Student Handbook

Medical Physics Programs

University of Pennsylvania
Table of Contents

I. Introduction and Program Contact Information ........................................... 1
II. Program Overview ......................................................................................... 2
III. Program Curriculum ..................................................................................... 3
IV. Capstone Guidelines ................................................................................... 7
V. Program Resources ....................................................................................... 15
VI. Program Policies and Procedures ................................................................. 17
VII. Student Advising and Course Registration Procedures .............................. 23
VIII. University Policies and Procedures ............................................................ 27
IX. University Systems Access ........................................................................... 31
X. University Student Services and Resources .................................................. 33
XI. University Student Health ........................................................................... 40
I. Introduction and Program Contact Information

The purpose of this handbook is to provide students in the Medical Physics Programs (MPP) with the information they need to complete the program. In this handbook you will find information on academic requirements, program and University policies and procedures, and program and University resources. This handbook is designed to provide general information and does not supplant official publications or University web pages. Should you have questions that are not answered here or problems that you cannot resolve, you should consult the MPP Program Director.

Program Contact Information

Jarod Finlay, Ph.D.
Program Director
Office 1N2b
David Rittenhouse Laboratory Building
209 S. 33rd St.
T: 215.898.5574
jarod.finlay@uphs.upenn.edu

Andrea Radine, Ed.M.
Administrative Director
College of Liberal and Professional Studies
3440 Market St., Suite 100
T: 215.746.4336
allmayer@sas.upenn.edu

College of Liberal and Professional Studies
3440 Market St., Suite 100
215.898.7326
lps@sas.upenn.edu
II. Program Overview

Master of Medical Physics (MMP)

The CAMPEP-accredited Master of Medical Physics (MMP) program at the University of Pennsylvania meets the academic and career interests of technically prepared college graduates who seek to combine their interests in graduate physics with career opportunities in the field of medical physics.

The MMP degree provides students with rigorous education in essential graduate-level physics courses as well as CAMPEP-mandated coursework in medical physics, anatomy, and radiation biology. The traditional problem-solving techniques emphasized in physics graduate education give students a unique perspective and enable them to address a wide variety of problems encountered in the modern medical environment. Such a fundamental education also allows them to evolve with the field of medical physics as it continues to embrace the most advanced technologies. The program offers an exceptionally well-balanced education, combining classroom, laboratory, and clinical training. The program also stresses communication, ethics, and responsibility (in both clinical and research settings), promoting the highest standards in patient care. 15 course unit (CUs) are required to complete the degree. Full-time students will complete the program in two years. In the second year, students will spend a significant amount of their time completing appropriate clinical rotations, primarily in the University of Pennsylvania Health System (UPHS). A capstone research project is also required and usually completed during the second year of study after approval from the Program Director and project advisor.

Graduates of the medical physics programs are qualified and eligible to apply for residency positions in medical physics, the next step on the path toward certification by the American Board of Radiology. The medical physics programs also include a professional development seminar series to help students secure residency positions and gain professional skills such as networking and interviewing, which will be useful beyond residency.

Post-Graduate Certificate

The University of Pennsylvania’s CAMPEP-accredited Medical Physics Post-Graduate Certificate Program offers participants a curriculum based on the recommendations of AAPM report #197S. Coursework includes radiological physics, radiation protection, medical imaging, medical ethics/government regulation, anatomy and physiology, radiobiology, and the physics of radiation therapy. Students will complete a total of 6 CUs (18 semester hours) over the course of two semesters.

Relationship within the University

The Medical Physics Programs (Master of Medical Physics degree and Post-Graduate Certificate) are offered by the Department of Physics and Astronomy in the School of Arts and Sciences in conjunction with the Departments of Radiology and Radiation Oncology in the School of Medicine. The programs are administered through the College of Liberal and Professional Studies (LPS). LPS is responsible for administration of the programs, e.g. registration, billing, student records, graduation, etc.
III. Program Curriculum

Master of Medical Physics (MMP) Curriculum

Fifteen CUs (the equivalent of 45 credit hours) at the graduate level are required for the MMP degree. With the exception of submatriculants admitted from the University of Pennsylvania, students may not apply any graduate-level courses taken as undergraduates toward the 15 course unit requirement. In addition to the 15 required CUs, MMP students are required to satisfactorily participate in the non-credit MMP seminar series during each semester in the program and also in the non-credit two-semester Introductory Practicum courses in their first year. The 15 course units should be completed in four semesters, or a maximum of eight semesters for part-time students; exceptions may be granted by the Program Director.

Core Medical Physics Courses: The following courses constitute the core educational requirements for both the Masters and Certificate programs. All students are required to complete these courses.

- **MMP 501: Introduction to Radiation Protection** (0.5 CU): Introduction to applied nuclear and atomic physics; radioactive decay; radiation interactions; biological effects and safety guidelines; radiation detection, instrumentation, and protection.

