSING PROGRAM**

The traditional Bachelor of Science in Nursing program is designed to develop the knowledge, understanding and skills essential for the practice of professional nursing and to provide the basis for graduate education. The program is fully accredited by the National League for Nursing Accrediting Commission and has preliminary approval from the Commission for Collegiate Nursing Education. Information on program requirements is available from

the League at 61 Broadway-33rd floor, New York City, NY 10006, telephone 1-800-669-1656. The first year of the program includes foundation courses in the natural, social, and behavioral sciences, and liberal arts. Each subsequent year increases the nursing content and coursework and culminates in a senior year of clinical residency in direct care clinical agencies. Clinical resources of the Department include healthcare agencies in Delaware, Maryland, Pennsylvania, and New Jersey.

During clinical rotations, students are exposed to many different experiences in a variety of healthcare settings. These include the major hospitals in New Castle County as well as regional community hospitals, a variety of extended care facilities, independent living facilities, and various community-based providers who offer a range of services across the life span. Students graduate as nurse generalists with experiences in pediatric, maternity, psychiatric, medical-surgical, and community health nursing.

Nursing students are encouraged to participate in the university chapter of the National Student Nurses' Association and the Black Student Nurses' Organization. Students who have earned recognition for superior academic achievement may be invited for membership in Beta Xi Chapter of Sigma Theta Tau, the International Honor Society of Nursing. Qualified students may participate in the University's Honors, undergraduate research, and the Degree with Distinction programs. Research opportunities are available to all undergraduates.

**ACCELERATED NURSING DEGREE PROGRAM**

The Accelerated Degree Program is a course of study leading to a Bachelor of Science in Nursing and is designed for individuals who have a previously earned degree in another field and would like to pursue a career in nursing. Students in this program must complete all of the non-nursing requirements by transfer credit from their first degree, completion of coursework at the University of Delaware or by transfer of pre-approved equivalent courses from other accredited institutions. The program begins in the fall with two courses which are offered in a web-enhanced format. Students will be required to come to campus for course examinations. If a student is unable to relocate until beginning full time study in January, special testing arrangements may be made on an individual basis. In January, students begin their full time studies with a five week winter session. Coursework continues in the spring semester, followed by a ten week summer session, the fall semester, and concludes with the following January winter session. All pre-requisite science courses must be completed successfully prior to the first fall nursing course.

Students taking courses in an accelerated mode are sometimes out of sequence with on-campus course offerings. In these instances, lecture will be provided via videotape or web, and augmented by group discussion sessions.

Eligibility for this course of study includes the following:

1. An earned baccalaureate degree.
2. GPA of 3.25 or greater
3. Completion of all non-nursing courses prior to second term of the program.

For more information or to make an appointment to discuss the accelerated program, please contact the School at 302-831-1253. A sample curriculum plan may be viewed at the Accelerated Degree Program website ([www.udel.edu/nursing/accelerated.html](http://www.udel.edu/nursing/accelerated.html)). Students who may need financial assistance in pursuing a second degree should contact the Financial Aid Office at 302-831-1534. Reference books on private financial aid sources are available in libraries or local academic institutions in your community.

**POLICIES**

In order to meet degree requirements, nursing majors must have a minimum cumulative GPA of 2.0 to progress in the nursing sequence. A student who earns a grade lower than C- in a nursing course must repeat the course and achieve a grade of at least C- before enrolling in a more advanced nursing course.

Students are not permitted to repeat any nursing course more than once. Students who earn a grade lower than C- in more than one nursing course will not be permitted to continue in the program. Students should meet regularly with their advisor to ensure that all requirements are being met.

Students are required to meet all immunization, safety, criminal background checks, drug screenings, and CPR requirements prior to clinical coursework and direct patient care. Additional requirements for the clinical education may be required by the healthcare agency to which a student is assigned. Students are expected to provide their own transportation to all required clinical experiences.

**LICENSURE**

Graduates are eligible for registered nurse licensure in any state upon satisfactory completion of the National Council Licensure Examination for Registered Nurses (N-CLEX-RN). If the examination is passed and licensure granted in one state, application may be made to other states for licensure by endorsement.

