



College of Health & Rehabilitation Sciences: Sargent College

UNDERGRADUATE STUDENT MANUAL

FOR

**HUMAN PHYSIOLOGY Graduating Class Years 2021, 2022,
2023**

AY 2020-2021

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I. INTRODUCTION TO SARGENT COLLEGE, BOSTON UNIVERSITY

Sargent College of Health and Rehabilitation Sciences became part of Boston University in 1929. It was originally founded as a School of Physical Training in Cambridge, Massachusetts by Dr. Dudley Allen Sargent in 1881. Dr. Sargent built an international reputation as an innovator in health promotion and physical conditioning. With the expansion of knowledge about health and the increase in complexity of society's health care needs, Sargent College continuously improves our degree programs to meet the needs of future professionals in health fields.

Academic Programs

Undergraduate programs include Athletic Training, Health Science, Health Studies (undergraduate portion of the Doctor in Physical Therapy program), Human Physiology (pre-med), Dietetics, Nutritional Science (pre-med), Speech, Language and Hearing Sciences, and Therapeutic Studies (undergraduate portion of the Occupational Therapy program). Graduate programs are offered in Applied Anatomy and Physiology, Nutrition, Audiology, Occupational Therapy, Physical Therapy, Rehabilitation Counseling, Rehabilitation Sciences and SpeechLanguage Pathology.

Scope of the Program Manual

Information in this manual is not intended to be fully comprehensive. The student should also refer to policies, data, or listings that are found in:

- Sargent College Graduate or Undergraduate Bulletins
- Academic Conduct Code
- The Boston University or Sargent College Websites

While every effort is made to keep all of these sources accurate, up-to-date and in agreement with one another, occasional discrepancies may occur and will be resolved by consultation with your Program Director.

Mission of Sargent College

The mission of Boston University Sargent College is to advance, preserve, disseminate, and apply knowledge in the health and rehabilitation sciences. BU Sargent College strives to create an environment that fosters critical and innovative thinking to best serve the health care needs of society.

II. INTRODUCTION TO THE DEPARTMENT OF HEALTH SCIENCES PROGRAM IN HUMAN PHYSIOLOGY

The Human Physiology Program in the Department of Health Sciences has prepared many students for successful admission to professional health care programs. For those individuals seeking a career in one of the health care professions, including medical school, and who have a strong interest in the sciences, the Human Physiology major provides an alternative to the traditional biology degree. With its focus on the study of human biology, a major in Human Physiology expands upon the required premedical requirements (listed below) with the addition of classes such as gross human anatomy, exercise physiology, muscle biology, neuroanatomy and neurophysiology, and cardiopulmonary pathophysiology. Breadth of academic preparation is insured by elective distribution requirements in the humanities and social sciences.

Health career schools prefer students who display a variety of interests with the quality and scope geared to meet the admission requirements of one's institutional choice. Above all, admission will depend upon academic achievement, unique interest and skills, clinical experiences, and letters of recommendation. In addition, medical schools require that all applicants complete the minimally required premedical courses (see Appendix II).

Many of the faculty in the Health Science Department hold joint appointments with various departments in the School of Medicine and have extensive research laboratories where students can gain insights regarding medical research programs in specialized areas. The department has extensive collaborative research relationships with various universities, hospitals and industrial research laboratories both in the greater Boston area and the surrounding New England states.

Each student in the department is assigned an academic/career advisor who works closely with the student in career planning, course selection and determining the professional school best suited for their particular health career.

III. FULL-TIME FACULTY IN HUMAN PHYSIOLOGY

Faculty and Areas of Specialization

Dustin Allen, Ph.D.

drallen@bu.edu,

Office: Sargent – Rm 416

Southern Methodist University, Lecturer;

Cardiovascular & Exercise Physiology, EdTech

Helen Barbas, Ph.D.
barbas@bu.edu,
Office: Sargent – Rm 431

McGill University, Canada; Professor,
Neuroscience, organization of prefrontal cortex.

Susan Kandarian, Ph.D.
skandar@bu.edu
Office: Sargent – Rm 423

The University of Michigan; Professor, Muscle
physiology, molecular mechanisms of gene
expression in muscle.

Kathleen G. Morgan, Ph.D.
kmorgan@bu.edu
Office: Sargent – Rm 443B

University of Cincinnati; Professor,
Cardiovascular cell biology and cytoskeleton.

Elizabeth C. Co, Ph.D.
eco@bu.edu
Office: Sargent – Rm 427

University of California, San Francisco, Clinical
Assistant Professor: Program Director,
Immunology, Reproductive Physiology, Education
University of Florida, Gainesville, Lecturer;
Physiology, Aging, Education

Lisa Roberts, Ph.D.
lmrob@bu.edu
Office: Sargent – Rm 407

Vasileios Zikopoulos, Ph.D.
zikopoul@bu.edu
Office: Sargent—Rm 401

University of Crete, Greece; Assistant Professor,
Neuroscience, organization of prefrontal cortex in
autism.

V

IV. ETHICAL STANDARDS AND POLICIES OF SARGENT COLLEGE OF HEALTH AND REHABILITATION SCIENCES; PETITIONS, APPEALS

Sargent College has a commitment to excellence in the education of Health and Rehabilitation Professionals. Individually and collectively, those associated with Sargent are responsible for maintaining and promoting those ethical standards below:

A. Responsibility of the College to Students:

1. In the process of recruiting students, the College and its program should be represented accurately.
2. The admissions procedures should indicate a fair and impartial review of student's credentials.
3. A learning environment should be provided which is safe and conducive to learning.
4. The curriculum should be consistent with the best practices, philosophies, and patterns within the allied health professions.

5. The College and its programs should attempt to respond to changing patterns and concepts in the process of educating allied health professionals.
6. The faculty should be competent educators in their respective field.
7. Procedures used to evaluate students should be fair and clearly presented to the students at the beginning of each course and throughout the program.
8. Grievance and appeals procedures for students should exist and be clearly presented to students.
9. The College should make every effort to ensure that the students will be competent in their professional areas at the completion of their program requirements.

B. Responsibility of the College to Consumers of Health Care Services

1. The College should make every effort to ensure that each graduate of the college should be competent for service in his or her respective profession.
2. The College should emphasize through its instruction that the graduates of the college should respect the dignity and privacy of each individual with whom they come in contact in a professional setting.

C. Professional Behavior Statement

The mission of Sargent College is to advance, preserve, disseminate, and apply knowledge in the health and rehabilitation sciences. Sargent College strives to create an environment that fosters critical and innovative thinking to best serve the health care needs of society. This environment is made possible only through full participation of all members of the Sargent College community. A key expectation of this community of scholars, educators, practitioners and students is the adherence to the highest standards of professional and ethical behavior.

Academic performance is only one indicator of success for Sargent College students. Students are expected to demonstrate professional behavior, to accept responsibility for their actions, and to expect the same from their peers. Professional behavior is expected across environments, whether the student is engaged in clinical practice, classroom instruction, peer or faculty interaction, and research or laboratory activities. Students are expected to know and comply with the specified rules for each of their academic and clinical experiences.

Students are evaluated on professional behavior in addition to academic performance. Failure to meet the standards for professional behavior may result in dismissal from the program. The specific responsibilities of students are outlined in the manual for each program of study.

D. Academic Honesty

Sargent College of Health and Rehabilitation Sciences is committed to creating an intellectual community in which both faculty and students participate in the free and uncompromising pursuit of learning. This is possible only in an atmosphere of mutual trust where the discovery and communication of truth are marked by scrupulous, unqualified honesty. The college expects all students to adhere strictly to the accepted norms of intellectual honesty in their academic and clinical work. It is the responsibility of the student to abide by the Sargent College

Academic Conduct Code that is distributed annually to each student at the college. Copies are available in the Academic Services Center (Room 207).