- **MMP 502: Medical Ethics and Governmental Regulation** (0.5 CU): Fundamentals of professional ethics for medical physicists through exploration of Code of Ethics (published by the American Association of Physicists in Medicine), case studies, and surveys of governmental regulations pertinent to medical physics are covered.

- **MMP 506: Physics of Radiation Therapy**: Clinical radiation oncology physics; principles of radiation producing equipment; photon and electron beams; ionization chambers and calibration protocols; brachytherapy, dose modeling and calculations; treatment planning.

- **MMP 511: Image-Based Anatomy**: Taught by a radiation oncologist, this course focuses on major organ systems and disease areas and is presented from a radiologic or imaging (including cross-sectional) viewpoint in addition to a standard anatomy and physiology presentation. This course is required by the ABR.

- **PHYS 582: Medical Radiation Engineering**: Fundamental concepts underlying radiological physics and radiation dosimetry. Covers photon and neutron attenuation, radiation and charged particle equilibrium, interactions of photons and charged particles with matter and radiotherapy dosimetry, including photographic, calorimetric, chemical, and thermoluminescence dosimetry.

- **MMP 525 and MMP 526: Introductory Practicum**: First year students are required to complete these two non-credit courses. Students are introduced to the various specialties of medical physics including radiation oncology, diagnostic imaging, nuclear medicine and medical health physics.
- **MMP 507: Physics of Medical Imaging**: Physical principles of diagnostic radiology, fluoroscopy, computed tomography; principles of ultrasound and magnetic resonance imaging; radioisotope production, gamma cameras, SPECT systems, PET systems; diagnostic and nuclear medicine facilities and regulations.

- **MPP 512: Radiation Biology**: Fundamental knowledge of mechanisms and biological responses of human beings to ionizing and non-ionizing radiation through the study of effects of radiation on molecules, cells and humans; radiation lesions and repair; mechanisms of cell death; cell cycle effect, radiation sensitizers and protectors; tumor radiobiology; relative sensitivities of human tissue and radiation carcinogenesis. This course is required by the ABR.

**Core Math and Physics Courses and Research**: The following courses are required for the Master’s Degree in Medical Physics. These courses are designed to provide students with a solid foundation in basic physics, and to provide research experience. (Certificate students, having gained equivalent experience during their prior graduate work, are not required to take these courses.)

- **MATH 584: Mathematics for Medical Imaging**: Covers the basic principles of mathematical analysis, the Fourier transform, interpolation and approximation of functions, sampling theory, digital filtering and noise analysis.

- **PHYS 521: Advanced Laboratory**: Directed experiments in classical, modern, and medical physics introducing the student to modern laboratory instrumentation and techniques.

**Core Physics courses** fall into one of two tracks. Students must select one track, and the selection must be approved by the Program Director:

- **Basic Physics Track**:
  - **PHYS 561: Electromagnetism I**: Intermediate course covering electrostatic fields and potentials, dielectrics, and direct currents.
  - **PHYS 562: Electromagnetism II**: A continuation of PHYS 561 covering magnetic fields and potentials, electromagnetic induction, Maxwell’s equations, electromagnetic waves, and radiation.

- **Advanced Physics Track**:
  - **PHYS 500: Mathematical Methods**: Concepts and techniques of classical analysis employed in physics theories. Topics include complex analysis, Fourier series and transforms, ordinary and partial equations, and Hilbert spaces.
  - **PHYS 516: Electromagnetic Phenomena**: Electrostatics and magnetostatics, Maxwell’s equations, electromagnetic waves, and radiation.

**Clinical Concentration**: Masters students beginning their second year will be required to select an area of clinical concentration. Based on this area of clinical concentration, along
with the guidance of their academic advisor or Program Director, students will select the following:

- **Two elective courses**: These courses should support the student’s area of clinical concentration. The Program Director will suggest relevant courses available each semester. Courses outside of these recommendations can be taken with approval of the Program Director.

- **MMP 531: Clinical Practicum** (1 CU): Clinical observation and training working alongside clinical physicists at the University of Pennsylvania Health System or affiliate organizations. Students will be assigned to Practicum sites based on availability and clinical concentration.

- **MMP 599/699: Capstone Project** (2 CUs): A year-long, supervised research project conducted under the guidance of a faculty member in Radiation Oncology, Radiology, Physics and Astronomy, or a related field. The topic of the Capstone project should be related to the student’s area of clinical concentration.