**HONORS DEGREE IN THE DEPARTMENT OF NURSING**

Students can earn an Honors Bachelor of Science Degree in Nursing by completing the following requirements:

1. All requirements for the Bachelor of Science in Nursing Degree
2. All the University's generic requirements for the Honors Baccalaureate Degree (see p. 48)

Courses at the 600 level or higher may be taken for honors credits (with permission from the course instructor and academic advisor).

**DEGREE: BACHELOR OF SCIENCE IN NURSING (Traditional Program)**

**MAJOR: NURSING**

CURRICULUM CREDITS

**UNIVERSITY REQUIREMENTS**

ENGL 110	Critical Reading and Writing (minimum grade C-)	3
First Year Experience (see p. 64)		0-4
Discovery Learning Experience (see p. 64)		3
Three credits in an approved course or courses stressing multi-cultural, ethnic, and/or gender-related course content (see p. 64-66)		3
This course also can be used in the breadth requirements.		

**BREADTH REQUIREMENTS**

(see College of Arts and Sciences standards, pages 91-97)

Group A: Understanding and appreciation of the creative arts and humanities	3
<i>(Foreign language requirement may be substituted for a Group A requirement)</i>	
Group B: The study of culture and institutions over time	3
Group C: Empirically based study of human beings and their environment	3

**MAJOR REQUIREMENTS**

BISC 207	Introductory Biology	4
BISC 276	Human Physiology (minimum grade C-)	4
BISC 300	Introduction to Microbiology	4
CHEM 105	General Chemistry	4
CHEM 106	Elementary Bioorganic Chemistry	5
NTDT 200	Nutrition Concepts	3
STAT 200	Basic Statistical Practice	3
PSYC 100	General Psychology	3
IFST 201	Life Span Development	3
NURS 100	New Student Connections	1
NURS 101	Basic Human Anatomy	2
NURS 110	Nursing Connections	1
NURS 200	Clinical Decision Making	2
NURS 222	Pharmacology	3
NURS 231	Health Promotion Across the Lifespan	2
NURS 232	Care of Vulnerable Populations	2
NURS 241	Scientific Basis of Nursing	3
NURS 242	Scientific Basis of Nursing	3

NURS 250 Health Assessment Across the Lifespan . . . . . 2  
 NURS 352 Adult Health Nursing . . . . . 3  
 NURS 354 Psychosocial Nursing . . . . . 3  
 NURS 356 Care of Children and Families . . . . . 3  
 NURS 358 Women's Health Nursing . . . . . 3  
 NURS 362 Research Concepts in Health Care . . . . . 3  
 NURS 372 Adult Health Nursing . . . . . 3  
 NURS 382 Communities and Health Policy . . . . . 2  
 NURS 390 Clinical Work Experiences . . . . . 1-2  
 NURS 411/412 Topics in Health Care Delivery . . . . . 3  
 NURS 411/412 Topics in Health Care Delivery\* . . . . . 3  
 NURS 453 Clinical Applications: Adult Health Nursing I . . . . . 3  
 NURS 457 Clinical Applications: Maternal Child Nursing . . . . . 3  
 NURS 459 Clinical Application: Psychosocial Nursing . . . . . 3  
 NURS 460 Clinical Integration Seminar I . . . . . 2  
 NURS 473 Clinical Applications: Adult Health Nursing II . . . . . 3  
 NURS 477 Clinical Applications: Care of Populations . . . . . 3  
 NURS 479 Clinical Preceptorship . . . . . 3  
 NURS 480 Clinical Integration Seminar II . . . . . 2  
 \*Each student is required to take 6 credits of NURS 411/412

NURS 358 Women's Health Nursing . . . . . 3  
 NURS 362 Research Concepts in Health Care . . . . . 3  
 NURS 372 Adult Health Nursing . . . . . 3  
 NURS 382 Communities and Health Policy . . . . . 2  
 NURS 411/412 Topics in Health Care Delivery . . . . . 3  
 NURS 411/412 Topics in Health Care Delivery\* . . . . . 3  
 NURS 453 Clinical Applications: Adult Health Nursing I . . . . . 3  
 NURS 457 Clinical Applications: Maternal Child Nursing . . . . . 3  
 NURS 459 Clinical Application: Psychosocial Nursing . . . . . 3  
 NURS 460 Clinical Integration Seminar I . . . . . 2  
 NURS 473 Clinical Applications: Adult Health Nursing II . . . . . 3  
 NURS 477 Clinical Applications: Care of Populations . . . . . 3  
 NURS 479 Clinical Preceptorship . . . . . 3  
 NURS 480 Clinical Integration Seminar II . . . . . 2  
 \*Each student is required to take 6 credits of NURS 411/412

**ELECTIVES**

After required courses are completed, sufficient elective credits must be taken to meet the minimum credits required for the degree.