E. Absence for Religious Reasons

1. Religious Holidays: According to Chapter 151C of the General Laws, Commonwealth of Massachusetts, any student in an educational or vocational training institution, other than a religious or denominational educational or vocational training institution, who is unable, because of his or her religious beliefs, to attend classes or to participate in any examination, study, or work requirements on a particular day, shall be excused from any such examination or study or work requirement, and shall be provided with an opportunity to make up such examination, study, or work requirement that may have been missed because of such absence on any particular day; provided, however, that such makeup examination or work shall not create an unreasonable burden upon such school.
2. Students are permitted to be absent from class, including classes involving examinations, labs, excursions, and other special events, for purposes of religious observance. Class and other work shall be made up in consultation with the student's instructors. All religious observances, within all religious traditions, are subject to this accommodation. You are encouraged to seek out services at Boston University or in the Boston metropolitan area. Marsh Chapel <http://www.bu.edu/chapel/life/index.html> is an excellent source of information about local services. A list of religious groups currently active on campus may be found at the [Religious Life](#) link on the University's website.
3. To that end, please identify potential schedule conflicts with religious observances (class attendance, exams, assignment due dates) *very early in the semester* and communicate these to the course instructor. We will arrange mutually acceptable alternative arrangements for class work and examinations that is equivalent to the original examination, assignment, or other academic exercise. This could be the same work with a different due date, or a substantially similar exercise at another time. To avoid misunderstandings, the agreed-upon arrangement should be put in writing. If, after discussion, the instructor and student cannot agree on an accommodation, the advice of the college Dean's office should be sought.
4. If you would like advice or counsel about religious observance you may call or email the Dean of Marsh Chapel (Robert Allan Hill, 617-358-3394, rahill@bu.edu) or the Director of Marsh Chapel (Raymond Bouchard, 617-358-3390, dymphna@bu.edu) for help in the administration of this policy.

F. Disability Accommodations (also on the BU Website)

Boston University provides reasonable accommodations to eligible individuals with disabilities in conformance with Section 504 of the Rehabilitation Act of 1973 and with the Americans with Disabilities Act of 1990. Requests for disability accommodations must be made in a timely fashion to the Office of Disability Services, 19 Deerfield Street, Boston, MA 02215; 617-353-3658 (Voice/TTY). Students seeking accommodations must submit appropriate medical documentation and comply with the policies and procedures of the Office of Disability Services.

Please see also, <http://www.bu.edu/disability/policy/policyindex.htm>

G. Graduation

All students must fill out an application for Graduation after they meet with their advisors to certify that all degree requirements are met. The application for Graduation must be signed by your advisor and returned to the Academic Services Center (ASC - Room 207). It is essential that this form be submitted by February 1st of your last year of study to ensure that your name is included in the May graduation list and commencement programs.

All students (January, May and September grads) are invited to participate in the May commencement ceremony if they have completed all coursework by that date. Commencement materials will be sent by email and postal mail so please be sure that BU has your updated contact information. Check the Sargent College and Boston University websites for important details about the ceremonies or stop by the Academic Services Center (Room 207) if you have any questions.

H. Double Majors Within Sargent College

Currently, students can pursue two undergraduate degrees in separate schools through the Boston University Dual Degree Program or double majors within a school. Some general policy considerations for double majors within Sargent College:

- Students must meet all requirements in both programs including GPA, all coursework (major and elective) and internships where applicable.
- Both degrees must be completed before the student can graduate from Boston University.
- Students must complete no fewer than 36 courses (144 credits) for a double major.
- To apply, students must complete their freshman year with a grade point average of 3.0 or higher. Applications can be made during the first or second semester of the sophomore year or by the first semester of the junior year (at least three semesters of enrollment are required).
- Students must meet with Deborah Claar, Academic Counselor (Room 201). She also serves as the BU and SAR Dual Degree Program Majors coordinator. All paperwork is processed through her.
- The application will then be reviewed by academic advisors who have knowledge of both programs.
- As part of the application, an essay (one-page, typed) must be submitted that describes why the double major is academically beneficial.

I. Freshman Program Changes and Transfers

Freshmen who wish to change programs during their fall semester at Boston University must first meet with Heather Nicholson to discuss the requirements of the target program. Because it is very helpful for everyone involved in the decision-making process to have the first semester grades for freshmen, the following guidelines are proposed.

- Freshmen who have been admitted into a specific program may transfer into new programs only after a full semester at BU.
- Freshmen who have been admitted into the Undeclared program can declare a major only after they have completed a full semester at Boston University.
- Students who become interested in changing majors during the fall semester will be encouraged to register for spring semester coursework in the target major rather than the admitted major.
- Students who have not yet met the transfer requirements will still be allowed to take crucial freshman spring courses (for example, AT 205) so that they don't fall behind in the curriculum requirements.

Any time after the fall of freshmen year, students who decide to change programs or transfer into Sargent College, BU may begin the process by meeting with one of the academic counselors, H. Nicholson (inside SAR transfers) or D. Claar (intra-university and outside BU transfers). The following actions are possible:

- An academic counselor or program director may recommend supplementary coursework that would help the student to succeed in their target major. This recommended coursework must be completed before the student will be allowed to apply to the target program.

- At his/her discretion, the program director may counsel that the student is unlikely to succeed in the target major and therefore permission to transfer will not be given.
- A student who meets the GPA and all other guidelines will be officially admitted to their new chosen program after all of the paperwork has been completed.
- Students who do not meet the GPA requirements of the target program, must remain in their admitted program until their grades are suitable for the new program and then reapply. Please note that, transferring into a new major may prolong the time it takes to complete the degree requirements.
- Students are expected to complete a minimum of three semesters in a Sargent College major prior to graduation.

J. Dean's List

Full-time students are named to the Dean's List for excellence of scholarship upon achieving a grade point index of 3.5 in any one semester with no incomplete grades. At least 12 credits of coursework with letter grades (not pass/fail) are needed for a student to be eligible for the Dean's list.

K. Senior Thesis for Distinction

<http://www.bu.edu/sargent/admissions/undergraduate/thesis-for-distinction/>

L. Academic Probation

Any student whose grade point index is below a 1.7 will be placed on academic probation and will be notified by Sargent College. To remove the probationary status from the academic record, a student must achieve a 2.0 GPI in the following semester.

Any student who has two consecutive semesters of a GPI below a 1.7 will be academically dismissed from the College and will be allowed a transitional semester as an undeclared student to raise their GPA to transfer to another college within the University or elsewhere. If, at the end of the transitional semester, they are unable to successfully transfer, they will be dismissed from the University. The academic probation policies include coursework completed during summer term at Boston University. Students can make an appointment with an academic counselor in the Academic Services Center (Room 207) at (617) 353-2713 to discuss their status.

No student on probation may hold office in any college or university organization, participate in any intercollegiate event or program, including athletics, or otherwise represent the university or college. A student on probation is not excluded from membership in a student organization. A student on probation may be ineligible to receive any financial aid from the university or college.

A letter is sent to each student informing him/her of academic probation status. Copies of this letter are sent to the faculty advisor and parents, and it is recorded at the Registrar's Office on the University Record System. Students on probation are encouraged to seek advice from an academic counselor at the college.

M. Termination of Enrollment for Academic Reasons and Appeal Process

A student is permitted only two consecutive semesters of a GPI below a 1.7. Termination of matriculation within the college shall occur for any student at the end of the second semester of unsatisfactory work but a transitional semester will be granted as stated above. This decision can be appealed and a formal petition can be submitted to the College Academic Policies and Procedures Committee by contacting the Academic Services Center (Room 207).