### Typical MMP Program of Study (Radiation Oncology concentration; 15 CUs)

**First year, Fall semester**
- MMP 501: Introduction to Radiation Protection (0.5 CU)
- MMP 511: Image-Based Anatomy (1 CU)
- MMP 525: Introductory Practicum I (0 CU)
- PHYS 561: Electromagnetism I (1 CU)
- PHYS 582: Medical Radiation Engineering (1 CU)

**First year, Spring semester**
- MMP 502: Medical Ethics/Governmental Regulation (0.5 CU)
- MMP 506: Physics of Radiation Therapy (1 CU)
- MMP 526: Introductory Practicum II (0 CU)
- PHYS 562: Electromagnetism II (1 CU)
- MMP 512: Radiation Biology (1 CU)

**First year, Summer semester**
- MMP 531: Clinical Practicum (1 CU)

**Second year, Fall semester**
- MMP 507: Physics of Medical Imaging (1 CU)
- Elective (1 CU)
- MMP 699: Capstone (1 CU)

**Second year, Spring semester**
- MMP 512: Radiation Biology (1 CU)
- Elective (1 CU)
- MATH 584: Mathematics for Medical Imaging (1 CU)
- MMP 799: Capstone (1 CU)
Typical Post-Graduate Certificate Program of Study (6 CUs)

**Fall Semester**
- MMP 501: Introduction to Radiation Protection (0.5 CU)
- MMP 511: Image Based Anatomy (1 CU)
- PHYS 582: Medical Radiation Engineering (1 CU)
- MMP 506: Physics of Radiation Therapy (1 CU)
- MMP 525: Introductory Practicum I (0 CU)

**Spring Semester**
- MMP 502: Medical Ethics and Governmental Regulation (0.5 CU)
- MMP 507: Physics of Medical Imaging (1 CU)
- MMP 526: Introductory Practicum II (0 CU)
- PHYS 521: Advanced Laboratory (1 CU)
IV. Capstone Guidelines

The purpose of this guide is to provide students in the Masters of Medical Physics (MMP) Program with information vital to the successful completion of the Capstone Project. In this guide, you will find procedures, timelines, and resources both inside and outside of Penn. You should plan to meet with your academic adviser to discuss first steps as you develop your project idea. In addition, should you have questions that are not answered here or problems that you cannot resolve, you should consult your adviser or the MMP Director immediately.

The Capstone Project is the culmination of an MMP student’s graduate study and results in a final paper and poster presentation. Students are also encouraged to share their research findings at the annual AAPM meeting or another appropriate professional or scientific meeting. Capstone Projects may differ from traditional master’s theses in that they tend to be applied rather than theoretical research.

The Capstone provides each student with the opportunity to integrate, synthesize, and analyze information, and to design and execute a piece of individual research. While it is expected that each MMP student should have a good working familiarity with the literature in his/her field, the student’s knowledge of this literature need not be as exhaustive as for students writing traditional master’s theses or doctoral dissertations. Nor is it necessary that the work be publishable in a scholarly journal, although this is strongly encouraged.

There are two typical approaches to completing the Capstone:

- **Extended Research Paper**
  This type of project is based on primary and/or secondary sources that demonstrate the student’s ability to understand and synthesize complex medical physics problems. This type of paper might be a “state of the science” type thesis in which library research is used to summarize and assess a particular problem. In this approach, the project should reflect the student’s MMP specialty, but may also build upon the student’s previous academic or professional experience.

- **Original Research**
  This type of project is based on the student’s use of data collected by others or by the student directly in the clinic or laboratory. With the help of an academic adviser, the student should define a specific research question, design a methodology for collecting data, and analyze those data. Typically these types of projects lead to a publication in a peer-reviewed journal.

**Choosing a Topic**

The Capstone topic should be directly related to the student’s specialty and professional goals. Topic ideas may come from:

- A guest speaker in a seminar
- A research article
- Radiation Oncology, Radiology, Physics and Astronomy, or Bioengineering faculty research
- Professional experience that the student would like to further develop
The Readers

Two faculty readers or advisers are required for the Project Design: one designated as the Primary Reader and the other as the Secondary Reader.

The primary reader is the research adviser and must be an expert in the Capstone topic field. S/he need not be a member of the Penn standing faculty; however, they must be academically or professionally engaged in the student’s topic. Professors from local universities have served as primary readers, as have adjunct faculty members and lecturers. Usually students choose primary faculty readers from the academic departments affiliated with the MMP Program.