**CREDITS TO TOTAL A MINIMUM OF . . . . . 122**

Many nursing courses are offered once each academic year. Students must complete selected required lower division courses before enrolling in upper division nursing courses. Nursing courses must be taken in sequence unless otherwise specified.

**ELECTIVES**

After required courses are completed, sufficient elective credits must be taken to meet the minimum credits required for the degree.

**CREDITS TO TOTAL A MINIMUM OF . . . . . 120**

Many nursing courses are offered once each academic year. Students must complete selected required lower division courses before enrolling in upper division nursing courses. Nursing courses must be taken in sequence unless otherwise specified.

**BACCALAUREATE PROGRAM FOR THE REGISTERED NURSE (BRN)**

The School of Nursing offers a separate program to allow registered nurses to earn a Bachelor of Science in Nursing. The Baccalaureate for the Registered Nurse (BRN) major is an innovative program designed to build on basic nursing knowledge, enhancing nursing practice in an increasingly complex society. The BRN major is offered in a distance learning format to maximize educational opportunities for registered nurses. Licensed registered nurses who are graduates of associate degree or diploma programs may apply for admission to this program. For the RN to MSN program, please see graduate nursing programs.

**Admission Requirements**

A registered nurse who is a graduate of an associate degree or diploma nursing program may apply for admission to the Baccalaureate for the Registered Nurse Major. The applicant should request a distance learning application form or access the application online at <http://www.udel.edu/dsp/BRN> and submit the form with fee to the Division of Special Programs.

**Materials requested are:**

- Completed application form with application fee
- Official transcripts verifying college credits previously earned including verification of graduation. A student who is transferring credit from other institutions must have a 2.5 cumulative grade point index (GPI) in all previous college work. The University accepts credits only from those institutions that are fully accredited by the appropriate regional accrediting association. This determination is made only at the time of formal application to the University. You may wish to contact institutions you attended previously to ascertain their status during your period of enrollment.
- Current registered nurse license for those licensed in the United States
- Documentation of equivalent to a US RN license for international students plus a minimum score of 600 for the paper test and 250 for the computer based test required for the Test of English as a Foreign Language (TOEFL)

**DEGREE: BACHELOR OF SCIENCE IN NURSING (Accelerated Degree Program)**

**MAJOR: NURSING**

**CURRICULUM CREDITS**

**UNIVERSITY REQUIREMENTS**

ENGL 110 Critical Reading and Writing (minimum grade C-) . . . . . 3  
 Discovery Learning Experience (see p. 64) . . . . . 3  
 Three credits in an approved course or courses stressing multi-cultural, ethnic, and/or gender-related course content (see p. 64-66) . . . . . 3  
 This course also can be used in the breadth requirements.

**BREADTH REQUIREMENTS**

(see College of Arts and Sciences standards, pages 91-97)

Group A: Understanding and appreciation of the creative arts and humanities . . . . . 3  
 (Foreign language requirement may be substituted for a Group A requirement)  
 Group B: The study of culture and institutions over time . . . . . 3  
 Group C: Empirically based study of human beings and their environment . . . . . 3

**SUPPORT COURSES**

(To be completed through course work or transfer of credit before beginning the first Winter Session)

BISC 207 Introductory Biology I . . . . . 4  
 NURS 101 Basic Human Anatomy . . . . . 2  
 BISC 276 Human Physiology (minimum grade C-) . . . . . 4  
 BISC 300 Introduction to Microbiology . . . . . 4  
 CHEM 105 General Chemistry . . . . . 4  
 CHEM 106 Elementary Bioorganic Chemistry . . . . . 5  
 IFST 201 Life Span Development . . . . . 3  
 NTDT 200 Nutrition Concepts . . . . . 3  
 PSYC 100 General Psychology . . . . . 3  
 STAT 200 Basic Statistical Practice . . . . . 3