N. Action Taken Outside Sargent College

Matters relating to a course taken by a student in a school or college other than the one in which the student is enrolled are subject to the determination of the school or college in which the course is offered. Disciplinary or academic actions against a Sargent student by other segments of the University will be reviewed by SAR/CAPP. SAR/CAPP will then recommend its decision to the Dean of Sargent College.

O. Attendance (also on the BU website)

Students are expected to attend each class session unless they have a valid reason for being absent. Students may be required at any time to account for undue irregularity in attendance, either by personal explanation to their faculty advisor or dean or by written statement from a parent or another authority. Any student who has been excessively absent from a course may be required to withdraw from that course without credit. Students who expect to be absent from class for more than five days should notify their dean promptly.

P. Suspension or Dismissal (also on the BU website)

Boston University, through its various faculties and appropriate committees, reserves the right to suspend or dismiss any student for failure to maintain a satisfactory academic record, acceptable personal behavior, or satisfactory standards of health. Copies of Boston University's Code of Student Responsibilities are available from the Office of the Dean of Students, East Tower, George Sherman Union, 775 Commonwealth Avenue, Boston, MA 02215.

Students absent from classes more than two days for illness should be under a doctor's care. Students who are absent five days or more for illness should present to Student Health Services a certificate of fitness from their physician or be examined at the University Clinic.

Q. Intra-University Minors

1) Minors available within the College of Arts and Sciences (CAS):

African Languages and Literature	German
African Studies	Geography
African American Studies	Greek Language and Literature
American Studies	Hebrew
Ancient Greek	History
Anthropology	Latin American Studies
Archaeology	Linguistics
Art History	Mathematics
Astronomy	Medieval Studies
Biology	Modern Greek Studies

Chemistry	Philosophy
Chinese	Physics
Classical Civilization	Political Science
Computer Science	Psychology
Earth Sciences	Public Health
East Asian Studies	Religion
Economics	Russian
English	Russian and Eastern European Studies
Environmental Analysis and Policy	Sociology
Environmental Science	Spanish
European Literature	Statistics
French	Women's Studies

2) Minors available within School of Fine Arts (SFA)

Dance
Music
Theatre Arts
Visual Arts

3) Minor available within School of Management (SMG) Business Administration

5) Minors available within Sargent College. Public

Health
Human Physiology
Speech, Language and Hearing Sciences

R. Minor in Public Health

The minor in public health is offered jointly by BU College of Health and Rehabilitation Sciences: Sargent College and BU School of Public Health. The minor consists of six courses, which must be completed with a grade of C or higher: four required courses (Introduction to Public Health, Epidemiology, a course in Statistics, and a course in International Health) and two courses from a list of public health electives. Students may fulfill some public health minor course requirements through two BU Study Abroad Programs: [Geneva Public Health and Dublin Health Science tracks](#).

Students must earn a grade of B- or better in Introduction to Public Health (PH510) and a C or better in the remaining courses. There are no specific prerequisites, other than those required for some of the elective courses. It is recommended that students take PH510 prior to taking the public health electives. Students may take the biostatistics course or the epidemiology course at any time.

All of the following courses are available for credit towards the proposed program either on the Charles River Campus or on the Medical Campus at the School of Public Health (A free shuttle bus service between the campuses is available to students).

The following four courses are required (10-12 credits):

1. Introduction to Public Health:

- SPH PH 510 Introduction to Public Health (4 cr)

2. One of the following International Health courses:

- SAR HS 363 Global Health: Beyond Germs and Genes (4 cr)
- SAR HS 450 Non-Infectious Diseases (4 cr)
- SPH PH 511 Pathogens, Poverty, and Populations: An Introduction to International Health (4 cr)
- SPH PH 506e International Health at the World Health Organization (4 cr) (offered through Geneva Program only) •
SPH PH 507e Controversies in International Health (4 cr) (offered through Geneva Program only)

3. One of the following Epidemiology courses:

- SAR HS 300 Epidemiology (4 cr)
- SPH EP 713 Introduction to Epidemiology (3 cr)

4. One of the following Statistics courses:

- CAS MA 113 Elementary Statistics (4 cr)
- CAS MA 115 Statistics 1 (4 cr)
- CAS MA 213 Statistics 1 (4 cr)
- CAS PS 211 Introduction to Experimental Design in Psychology (4 cr)
- SMG SM 221 Probabilistic and Statistical Decision Making for Management (4 cr)
- CAS EC 305 Economic Statistics (4 cr)
- SPH BS 704 Biostatistics (3 cr)

Two courses (*minimum 6 credits*) from the following list of Public Health electives are required:

- SAR HS 345 Global Environmental Public Health (4 cr)
- SAR HP 353 Organization and Delivery of Health Care in the U.S. (4 cr) (*cannot be taken in combination with SPH PM 702*)
- SAR HS 363 Global Health: Beyond Germs and Genes (4 cr) (*if not taken to fulfill the International Health course requirement*)
- SAR HS 395 Food, Dietary Supplements, and Consumer Health (4 cr)
- SAR HS 425e Health Care Policy and Practice in Ireland (4 cr) (*Dublin Program only*)
- SAR HS 440 Qualitative Research Strategies in Global Public Health
- SAR HS 450 Non-Infectious Diseases (4 cr) (*if not taken to fulfill the International Health course requirement*)
- SAR HS 470 Topics in Public Health (4 cr)
- SAR HS 475 Disability Advocacy and the Law (4 cr)
- CAS SO 215 Sociology of Health Care (4 cr)
- SPH EH 717 Introduction to Environmental Health (3 cr)
- SPH LW 719 Essentials of Health Law (3 cr) *or* SPH LW 751 Public Health Law (4 cr) *or* SPH LW 740 Human Rights and Health (4 cr)
- SPH MC 705 Safe Sex in the City: From Biology to Policy (4 cr)
- SPH MC 725 Woman, Children & Adolescents: Public Health Approaches (4 cr)
- SPH PH 709 The Biology of Public Health (4 cr)
- SPH PM 702 Introduction to Health Policy & Management (3 cr) (*cannot be taken in combination with SAR HP 353*)
- SPH SB 721 Social and Behavioral Sciences and Public Health (3 cr)
- SPH PH 511 Pathogens, Poverty, and Populations: An Introduction to International Health (4 cr) (*if not taken to fulfill the International Health course requirement*)
- SPH PH 506e International Health at the World Health Organization (4 cr) (*Geneva Program only*) (*if not taken to fulfill the International Health course requirement*)
- SPH PH 507e Controversies in International Health (4 cr) (*Geneva Program only*) (*if not taken to fulfill the International Health course requirement*)

Inquiries and course approval should be directed to:

Bria Dunham, PhD, MPH, Clinical Assistant Professor of Health Sciences

College of Health and Rehabilitation Sciences: Sargent College
635 Commonwealth Ave, Room 405
Office Phone: 617-358-5477 e-mail:
phminor@bu.edu

S. Sargent College - Degree Requirements

Sargent College requires a minimum of 48 credits be taken at Boston University to fulfill requirements for graduation. Individual departments may require more.

Sargent College baccalaureate degree requirements must be completed within eight years of the initial date of matriculation at Boston University.

All Sargent College students are required to complete a college-level English composition course. Advanced placement units and/or exemption by SAT scores may not be used to meet this requirement.

No incomplete grades will be reported unless the instructor and the student have conferred, the student has presented a sufficient reason why the work of a course cannot be completed on schedule, and the instructor has assigned a date within the succeeding twelve months by which time all course requirements must be completed. No degree credit for incomplete courses will be granted unless the work is completed by the date assigned, which must be no later than one calendar year of the date on which the incomplete date is reported. In the event that coursework remains incomplete on the assigned date or twelve months after the I grade has been awarded, whichever comes first, the I grade will be changed automatically and permanently to an F grade.