Primary Reader’s Responsibilities:
- Help guide the development of the Capstone proposal including:
  - Compilation of the bibliography
  - Design of research methods
  - Development of a timeline for completing the project
- Advise the student throughout the project experience
- Guide the student’s writing of the final thesis paper
- Evaluate the final Capstone based on the proposal, paper and poster

The Secondary Reader’s Responsibilities:
The Secondary Reader does not need to be an expert in the topic field but should be a Faculty Member associated with MMP Program. He/she will:
- Provide feedback on drafts of the proposal and final paper
- Contribute to evaluation of the final Capstone paper and poster

Identifying Readers:
Once the student has identified their research topic, they should contact their Academic Adviser to meet and discuss the merit and feasibility of the project. Advisers can help guide the student in the initial phase of project topic development. However, the student’s Academic Adviser may not be the best person to serve as the Primary Reader. Remember, the Primary Reader should be an expert in the topic that the student is exploring. The Academic Adviser can recommend potential Primary Readers; however, it is the student’s responsibility to contact the potential readers and discuss their project in depth. If the expert is willing to serve as the Primary Reader on a student’s project, they should review the student’s written proposal and complete and sign Form 100.

If the student and their Academic Adviser determine that the best candidate for a Primary Reader is not a member of the Penn community, the student should seek the approval of the MMP Program Director before approaching the candidate.

Candidates from outside of academia may not understand the commitment that they would be undertaking, and students should be clear in what they are asking the potential Reader to do. At a minimum, Primary Readers should be willing to:
- Help a student formulate a plan with a timeline, as described above
- Check on the student’s progress regularly
• Be certain that the student understands the methodologies required for the work
• Be available for student questions on a regular basis
• Read and give comments on multiple drafts of the student’s capstone final paper
• Evaluate the final written Capstone paper and poster

Whether the student’s candidate for Reader is a Penn faculty member or from the professional world, the student should be sensitive to a candidate’s reluctance to advise a project. Many faculty and professionals have multiple projects or travel extensively and, although they may find the proposed project interesting, may not be able to give the student the attention needed. A good rule of thumb: If a Reader candidate is hesitant, seek another candidate.

When should a student identify a Project Reader?
Once a topic has been chosen, students should attempt to identify a Reader immediately, even if the student does not intend to begin the project for several months. If they are having difficulty identifying Readers, the MMP Program Director can recommend likely prospects among the faculty.

Writing the proposal

To ensure that each student is adequately prepared to undertake their Capstone Project, the MMP Program requires that she/he submit a Project Proposal prior to beginning the research. The proposal must be approved by both the Primary Reader (faculty adviser) and by the Director of the MMP Program before the research begins. Research initiated prior to approval of the proposal may not count toward the Capstone requirement.

The Project Proposal should include:

1. Title Page
   This page should include: proposal title, student’s name, proposed graduation date, Primary and Secondary Readers’ names, and project location.

2. Abstract
   A short one-paragraph synopsis of the proposed work (no more than 300 words).

3. Introduction
   A clear description of the project’s topic or focus. What has been done before and how does the proposed project fit into the existing knowledge of the subject? This section should emphasize the importance of the project in terms of why it should be done. The literature review should be thorough, but not exhaustive. An extensive review should be reserved for the final paper. Often, scholars identify broad issues that motivated their study, and then set limits on their present study. It is far better to set a narrow study and to explore it thoroughly than to delineate a broad scope and conduct a shallow or haphazard investigation.

4. Materials Methods and Timeline
   This section will vary depending on the type of project. For an experiment or data analysis-based topic, this section may describe lab work or sampling techniques used in the lab or field. For a review paper, this may include a plan or approach to researching the topic. It is
important that the student demonstrate their understanding of the requirements to properly research the topic, and a well-written methods section is imperative to that effort and should include a timeline.

5. Literature Cited
All sources quoted or used in the proposal must be properly cited in the text and listed in the Literature Cited section. Sources not used in the proposal, but used to develop the project should not be listed here nor should there be a bibliography section at the end of the text. A majority of the sources should be primary literature from peer-reviewed journals and books (not websites and magazine articles).

6. Appendices
An appendix may not needed in the proposal; however, if the Capstone is a component of a larger project, an overview of this larger project could be included in the appendices.

Writing the Final Paper

Overall Appearance of the Final Paper:
The manuscript must be clear and legible, free of typographical or grammatical errors, and attractive in appearance. All pages must be printed single-sided.

Organization of the Final Paper:
All components listed below must be included in your final document unless listed as optional:
- Title Page (see additional information below)
- Dedication (optional)
- Acknowledgment (optional)
- Abstract (see additional information below)
- Table of Contents
- List of Tables
- List of Figures
- Main Text
- Literature Cited
- Appendices (optional)

Margins:
All text, including page numbers, must be inside these boundaries. Nothing may appear in the margin area.

Left margin: 1.5 inches
Right margin: 1 inch
Top and bottom margins: 1 inch

Line spacing:
The text of the thesis is double-spaced, but long quoted passages, and lists of tables and figures should be single-spaced.
Font:
Any non-italic 12-point font may be used. Headings may be larger. For enhanced readability it is recommended that you use Arial, Courier New, Georgia, Times New Roman, or Verdana font. For figures, citations, charts, and graphs; a font of 9 point or larger may be used. Italic type may be used for quotations, words in a foreign language, occasional emphasis, or book titles.