**NURSING COURSES (66 credits)**

NURS 220 Concepts of Nursing Practice . . . . . 3  
 NURS 222 Pharmacology . . . . . 3  
 NURS 230 Foundations of Nursing . . . . . 2  
 NURS 250 Health Assessment Across the Lifespan . . . . . 2  
 NURS 312 Pathophysiology . . . . . 4  
 NURS 352 Adult Health Nursing . . . . . 3  
 NURS 354 Psychosocial Nursing . . . . . 3  
 NURS 356 Care of Children and Families . . . . . 3

- Official admission to the BRN major
- Completion of all science credits required for the degree. The remaining non-nursing credits can be taken at any time in the program; however students are strongly encouraged to complete non-nursing requirements prior to enrollment in nursing courses.
- Submission and approval of:
  - Nursing Employment Verification Form
    - The process must be completed before enrollment in the student's first nursing course.
  - Updated immunization record to Student Health and the Division of Special Programs
  - Current RN license

NURS 312	Pathophysiology . . . . .	4
NURS 335	BRN Orientation . . . . .	1
NURS 345	Conceptual Foundations for Nursing Practice . . . . .	3
NURS 350	Wellness/Health Assessment . . . . .	3
NURS 362	Research Concepts in Health Care . . . . .	3
NURS 411/412	Topics in Health Care Delivery . . . . .	3
NURS 435	Leadership & Management in Health Organizations . . . . .	3
NURS 442	Community Health Nursing . . . . .	3
NURS 443	BRN Role Practicum . . . . .	3
NURS 450	BRN Capstone . . . . .	1

**ELECTIVES**

After required courses are completed, sufficient elective credits must be taken to meet the minimum credits required for the degree.

**CREDITS TO TOTAL A MINIMUM OF . . . . . 120**

**POLICIES**

In order to meet degree requirements, nursing majors must have a minimum cumulative GPA of 2.0 to progress in the nursing sequence. A student who earns a grade lower than C- in a nursing course must repeat the course and achieve a grade of at least C- before enrolling in a more advanced nursing course.

Students are not permitted to repeat any nursing course more than once. Students who earn a grade lower than C- in more than one nursing course will not be permitted to continue in the program. Students should meet regularly with their advisor to ensure that all requirements are being met.

Students are required to meet all immunization, safety, criminal background checks, drug screenings, and CPR requirements prior to clinical coursework and direct patient care. Additional requirements for the clinical education may be required by the healthcare agency to which a student is assigned. Students are expected to provide their own transportation to all required clinical experiences.

**ACADEMIC PROGRESSION**

The program is designed to facilitate timely progression for nurses who are continuing their education while employed full or part-time. There is no time limit for completion of prerequisite courses; however upon enrollment in the first nursing course, the program must be completed within a five-year period. It is possible to complete the required nursing courses in a 12-month period

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**DEGREE: BACHELOR OF SCIENCE IN NURSING**  
**MAJOR: BACCALAUREATE FOR THE REGISTERED NURSE (BRN)**

CURRICULUM CREDITS

**UNIVERSITY REQUIREMENTS**

ENGL 110 Critical Reading and Writing  
 (minimum grade C-) . . . . . 3

Discovery Learning Experience (see p. 64) . . . . . 3

Three credits in an approved course or courses stressing multi-cultural, ethnic, and/or gender-related course content (see p. 64-66) . . . . . 3

**MAJOR REQUIREMENTS**

24 credits, to include a minimum of one course in each of the following five categories: . . . . . 24  
 (1) biology, (2) microbiology, (3) chemistry, (4) anatomy and physiology, and (5) nutrition.

STAT 200 Basic Statistical Practice . . . . . 3  
 English course (second English composition course) . . . . . 3  
 Psychology course . . . . . 3  
 Sociology course . . . . . 3  
 Lifespan development course . . . . . 3  
 Restricted elective chosen from the following . . . . . 3  
 Art, Art History, History, Philosophy, Music, Theatre, Comparative Literature, Black American Studies, Economics, Political Science, Women's Studies, Foreign Languages and Literatures, Linguistics, and English.