V. ACADEMIC POLICIES, STANDARDS, AND REQUIREMENTS SPECIFIC TO: Program in Human Physiology

A. Program in Human Physiology

1. A cumulative G.P.A. of 2.0 must be maintained to remain in good academic standing.
2. An overall G.P.A. of 2.0 is needed to enter the junior year, to enroll for an undergraduate internship, and to graduate.
3. No more than 12 credits of D grades (three 4 credit courses) will be allowed in the course of study. Each student's respective advisor will determine what course, in case of a fourth D, would be retaken.
4. Students taking courses outside Boston University must achieve a grade of C or above in order to receive credit from the college.
5. An application for graduation must be completed one semester prior to graduation and can be obtained from the SAR Academic Services Center (ASC).
6. It is the student's responsibility to become familiar with all policies and procedures concerning academic standing, course requirements, and graduation.

B. Deviations from Program Course Requirements

The student may petition the Human Physiology faculty for waiver or substitution of program requirements. Petitions should be submitted to the student's academic advisor and be accompanied by information (e.g. course outlines, transcripts, exams, etc.) which will support the proposed change.

Requests for variance from the usual academic or curricular requirements, to include:

- Transfer of credit from another college or university
 - Waiver of a course based upon prior coursework or experience, to include permission for competency testing
 - Course substitution or the determination of course equivalence
 - Waiver of department course prerequisite or corequisite
 - Waiver of academic standard
1. The advisor, at her/his discretion, may act on petitions seeking: i) course transfer, ii) course waiver, iii) course substitution. When relevant, concurrence with the involved course instructor(s) is required.
 2. The Program faculty will always receive directly from the advisor any petitions having to do with waiver of an academic requirement, or any variances whose approval would be precedent-setting or defacto policy formation and will consider such petitions and present its recommendation to the faculty for vote.
 3. Petitions will be signed by the advisor or delegate. This may be the advisor, the program director, or the chairperson of the Health Sciences Department.
 4. All petitions and any supporting documents, whether approved or denied, will be filed in the student's permanent College record.

Students who seek a variance of departmental policy or regulation or who have a grievance with an instructor or a departmental judgment must attempt to resolve the situation in the department with the individual instructor, the department chairman or by petition to the department academic standards committee.

If the student is not satisfied with the reconsideration of the department as outlined, the student may petition the Committee on Academic Policies and Procedures. The purpose of the Sargent (SAR/CAPP) Committee is to assure that the standards set by the college at large and academic policies set by the faculty of individual programs are consistently applied in a non-prejudicial and non-discriminatory manner. Therefore, SAR/CAPP will consider petitions that involve academic standards and policies if students have pertinent additional information not previously presented; if there are extenuating circumstances that justify deviation from, or exception to, stated rules; or if students feel that the departmental committee or a faculty member has not dealt with them in a fair manner.

Petitions to SAR/CAPP to reconsider academic or disciplinary actions against a student must be submitted for such consideration no later than two weeks after the student has been notified of the departmental action. SAR/CAPP will inform the student of the scheduled hearing date. The student will be requested to submit all pertinent materials to the Committee in advance of the hearing. The student has the right to present his/her case in person if so desired. The Committee may request the attendance of other individuals who may speak to the issue(s) under consideration. A verbatim transcript of the hearing may be requested by the Committee and will be made available to the student upon request. The student will be notified of the Committee's findings in writing within five days after the hearing.

If the student is not satisfied with the decision of SAR/CAPP, the student may petition the dean of the college for reconsideration. All academic conduct and standards cases are subject to the review and final determination, including determination of sanction, by the provost of Boston University or his or her designated representative.

Any student terminated from a department within Sargent College for disciplinary reasons is automatically terminated from the college.

Students may petition SAR/CAPP to consider non-academic issues such as charges of discrimination or sexual harassment by faculty, staff or students. Students are urged to seek redress within the appropriate department(s) whenever possible, but SAR/CAPP will hear unresolved issues, or those, which might cross departmental lines. As in all cases, due process as described by the Boston University Code of Student Responsibilities will be followed.

VI. UNDERGRADUATE CURRICULUM

Sargent College of Health and Rehabilitation Sciences
Department of Health Sciences
Curriculum Outline - HUMAN PHYSIOLOGY

Name: _____ ID#: _____ Advisor: _____

Course		Credits
FRESHMAN YEAR		
First Semester		
CAS BI 107	Biology I	4
CAS CH 101	General Chemistry I	4
CAS WR 120	Writing Seminar	4
CAS PS 101	General Psychology	4

SAR HP 150	Freshman Experience Seminar	0
		16
Second Semester		
CAS BI 108	Biology II	4
CAS CH 102	General Chemistry II	4
CAS WR 150/151/152	Writing, Research, & Inquiry	4
SAR HP 151	Introduction to Health & Rehabilitation Sciences	2
PDP ¹	Activity	2
		16
SOPHOMORE YEAR		
First Semester		
CAS CH 203	Organic Chemistry	4
CAS BI 203	Cell Biology	4
CAS MA 121	Calculus	4
HUB	BU Hub requirements outside the major ²	4
		16
Second Semester		
CAS CH 204 or 214 ²	Organic Chemistry	4
CAS BI 315	Systems Physiology	4
CAS MA 122	Calculus	4
CAS SS XXX ³	BU Hub requirements outside the major ³	4
		16

Course		Credits
JUNIOR YEAR		
First Semester		
CAS CH 421 ¹	Biochemistry or Principles of Biochemistry (CH 373) or Biochemistry (BI 437)	4
CAS PY 105	Elementary Physics	4
SAR HS 251	Human Nutrition Science	4
HUB	BU Hub requirements outside the major	4
		16
Second Semester		
SAR HS 342	Exercise Physiology	4
CAS PY 106	Elementary Physics	4
HUB	BU Hub requirements outside the major	4

¹ A maximum of 2 credits of PDP will count toward the 128 credit graduation requirement ²

For a listing of BU Hub electives, click [here](#).

² Students planning to take CAS CH 421 Biochemistry should take CAS CH 214 Organic Chemistry instead of CH 204. CH214 is recommended for students intending to take Biochemistry with lab (CH421)

³ If you are pre-med, SO100 or SO215 are recommended for MCAT preparation.

PS 211 or MA 113	Statistics	4
		16
SENIOR YEAR		
First Semester		
SAR HS 369	Gross Human Anatomy	4
<i>SAR HS 410²</i>	<i>Internship: Human Physiology</i>	<i>4</i>
SAR HS375	Cardiovascular Pathophysiology (or Pulmonary Pathophysiology in the Spring)	4
HUB	BU Hub requirements and/or general electives ³	4-8
		16
Second Semester		
SAR HS 370	Neuroanatomy and Neurophysiology	4
SAR HS 375	Pulmonary Pathophysiology	4
<i>SAR HS 410</i> or <i>HS412²</i>	<i>Internship: Human Physiology</i>	<i>4</i>
	BU Hub requirements and/or general electives ³	4 - 12
		16
	Total	128

Shading = Lab Courses

Field Experience: Human Physiology HP 410/412

The goal of an Internship is to provide students with an experience that is different from the classroom in which you can apply much of the knowledge you have gained in previous course work. Exposure to a hospital setting, research laboratory or clinical environment, direct patient contact, and various laboratory responsibilities are certainly all within the realm of available experiences. Your internship will give you, the student, a stronger sense of careers available in the health professional world while providing you with valuable first-hand experience for your future endeavors.