Pagination:
Every page in the manuscript should have a number, except for the Title Page. For the preliminary pages (i.e., dedication, acknowledgements, abstract, table of contents, list of tables, and list of figures) use small Roman numerals (e.g., i, ii, iii, iv, v). These may be placed at the bottom of the page. The title page is counted as page i (even though the number does not appear on it). For the rest of the text beginning with the “main text,” use Arabic numbers (e.g., 1, 2, 3, 4, 5) starting with page 1 (the first page of the text itself). These may be placed at the bottom of the page. Do not print page numbers, footnotes, or anything else in the margins. Each page must be consecutively numbered, including tables, graphs, illustrations, and bibliography/works cited; letter suffixes (such as 10a, 10b) are not allowed. Check pagination carefully. Do not include blank pages. All pages must have a page number and be accounted for.

Title Page:
The Title Page must contain the TITLE (in upper case); the author's name; the year and term the degree is being granted; the name of the Primary Reader; and the name of the Secondary Reader. The title page is understood to be page “i” for counting purposes, but no page number should be printed on the title page. Here is an example:

____________________________
CLINICAL IMPACTS OF GRADUATING

Master of Medical Physics Program

Author's Name

Graduation Semester and Year (example: Spring 2016)

Primary Reader’s Name

Secondary Reader’s Name

____________________________

Abstract:
The Abstract is a condensed summary of the thesis project, not to exceed 350 words. All words count toward the total. The abstract, which is normally a single paragraph, consists of four parts: the statement of the problem, the procedure and methods used to investigate the problem, the results of the investigation, and the conclusions. The abstract is double spaced. Below the word "ABSTRACT" (in upper case), list the title of the thesis (upper case), your name, and your Primary Reader’s name (see next page).
ABSTRACT

THE EFFECTS OF INHIBITORS OF PI3K/AKT/MTOR SIGNALING ON THE RADIOSENSITIVITY OF DNA DAMAGE REPAIR

Janice Lau

Primary Reader: Dr. Amit Maity

The PI3K/Akt/mTOR signaling pathway is commonly activated in many human cancers, including in head and neck squamous cell carcinoma. This signal transduction pathway involves many proteins and is responsible for regulating cell growth, proliferation, metabolism, autophagy, and survival, and is therefore of particular interest for anticancer drug therapy. By targeting the PI3K/Akt/mTOR pathway, mechanisms such as apoptosis, autophagy, and tumor growth arrest may be induced. Numerous inhibitors of the proteins involved in the signaling cascade have been developed for therapy, including the oral pan-PI3K inhibitor NVP-BKM120 (BKM120) from Novartis. There is some evidence that inhibition of the PI3K/Akt/mTOR pathway can increase the sensitivity of cancer cells to radiation, and we have preliminary data showing that BKM120 acts as a radiosensitizer. This research investigated the potential efficacy of BKM120 as a radiosensitizing agent for SQ20B cells in vitro. We measured expression of proteins involved in DNA damage repair, including DNA-PKcs, ATM, and γH2AX, to assess whether BKM120 affects attenuation of DNA damage repair. Staining for γH2AX revealed the presence of foci in the cells after DNA damage that persisted for a long period of time, indicating that DSB sites were not being repaired as efficiently. Results suggest that BKM120 may serve as a viable treatment option for squamous cell carcinomas, and additional research is warranted to investigate other effects of the drug, such as potential induction of autophagy, apoptosis, or cellular oxygen consumption.
Literature Cited:
This is an alphabetical listing of all references used. Page numbers in this section continue
the pagination of the text; do not number the bibliography separately.

Frequently Asked Questions:

1) Do I need to submit a bound copy of my final thesis?
   No. All documents may be submitted by email or on a CD. However, your Readers may
   wish to have a bound copy of the final document.

2) How many pages should the thesis be?
   This depends on you and your Primary Reader. There is no minimum or maximum
   number of pages for an MMP thesis. The paper must be long enough to document the
   problem you addressed, the methods you used to address that problem, the results of your
   research, and your conclusions.

3) What citation method should I use?
   This depends on you, your Primary Reader, and the type of research you are doing.
   Typically MMP projects follow a Chicago style citation. Be sure to discuss which styl
   you will use with your Primary Reader early in the writing process.

4) Can I use websites as sources for my research?
   Websites as references should be used sparingly. The majority of your sources should be
   from primary literature sources such as peer-reviewed journals and books. When
   websites are used be sure they are credible and valid sources of information.

Forms

There are two forms which students must complete for the Capstone Project:

- **“Agreement to Serve on Capstone Project Committee”** certifies that two people have
  agreed to serve as the student’s Readers. This form serves as the cover page to the
  Capstone Proposal, which must be submitted and signed prior to initiation of research.