Students in their internship will be exposed to a myriad historical, racial, socio-economic, political, gender, linguistic, religious and/or cultural backgrounds based on their individual internship site placement. Students are required, through journal entries, to reflect upon their exposure to the aforementioned dimensions while on-site. A minimum of 140 hours are required on site. This course will provide students with a HUB unit – Individual in the Community.

The application process begins two months prior to work on site. Just after course registration, all students who register will receive a formal confirmation and welcome letter indicating the next steps to take.

HS410 can be taken fall OR spring; if taken in fall and student wishes to continue their internship experience at the same site, they may take HS412 in spring. N.b., **a maximum of 8 credits of HS410/412 will count toward the 128 credit graduation requirement.**

495 (Thesis with distinction) can replace the 410/412 requirement.

Process for Filing a Complaint for an Issue Regarding Distance Education (including field placements, clinical rotations, and academic internships)

Boston University makes every attempt to resolve student complaints within its academic and administrative departments. Students should first attempt to resolve any concerns by utilizing existing University procedures.

The [BU Compliance website](#) and the [Academic Bulletin](#) provide information about ways that students and prospective students can report concerns and utilize University complaint procedures. The Massachusetts Department of Higher Education, in its capacity as the State Authorization Reciprocity Agreement (SARA) portal entity for Massachusetts, reviews and evaluates student complaints regarding distance education activities offered by Boston University in accordance with 610 CMR 12.07.

If an issue regarding distance education cannot be resolved internally, please see the [process here](#).

SPECIAL CONSIDERATIONS FOR PRE-MED/PRE-CLINICAL STUDENTS

Beginning as early as possible, the student should form a relationship with an advisor in the pre-professional advising office. <http://www.bu.edu/caspreprofessional/>.

Particular curricular recommendations

- SO100 or SO215 are recommended for MCAT preparation.
- Department recommends taking biochemistry CAS CH 421, but CAS CH373 is acceptable. CH214 is the recommended 2nd semester organic chemistry course for those planning to take CH421. CAS CH422 Biochemistry II may be taken as a general elective.
- For students planning to apply to physician assistant or nursing graduate programs, the Department recommends taking microbiology with a lab: CAS BI311 (BI206, genetics, is a prerequisite). Depending upon the specific programs to which you apply, CAS BI114 or GMS BT426 may also fulfill the requirement.

VII. Senior Thesis for Distinction

<http://www.bu.edu/sargent/admissions/undergraduate/thesis-for-distinction/>

VIII. Early decision BS-MS in Human Physiology program

The Combined Bachelor of Science/ Master of Science in Human Physiology degree is designed to 1) prepare students for a research career in a hospital, pharmaceutical or biotechnology setting; 2) strengthen professional school applications (MD, PA, NP, etc.); and 3) provide a strong foundation for doctoral-level studies in biology, physiology or neuroscience.

In addition to gaining a strong background in basic lab sciences during the undergraduate portion of the program, students are invited to explore a variety of research topics. Working together with a faculty advisor, a graduate plan of study is customized based on the individual's research interests and career goals. The combined BS/MS includes coursework, research, training and completion of a thesis.

Application:

1. This is an early application/admission program for a BS/MS in Human Physiology.
 - a. Apply after completing 2 years of undergraduate study with minimum 3.2 GPA.
 - b. One year of general chemistry, one year of organic chemistry, and one year of general biology completed by the end of sophomore year
 - c. Application deadline April 1 of sophomore year; official transcript submitted by June 1 and decision made by July 1 for acceptance into program for fall semester of junior year.
 - d. Admission is based on academic record, letters of recommendation, an interview, and involvement in college and community activities. The faculty will look for evidence of a student's curiosity, responsibility, integrity and maturity in the application documents. Matching the student's interests with an appropriate research mentor is also required.
 - e. To remain in the program, students must maintain a 3.00 GPA both cumulatively and in the sciences, with no graduate level course grade below B-.
2. The curriculum is essentially the same as the BS-Human Physiology course of study through the junior year with the exception that students will be required to take the year-long Biochemistry sequence (CAS CH421/422) which is optional for BS only students.
3. Students will begin master's thesis research in their senior year.
4. Students will graduate with a BS degree at the end of their 4th year in the program.
5. By the end of their 5th year they will have completed a master's thesis and will graduate with an MS degree.

Curriculum for Combined BS-MS in Human Physiology

Begin BS in Human Physiology

Course		Credits	Grade	Substitute	Advisor
FRESHMAN YEAR					
First Semester					
CAS BI 107	Biology I	4			
CAS CH 101	General Chemistry I	4			
CAS WR 120	Writing Seminar	4			
CAS PS 101	General Psychology	4			
SAR HP 150	Freshman Experience Seminar	0			

		16			
Second Semester					
CAS BI 108	Biology II	4			
CAS CH 102	General Chemistry II	4			
CAS WR 150/151/152	Writing, Research, & Inquiry	4			
SAR HP 151	Introduction to Health & Rehabilitation Sciences	2			
PDP ¹	Activity	2			
		16			
SOPHOMORE YEAR					
First Semester					
CAS CH 203	Organic Chemistry	4			
CAS BI 203	Cell Biology	4			
CAS MA 121	Calculus	4			
HUB	BU Hub requirements outside the major ²	4			
		16			
Second Semester					
CAS CH 204 or 214 ²	Organic Chemistry	4			
CAS BI 315	Systems Physiology	4			
CAS MA 122	Calculus	4			
CAS SS XXX ³	BU Hub requirements outside the major ³	4			
		16			

Apply to BS/MS combined program

Course		Credits	Grade	Substitute	Advisor
JUNIOR YEAR					
First Semester					
CAS CH 421	Biochemistry I	4			
CAS PY 105	Elementary Physics	4			
SAR HS 251	Human Nutrition Science	4			
HUB	BU Hub requirements outside the major	4			
		16			
Second Semester					
CAS CH422	Biochemistry II	4			
CAS PY 106	Elementary Physics	4			
HUB	BU Hub requirements outside the major	8			
		16			
SENIOR YEAR					

¹ A maximum of 2 credits of PDP will count toward the 128 credit graduation requirement ²

For a listing of BU Hub electives, click [here](#).

² Students planning to take CAS CH 421 Biochemistry should take CAS CH 214 Organic Chemistry instead of CH 204. CH214 is recommended for students intending to take Biochemistry with lab (CH421)

³ If you are pre-med, SO100 or SO215 are recommended for MCAT preparation.

First Semester					
SAR HS 342	Exercise Physiology	4			
SAR HS 369	Gross Human Anatomy	4			
SAR HS 375	Cardiovascular Physiology	4			
SAR HS791	Research	4			
		16			
Second Semester					
SAR HS 370 Or SAR HS nnn Or SAR HS nnn	Neuroanatomy and Neurophysiology Pulmonary Physiology Vascular Physiology	4			
SPH BS704	Biostatistics	3			
	BU Hub requirements and/or general elective	4			
SAR HS791	Research	5			
		16			
	BS Total	128			
Shading = BS Lab Courses	Courses that differ from standard BS requirements				

Complete BS in Human Physiology Begin MS in Human Physiology

MS Program					
First Semester					
SAR HS750	Analysis of Physiological Literature	2			
CAS BI 552	Molecular Biology I	4			
	Elective^	4			
SAR HS791	Research	4			
		14			
Second Semester					
CAS BI553	Molecular Biology II	4			
	Elective^	4			
	Elective^	4			
SAR HS791	Research	4			
		16			
	MS Total	30			
	BS/MS Total	158			
Shading = MS Courses					

Complete MS in Human Physiology

^ Electives to be chosen from the following list (in consultation with your advisor):

SAR HS550 – Neural Systems (4)
SAR HS5nn – Pulmonary pathophysiology
SAR HS5nn – Vascular biology
SAR HS710 – Graduate Field Experience: Human Physiology
SAR HS745 – Advanced Regional Anatomy (var. cr)
SAR HS755 – Readings in Neuroscience (4)
CAS BI520 – Sensory Neurobiology
CAS BI545 – Neurobiology of Motivated Behavior
CAS BI556 – Membrane Biochemistry
CAS BI560 – Systems Biology
CAS BI 576 - Carcinogenesis
GRS BI645 – Cellular and Molecular Neurophysiology
GRS BI681 – Molecular Biology of the Neuron
GRS BI735 – Advanced Cell Biology
GRS BI753 – Advanced Molecular Biology
GRS BI755 – Cellular and Systems Neuroscience
GRS BI756 – Systems and Cognitive Neuroscience

IX. Curricula for post-baccalaureate programs (other than physician)

Physician Assistant

Human Physiology program *sample* curriculum:

Includes prerequisites for application to post-baccalaureate physician assistant programs.

<i>Semester I</i>	<i>Semester II</i>
<u>Freshman year</u> CAS BI 107 Biology I CAS CH 101 General Chemistry CAS WR 120 Writing Seminar CAS PS 101 General Psychology SAR HP 150 Freshman Experience Seminar (0)	CAS BI 108 Biology II CAS CH 102 General Chemistry CAS WR 150/151/152 Writing, Research, & Inquiry SAR HP 151 Intro to Health & Rehab Sciences (2) PDP Activity (2)
<u>Sophomore year</u> CAS CH 203 Organic Chemistry CAS BI 203 Cell Biology CAS MA 121Calculus HUB BU Hub requirements outside the major	CAS CH 204 Organic Chemistry CAS BI 315 Systems Physiology CAS MA 122 Calculus HUB BU Hub requirements outside the major
<u>Junior year</u> CAS CH 421 ^I Biochemistry or Principles of Biochemistry (CH 273) CAS PY 105 Elementary Physics SAR HS 251 Human Nutrition Science HUB BU Hub requirements outside the major	SAR HS 342 Exercise Physiology CAS PY 106 Elementary Physics <u>CAS BI 206 Genetics</u> CAS PS 211 Experimental Design in Psychology <i>or</i> CAS MA 113 Statistics

Senior year

SAR HS 369 Gross Human Anatomy
 SAR HS 375 Cardiopulmonary Pathophysiology (F or S)
 SAR HS 410² Internship: Human Physiology
 HUB BU Hub requirements outside the major
CAS BI 311 Microbiology

SAR HS 370 Neuroanatomy and Neurophysiology
 SAR HS 375 Cardiopulmonary Pathophysiology (F or S)
 SAR HS 410² Internship: Human Physiology
 HUB BU Hub requirements outside the major

Courses modified for this track are underlined and in italics

Note that most physician assistant programs recommend (and some require) 2000 hours of clinical experience. This is approximately one year of full-time employment.

Nurse Practitioner

Human Physiology program *sample* curriculum:

Includes prerequisites for application to post-baccalaureate nurse practitioner programs.

<i>Semester I</i>	<i>Semester II</i>
<u>Freshman year</u> CAS BI 107 Biology I CAS CH 101 General Chemistry CAS WR 120 Writing Seminar CAS PS 101 General Psychology SAR HP 150 Freshman Experience Seminar (0)	CAS BI 108 Biology II CAS CH 102 General Chemistry CAS WR 150/151/152 Writing, Research, & Inquiry SAR HP 151 Intro to Health & Rehab Sciences (2) PDP Activity (2)
<u>Sophomore year</u> CAS CH 203 Organic Chemistry CAS BI 203 Cell Biology CAS MA 121 Calculus HUB BU Hub requirements outside the major	CAS CH 204 Organic Chemistry CAS BI 315 Systems Physiology CAS MA 122 Calculus HUB BU Hub requirements outside the major
<u>Junior year</u> CAS CH 421 ¹ Biochemistry or Principles of Biochemistry (CH 273) CAS PY 105 Elementary Physics SAR HS 251 Human Nutrition Science <u>CAS PS 241 Developmental Psychology</u>	SAR HS 342 Exercise Physiology CAS PY 106 Elementary Physics <u>CAS BI 206 Genetics</u> CAS PS 211 Experimental Design in Psychology <i>or</i> CAS MA 113 Statistics
<u>Senior year</u> SAR HS 369 Gross Human Anatomy SAR HS 375 Cardiovascular Pathophysiology (F or S) SAR HS 410 ² Internship: Human Physiology HUB BU Hub requirements outside the major <u>CAS BI 311 Microbiology</u>	SAR HS 370 Neuroanatomy and Neurophysiology SAR HS 375 Cardiovascular Pathophysiology (F or S) SAR HS 410 ² Internship: Human Physiology HUB BU Hub requirements outside the major

Courses modified for this track are underlined and in italics

Physical Therapy

Prerequisites for application to most post-baccalaureate physical therapy programs are included in the human physiology curriculum. Some programs require developmental psychology (CAS PS 241) which can be taken as one of your social science electives.

X. Combined Bachelor of Science and Master of Public Health

This program is available to Sargent students who are majoring in all of the concentrations except for the combined BS/MSOT and BS/DPT degree programs. This dual degree program requires 5 years of full time study to acquire a Bachelor of Science degree in one of the specified concentrations at Boston University Sargent College and the Master of Public Health degree in any one of the concentrations at the Boston University School of Public Health.

Up to sixteen credits of graduate level School of Public Health course work will be completed in the last two years of undergraduate study and applied to both the BS and MPH degrees. At the completion of the BS degree requirement (128+ credits) at Sargent College the Bachelor of Science degree will be awarded. At the end of the 5th year (32+ additional credits of SPH coursework) the Master's in Public Health degree will be awarded.

Admission to the BS/MPH Program

Students in the second semester of their sophomore year or first semester of their junior year are eligible to apply to the BS/MPH program. Sargent sophomores and juniors who wish to apply to the BS/MPH program must first complete the Sargent College BS/MPH Application Approval form and meet with the Sargent College MS/MPH faculty advisor before initiating an application to the School of Public Health in SOPHAS, the centralized application service for the Association of Schools of Public Health (ASPH). Applicants must have a minimum cumulative grade point average of 3.0, and successful applicants will generally have a GPA above 3.3.

Application deadlines and decision dates are as follows:

Year of Student	Apply By	Decision By
Second Semester Sophomore	April 1	July 1
First Semester Juniors	October 15	February 15

Application to the BS/MPH program will consist of:

1. A completed Sargent College BS/MPH Application Approval Form, signed by the Sargent College BS/MPH faculty advisor, submitted to the Admissions Office at the School of Public Health
2. A SOPHAS application to Boston University School of Public Health
3. An official Boston University undergraduate transcript
4. Three letters of reference, including at least two from faculty members at Sargent College specifically addressing the student's capacity to do graduate level work

For more information about the Boston University School of Public Health, visit their web site at www.bu.edu/sph.