- **“Completion of Capstone”** should be completed by both Readers to certify their
  approval of the completed project. This form should be submitted by the Primary Reader
  to the MMP Program Director. However, the capstone is not considered complete until
  the final version of the thesis is submitted to the MMP Program Director as well.

Registering for the Capstone Courses

A student completing their Capstone Project must register for MMP 699. Although the course
does not meet formally, a writing advisor is available to help with drafts of the final paper. In
addition, the student’s Primary Reader will work directly with the student during this time on the
technical aspects of the project. Students should subsequently enroll in MMP 799: Capstone II
as they complete their research.
Master’s Thesis Registration:
MMP students who have completed all of their course work toward the degree but have not completed their Capstone will be automatically enrolled in the non-credit Master’s Thesis course (MMP 990) for two additional semesters or until the thesis is complete and a grade has been submitted, whichever comes first. The cost of thesis registration is less than the cost of a course and keeps the student status active. Students enrolled in Master’s Thesis have access to the library and maintain their Penn e-mail accounts. They will also be considered full-time students and will automatically be enrolled in the Penn Insurance plan unless they request a waiver. Should a student wish to extend Master’s Thesis registration beyond two semesters, they must receive permission from the MMP Faculty Advisory Committee.

Project Design Checklist

☐ Capstone Proposal submitted at the start of the semester in which research will be initiated.
☐ Final Capstone paper submitted to Primary and Secondary Readers for review
☐ Capstone Completion Form submitted to Primary and Secondary Readers for Capstone approval
☐ Final copy of Capstone paper submitted to MMP Program Director
☐ Electronic version of Capstone Project poster submitted to MMP Program Director
IV. Program Resources

Student Resources

The MPP Program offices are located in Suite 1N1 of the David Rittenhouse Laboratory (DRL) building at 209 S. 33rd Street (basement level, north side of building). Either a punch code or key is necessary to enter DRL, either of which may be obtained from the MPP Administrative Director.

Lockers are available for MPP students to store personal items while they are on campus. Individual powered study carrels are available specifically for MPP students as well as small conference tables and whiteboards for group work or projects. There is also a room with a larger conference table and another area for less formal gatherings. A kitchenette is also available for MPP student use.

Two desktop computers, a large-screen monitor, and a printer are available for MPP students to use as well as access to basic office supplies. Contact the MPP Administrative Director for more information about these resources.

The IP address for our printer is 128.91.43.173. Instructions on how to connect to a printer are located at http://www.sas.upenn.edu/computing/physics/printers.

MatLab

Computers with MatLab installed are available for your use at various SAS Computing lab locations throughout campus. One such location is Multi-Media Services (MMS) located in the David Rittenhouse Laboratory Building. You can enter from the left most set of double doors that face 33rd St. A large sign is posted above the set of doors that reads “Multi-Media Services.” Forty computers are available for walk-in use as long as they have not been reserved for a class. For further descriptions of MMS and to check computer availability, go to http://www.sas.upenn.edu/computing/mms.

Other SAS Computing lab locations with MatLab software include the David B. Weigle Information Commons in Van Pelt-Dietrich Library (3420 Walnut St.) and the Undergraduate Data Analysis Lab (UDAL) in rooms 104, 108 and 109 of the McNeil Building (3718 Locust Walk).

Physics Library

The Physics and Astronomy Library is located on the third floor of the David Rittenhouse Laboratory (DRL) building at 209 S. 33rd St where most of your physics courses will take place. You will find helpful and current information on physics topics relevant to your coursework. For more information, contact the library at 215.746.0228 or visit the science and engineering library website at http://gethelp.library.upenn.edu/support/scitech/csf.html.
AAPM Membership

The website of the American Association of Physicists in Medicine (http://www.aapm.org) is a good resource for general information about the field of medical physics. All MPP students are required to join the AAPM, and are encouraged to join the Delaware Valley Chapter. Membership benefits with the AAPM include access and subscriptions to journals, salary surveys, medical physics position listings, and membership directories. Students are responsible for paying the application fee and dues, both of which are discounted for student members. In accordance with AAPM rules, Certificate students must join as junior members. Applications may be printed from the AAPM website at http://www.aapm.org/memb/. Letters certifying eligibility will be provided by the Administrative Director during orientation.

HPS Membership

The website of the Health Physics Society (http://www.hps.org) is a good resource for information regarding the radiation safety aspects of medical physics. All MPP students are strongly encouraged to join the HPS national and Delaware Valley chapters. Membership benefits include access and subscriptions to journals and handbooks, invitations to local and national meetings, medical physics position listings and membership directories. Travel scholarships to attend HPS meetings are also available. Students are responsible for paying the application fee and dues, which are discounted for students. Applications for HPS are online at https://hps.org/join/, and for the Delaware Valley Chapter at http://hpschapters.org/dvsrs/History.htm.
VI. Program Policies and Procedures

Academic Standards

Students in the MPP are expected to maintain academic performance commensurate with the demands of rigorous didactic and clinical training in the field. To ensure that students are making satisfactory progress toward their degree or certificate, student performance is regularly reviewed. The MPP Faculty Advisory Committee has adopted the following standards:

**Good Academic Standing:** Students are considered in good academic standing if they have:
- Taken all required courses counting toward their MPP degree for a letter grade. Pass/Fail courses may not be counted toward the degree.
- Maintained a 3.0 cumulative grade point average (GPA) in all courses, including electives.
- Received grades of B or higher in all courses, including electives.

**Academic Warning:** Students will be given an academic warning, delivered via e-mail, if they fail to meet the requirements of Good Academic Standing. Specifically, if they have:
- Received one grade of B- or lower in any course. One course with a grade of B- may be counted toward graduation requirements.
- Received a semester GPA lower than 3.0 for one semester.

Students given an Academic Warning may continue in the program without formal review; however it is recommended that they meet with the Program Director to discuss strategies to improve their academic performance.

**Academic Probation:** Students who fail the requirements for Good Academic Standing for multiple semesters or by significant margins as defined below will be placed on Academic Probation; specifically if they have received:
- More than one grade of B- or lower in any course. One course with a grade of B- may be counted toward graduation requirements; others may have to be replaced or repeated.
- A grade below B- in any course.
- A cumulative GPA below 3.0.
- A semester GPA lower than 3.0 for more than one semester.

Students placed on Academic Probation must work with the Program Director to develop an Academic Plan. The Academic Plan must detail the courses the student will take to fulfill the requirements of the program and the strategies to be followed to ensure successful completion of those requirements. Courses with grades of B- or lower may be repeated or replaced with other relevant courses. Additional courses may be taken to increase the cumulative GPA. The Academic Plan must be approved by the Faculty Advisory Committee. Students will not be allowed to register for courses during their probation without an approved plan in place.

**Program Dismissal:** Students placed on Academic Probation will be reviewed at the start of Probation and once per semester thereafter by the MPP Faculty Advisory Committee. If,
after a minimum of one semester on Academic Probation, the Committee decides that the student is unlikely to successfully complete their degree program, the student will be sent an academic dismissal letter via email and U.S. postal mail.

**Inactive Status:** Students who do not enroll in courses for four consecutive terms, including Summer Term, will be considered inactive and will be automatically withdrawn from the program during the fourth term. Students who are withdrawn from the program will be required to apply for readmission to the program. Standard application fees will apply.

**Incomplete Grades:** An incomplete grade indicates that a student has not completed all the work in a course and has done so with the instructor’s permission. An instructor who chooses to grant an extension to a student who has not completed a course by the end of the term may grant either an Incomplete (I) or an Extended Incomplete (II). An Incomplete must be made up within the first four weeks of the start of the next term, and an Extended Incomplete must be made up by the end of the next term (including the summer term). In either case, if the Incomplete is not made up by the deadline, it will become an F. An Incomplete is made up only when the official grade is received by the LPS Office and recorded by the Registrar’s office on the student’s official transcript. Once an Incomplete grade is converted to an F, the instructor may change the grade after the student has completed all required work.

Students with two or more Incomplete grades are subject to registration hold and are required to meet with the MPP Director to explain the circumstances of the Incompletes and develop a plan to resolve them. Students with two or more outstanding grades of Incomplete will not be allowed to register for courses; students with two or more outstanding grades of Incomplete who have already registered will be dropped from courses.

**Academic Grievances**

Evaluation of a student's performance in a course is the responsibility of the course instructor. Should a final grade in a course be disputed, the student must submit a written appeal to the instructor within the first two weeks of the academic semester immediately following the semester in which the grade was received. The instructor must respond in writing to the student within two weeks of receiving the written appeal. If, after receiving the written response from the instructor, the student still believes that the grade has been unfairly assigned, the student must submit a written appeal to the MPP Director for consideration by the MPP Faculty Advisory Committee. If the Committee believes the appeal demonstrates evidence of negligence or discriminatory behavior, a sub-committee will be formed to review the student's appeal and make a recommendation to the full Academic Committee. The School of Arts & Sciences and the Provost’s Office have policies governing academic grievances. Students should consult these for additional information about the grievance procedure.