The contact in SAR for this program is Professor Bria Dunham, PhD, MPH: 617-353-7469, dunhamb@bu.edu

For further information please visit: <http://www.bu.edu/sargent/academics/programs/public-health/combined-bs-and-master-of-public-health/>

XI. Humanities and Social Sciences Elective Options for the Class of 2021

Selected Humanities Electives

College/Course #	Course Title	Semester	Prerequisites
CAS AH--	<i>any Art History course</i>		
CAS AH 205	Architecture: An Introduction	1	none
CAS AH 284	Arts in America	2	none
CAS AH 295	History of Photography	1	none
CAS AM 200	Intro to American Studies	2	none
CAS AN 331	Human Origins	2	CAS AN102 OR CAS AR101 OR CAS BI107 or equivalent
CAS AR 100	Great Discoveries in Archaeology	both	none
CAS CL--	<i>any Classical Studies course</i>		
CAS CL 213	Greek and Roman Mythology	both	none
CAS CL 303	The Decline and Fall of the Roman Empire	2	none
CAS CL 305	Topics in Myth	both	none
CAS CL 324	Greek Drama in Translation	1	none
CAS EN --	<i>any English course</i>		
CAS EN 175	Literature and the Art of Film	both	none
CAS EN 202	Introduction to Creative Writing	both	none
CAS EN 326	Voices of Women	1	none
CAS L--	<i>any Modern Foreign Language course (literature and civilization) – learning the language courses are general electives</i>		
CAS LC 283	Chinese Civilization	1	none
CAS LC 287	Chinese Cinema	2	none
CAS LJ 281	Japanese Civilization	1	none
CAS LJ 283	Modern Japanese Culture in Cinema	2	none
CAS LK 283	Modern Korean Culture Through Cinema	2	none
CAS LL 223	Introduction to Comparative Literature: Middle Eastern Literature	1	none
CAS LL 281	Holocaust Literature and Film	1	none
CAS LL 315	Film and Identity in the Islamic World	2	none
CAS LL 381	Topics in Gender and Literature	2	none
CAS LX 250	Introduction to Linguistics	1	none
CAS MU- -	<i>any Music course (appreciation, history, and theory); learning and instrument not included</i>		
CAS PH- -	<i>any Philosophy course</i>		
CAS PH 150	Introduction to Ethics	both	none
CAS PH 251	Medical Ethics	1	1 PH course or sophomore standing
CAS PH 256	Philosophy of Gender and Sexuality	2	1 PH course or sophomore standing
CAS PH 265	Minds and Machines	1	1 PH course or sophomore standing
CAS PH 266	Mind, Brain & Self	2	none

CAS PH 270	Philosophy of Science	2	1 PH course or sophomore standing
CAS PH 277	Philosophy and Methods in the Human sciences	1	none
CAS PH 350	History of Ethics	1	1 PH course or sophomore standing
RN- -	<i>any religion course</i>		
CAS RN 103	Religions of the World: Eastern	both	none
CAS RN 106	Death and Immortality	both	none
CAS WS 114	Women, Society, and Culture: Humanities	both	none
SED EM 523	Children's Literature: Overview	2	Jrs/Srs & Grad Students Only

Selected Social Science Electives

College/Course #	Course Title	Semester	Prerequisites
CAS AA 309	African American History	1	sophomore standing
CAS AM--	<i>any American Studies course</i>		
CAS AM 200	Intro to American Studies	2	none
CAS AN--	<i>any Anthropology course except AN102 and AN331</i>		
CAS AN 210	Medical Anthropology	1	none
CAS AN 240	Legal Anthropology	1	none
CAS AN 252	Ethnicity and Identity	1	none
CAS AN 260	Sex and Gender in Anthropological Perspective	2	none
CAS AN 290	Children and Culture	1	none
CAS AN 351	Language, Culture, and Society	1	none
CAS AN 372	Psychological Anthropology	2	none
CAS AR--	<i>any Archaeology course except AR100</i>		
CAS AR 205	Origins of Civilization	1	none
CAS AR 221	Archaeology of the Islamic World	2	none
CAS AR 280	Food, Diet, and Ancient People	1	none
CAS AR 332	Greek and Roman Cities	2	none
CAS EC--	<i>any Economics course</i>		
CAS GE--	<i>any Geography course</i>		
CAS HI--	<i>any History course</i>		
CAS IR--	<i>any International Relations course</i>		
CAS PO--	<i>any Political Science course</i>		
CAS PO 241	Introduction to Public Policy	2	none
CAS PS--	<i>any Psychology course</i>		
CAS PS 243	Life Span Developmental Psychology in Health and Illness	1	CAS PS 101 and for students in the MMEDIC program, consent of director
CAS SO--	<i>any Sociology course</i>		
CAS SO 205	The American Family	both	none
CAS SO 207	Intro to Ethnic, Race, and Minority Relations	2	none
CAS SO 208	Sociological Approaches to Current Issues	both	none
CAS SO 215	Health and Society	both	none
CAS SO 240	Sexuality and Social Life	both	none
CAS SO 418	Seminar: Sociology of Medicine	2	none

CAS SO 521	Seminar: Epidemiology	2	none
CAS WS 113	Women, Society, and Culture: Social Sciences	both	none
CAS WS 305	Critical Issues in Women's Studies	both	none

APPENDIX I: SARGENT COLLEGE STANDARD OPERATING PROCEDURES FOR LABS

(Taken from the Boston University documents, Chemical Hygiene Plan and Chemical Hygiene Officer's Handbook)

Student's Responsibilities:

1. Read and become thoroughly familiar with these procedures.
2. Notify the teaching Assistant of any spills or accidents or near accidents.
3. Become familiar with the use and location of emergency equipment and facilities such as showers, eyewashes, fire extinguishers, fire blankets, fire alarms, first aid kits, chemical spill control agents and emergency exits.
4. Always use adequate eye protection, protective clothing, and gloves in the laboratory. Details on protective garb are given below for specific classes.
5. Always wash up when finished working with chemicals. Use soap and water and be sure to wash hands and arms thoroughly even when gloves have been worn.
6. Never work alone without explicit permission from the instructor.
7. Never perform unauthorized experiments or preparations.
8. Never eat, drink, smoke or apply cosmetics in laboratory.
9. Never engage in horseplay, pranks or other acts of mischief in the laboratory.
10. Never leave exposed needles or micropipettes on the bench or in washing facilities.
11. Clearly label any containers of any substance.
12. Remove barrier protection (gloves, lab coats and aprons, eye protection) before leaving the laboratory. Potentially contaminated equipment must be kept where it will pose no threat to other persons.
13. Decontaminate, clean or sanitize personal protective equipment on a regular basis.
14. Discard used chemicals, equipment, and any other hazardous-infectious waste as defined below.

Personal Protective Equipment

Eye Protection.

All students must wear safety glasses in any laboratory where hazardous chemicals are used. This includes Gross Anatomy and Neuroanatomy laboratories. Wearing of contact lenses in the laboratory is not recommended. Students may wear prescription eyewear or any safety glasses with splash guards.

Protective clothing.

Lab coats must be worn in laboratories with hazardous chemicals present and in Gross Anatomy. Students may provide their own or they may borrow coats in the lab. Lab aprons must be worn over lab coats by instructors and students in Regional Gross Anatomy. The lab coat and shoes should provide protection for legs and feet. Perforated or open shoes and sandals are not sufficient protection. Cutoffs and shorts are inappropriate.

Gloves.

Gloves must be worn in all laboratories. In Neuroanatomy lab, gloves will be supplied. For Gross Anatomy labs, students must purchase 4 mil nitrile gloves (\$1/pair) or they may purchase them by the box from the Medical School. Nitrile gloves must be short-term protection from chemicals and biological tissue and waste. Most organic chemicals will eventually penetrate virtually any glove. Contaminated gloves must not be reused.

Hazardous Waste Disposal

Solids: Biological waste and contaminated gloves and protective clothing is to be deposited into receptacles designed for that purpose. Usually these receptacles have red plastic liners. If you are unsure where these containers are located, it is critical that you ask the lab instructor. Sharp objects such as needles and scalpels are to be deposited in the red hard plastic containers designated for this purpose. Disposal of hazardous chemicals will be explained by the laboratory supervisor (refer to the Boston University Chemical Hygiene Plan).

Liquids: When gloved hands or instruments are contaminated with human waste or specific chemicals, use the sinks that are designated for rinsing and cleaning these items. Items not contaminated may be washed using "clean" sinks.

Visitors

There are to be no visitors in any laboratory except those who come for educational or professional purposes. These visitors must wear appropriate eye and protective clothing. Minors under the age of 18 are not permitted to spend time in laboratories where chemicals are used or stored.

Emergency Procedures

Any laboratory accident must be reported to the laboratory instructor immediately. Take directions from the instructor and be familiar with the procedures listed below.

FIRE: If you cause or discover a fire: Activate the fire alarm, evacuate, and call Boston University Police at 3-2121. Only use the fire blanket and fire extinguisher if you know how and you feel

confident that you will be successful. Be available to firefighters to give information about how the fire started.

CHEMICAL SPILLS OR EXPOSURE: If you cause or discover a chemical spill, report this to the TA and contact the Sargent College Chemical Hygiene officer (Dr. Susan Kandarian) via the Health Sciences secretary. Warn all others in the area and evacuate. For spills covering small amounts of skin, immediately flush with water for no less than fifteen minutes. Wash with warm water and soap to facilitate removal of any residual materials. If a delayed reaction is noted, seek medical attention and explain carefully what chemicals were involved. For larger spills, quickly remove all contaminated clothing and shoes while using the safety shower. Get medical attention as soon as possible. For eye exposure to chemicals, turn on the eyewash and immerse eyes directly into the eye fountain for several minutes.

INJURIES & FIRST AID: If an injured person is not breathing, provide CPR if you are trained to do so and get medical attention (call BU Police at 3-2121). If an injured person is bleeding severely, control the bleeding by compressing the wound with a cloth or whatever is available. Wrap the injured person to avoid shock and get immediate medical attention. In the case of a less severe cut, wash the cut, cover with a clean cloth and get medical attention. The BU Police will provide transportation to a nearby medical facility.

REPORTING OF ACCIDENTS:

Call BU Police immediately at 3-2121. They will determine if medical care is required and arrange transportation to a clinic or hospital emergency room, if necessary.

The nature and location of the accident must be reported; give your name, telephone number and address. Tell where you will meet the emergency vehicle. If several individuals are involved, report how many, whether they are unconscious, burned or trapped; whether an explosion has occurred; and whether there is or has been a chemical or electrical fire.

- Tell others in the area about the nature of the emergency.
- Meet the BU Police at the place you indicated. Send someone else if you cannot go.
- Do not make any other telephone calls unless they directly relate to the control of the emergency.
- Be prepared to tell emergency workers the nature and amounts of any chemicals involved in the emergency.

APPENDIX II: HEALTH CARE CAREERS

The Human Physiology Program in the Department of Health Sciences has prepared many students for successful admission to professional health care programs. For those individuals seeking a career in one of the health care professions, including medical school, and who have a strong interest in the sciences, the Human Physiology major provides an alternative to the traditional biology degree. With its focus on the study of human biology, a major in Human Physiology expands upon the required premedical requirements (listed below) with the addition of classes such as gross human anatomy, exercise physiology, muscle biology, neuroanatomy and neurophysiology, and cardiopulmonary pathophysiology. Breadth of academic preparation is insured by elective distribution requirements in the humanities and social sciences.

Health career schools prefer students who display a variety of interests with the quality and scope geared to meet the admission requirements of one's institutional choice. Above all, admission will depend upon academic achievement, unique interest and skills, clinical experiences, and letters of recommendation. In

addition, medical schools require that students complete the following premedical courses (included in the Human Physiology curriculum):

Biology: (one year)
BI 107-108

Chemistry: (one year general chemistry and one year organic chemistry, some schools also suggest biochemistry)
General Chemistry CAS CH 101-102
Organic Chemistry CAS CH 203-204

Physics: (one year) CAS PY 105-106

Mathematics: (one year) CAS MA 121-122 or MA 123-124

Sociology: CAS SO100

Many of the faculty in the Health Science Department hold joint appointments with various departments in the School of Medicine and have extensive research laboratories where students may gain experience and insights regarding medical research programs in specialized areas. The department has extensive collaborative research relationships with various universities, hospitals and industrial research laboratories both in the greater Boston area and the surrounding New England states.

Each student in the department is assigned an academic/career advisor who works closely with the student in career planning, course selection and determining the professional school best suited for their particular health career.

APPENDIX III: OCCUPATIONAL HEALTH CENTER RECOMMENDATION FOR ALL EMPLOYEES WHO WORK IN HEALTH CARE SETTINGS

I. Tuberculosis (TB) Skin test or Screen

- A. All health care workers need to be either skin tested or screened for TB on hire and annually thereafter unless they can document a negative skin test within the last 90 days. In the latter case, they only have to repeat testing in one year.
- B. Employees who have a history of a positive PPD skin test will need to be screened annually for signs and symptoms of active tuberculosis.

II. Proof of immunity to MMR (measles, mumps, rubella)

- A. Positive titers or
- B. Physician documentation of having the diseases or
- C. Two MMR vaccines-health care workers born after 1957 should have documentation of one MMR vaccine after 12 months of age with a repeat at a later date.

III. Hepatitis B vaccine

- A. Hepatitis B antibody titer 6-12 weeks following completion of Hepatitis B vaccine series or
- B. Declination form refusing Hepatitis B Vaccine

III. Tetanus Diphtheria vaccine within the last 10 years

(Presently new adult vaccine recommended by CDC and MDPH is Tetanus, Diphtheria and Pertusis, TDAP)

IV. Proof of immunity to Varicella

- A. Documentation of Varicella vaccine
- B. Positive Varicella titer
- C. Physician documentation of having Varicella disease

HEPA N95 respiratory Mask Fit and Seal Test.

Revised 3/06

APPENDIX IV: INTERNSHIPS IN HUMAN PHYSIOLOGY (HS 410)

Please see the internship manual at:

http://www.bu.edu/sargent/files/2018/08/HP_Affiliations_Manual_AY18-19_Updated.pdf

APPENDIX V: HOW TO REQUEST A LETTER OF RECOMMENDATION

As faculty members, we are pleased to support your applications to study abroad, to apply for employment positions after graduation and to support your applications to graduate schools. To facilitate this process, please follow the procedure below.

Human Physiology Program Recommendation Request Procedures

1. Provide at least two weeks of notice. It is highly recommended you sign up for office hours with the appropriate faculty member to discuss in person the specific request.
2. Following your meeting, please email (as Microsoft Word document attachments) the following information to your advisor:
 - a) Letter of Recommendation Form(s) provided by schools to which you are applying (if applicable)
 - b) Updated resume
 - c) Copy of your transcript (may be unofficial)
 - d) Program/Job Description (a website link may be appropriate)
 - e) If this is a graduate program, provide your personal statement, letter of intent, or equivalent.
 - f) A completed SAR Recommendation Request Form (see below; copy and renumber information section for each graduate program to which you are applying).
3. Place any hard copies of forms in the faculty mailboxes located in Room 443.
4. Letters will be sent in order of receipt. We will notify you by email when letters are completed.



College of Health & Rehabilitation Sciences
Sargent College

Recommendation Request Form

Student Information

Name	Type of Recommendation (grad. school, job, internship)	Total number of Letters requested
Email	ID Number	Date Submitted

Recommendation #1 Request

Name of School or Employer		Name of Program or Name of Hiring Agent	
Mailing Address		City/State/Zip	
Deadline for Letter of Recommendation		Instructions for Delivery	
Does this application require form to be filled out in addition to recommendation? (Note: If so please make sure you have provided this form via email or hard copy)		Additional Notes/Comments	