SAS policy for graduate students' grievances: [https://www.sas.upenn.edu/graduate-division/resources/academic-grievance-procedure](https://www.sas.upenn.edu/graduate-division/resources/academic-grievance-procedure)

Penn Provost’s information on academic grievances: [http://provost.upenn.edu/policies/pennbook/2013/02/13/student-grievance-procedures](http://provost.upenn.edu/policies/pennbook/2013/02/13/student-grievance-procedures)
Leave of Absence

Students take time away from their studies for a wide variety of reasons including:

- manage a medical concern
- fulfill a family obligation
- pursue career-related opportunities
- complete military service
- work on a political campaign

While interrupting your studies to take time away may seem intimidating, a leave is a means to the successful completion of a degree, not a barrier to graduating. More than three quarters of students who take a leave return to complete their degree within two years.

If you are considering a leave, take time to think carefully about your goals for your time away and for when you return. Speaking with the MPP Director is an important first step. Depending on your circumstances you should get advice from other sources as well. Students taking time away in order to manage a medical condition should discuss the leave with their healthcare provider. Your MPP Director will help you connect with other campus resources as you prepare to take a leave of absence, such as Student Financial Services, Housing, and International Student and Scholar Services.

Students typically take a leave for a full academic year. Individual circumstances may require more or less time; the length of the leave is determined by the school. Students on leave should remain in contact with their MPP Director and update them about changes in plans. The return from leave process supports students in a successful re-entry to academic life at Penn. When preparing to return, students must consult their MPP Director to develop a plan that includes connection with appropriate resources.

Requesting a Leave of Absence:

- Students must meet with a program advisor to discuss a leave request.
- The student must submit a written request for leave of absence, detailing the reasons for the desired leave.
- The leave request will be evaluated by the Program. If the request is approved, the Program will stipulate conditions that must be met by the student before returning from leave.
- The student will be notified with the result of the leave request. The Program may deny any request for leave. In granting leaves, the decision of the Program is final.
- A student on leave may not be enrolled in Penn classes and will not receive credit for classes taken elsewhere during the leave unless special approval by the Program is given. Students on leave may not live in University-owned housing during the term of their leave. In addition, a student may not participate in and/or hold a leadership position in a registered University organization.
- Discontinuance of study without permission from the University does not constitute a leave of absence. Students who have requested a leave of absence for a given semester may still be dropped from the University rolls if their previous term's grades qualify them for this action.

Medical Physics Programs Student Handbook (Spring 2016)
**Leave of Absence, Drop or Withdrawal:**
Once a leave of absence or withdrawal has been approved, or you have been dropped, that action will be posted to your transcript. Your PennCard will be deactivated as soon as the leave, drop, or withdrawal has been processed.

**Notifications:**
Be sure to notify all relevant offices of your leave or drop. These offices may include the following, if applicable:
- Student Registration and Financial Services
- Housing and Conference Services
- International Student and Scholar Services (ISSS)
- Student Telephone Services
- Student Health Service
- Office of Student Conduct

**While Out:**
During the term of your leave or drop, you may call your program office if you have any questions. Please be aware of the conditions for return outlined in your leave or drop letter, since you will be required to fulfill them before you may re-enroll.

**Applying to Return:**
You must apply to return from leave or drop by the relevant deadline (July 15 for the fall semester, November 15 for the spring semester and April 15 for the summer). At that time, you must fill out a request to return from leave or drop form and show that you have fulfilled all of the conditions for return as outlined in your original letter from your program. To begin this process, contact the Program Director. Any return request submitted to the Program Director later than the above-indicated deadlines may be denied. Timely submission of requests and documentation is a condition of all leaves.

**Submatriculation**
Undergraduate students in their junior year or before the end of their 7th semester at the University of Pennsylvania may apply for submatriculation into the MMP Program. The deadline to apply for submatriculation is November 1st of the senior year. Second semester seniors are NOT eligible for this option. Submatriculation is an academic option for University of Pennsylvania undergraduate students to take graduate-level courses toward the MMP Program, enabling completion of the undergraduate and graduate degrees within five and a half years. Applicants must have the equivalent of a Physics minor to be considered for submatriculation. Students interested in submatriculation should contact both their undergraduate advisor and the MPP Director for academic advisement.

All students must apply via the online application for the MMP Program: [http://www.sas.upenn.edu/lps/graduate/mmp/application](http://www.sas.upenn.edu/lps/graduate/mmp/application).

A submatriculation application to the MMP Program must contain all of the following in order to be considered complete:
- Completed application form
• Three letters of recommendation
• Non-refundable application fee
• Application essays

Students may double count up to **four CUs** of graduate level courses toward their undergraduate and graduate (MMP) degrees with prior approval from both the undergraduate advisor and the MPP Director. More than 4 CUs of graduate level courses for the MMP degree taken by submatriculants will not be accepted. Courses taken at the University prior to submatriculation must be approved by the MPP Director to count toward completion of MMP degree requirements.

Additional information on sub-matriculation can be found on the College of Arts & Sciences website at [http://www.college.upenn.edu/submatriculation](http://www.college.upenn.edu/submatriculation). Questions about submatriculation should be directed to the MPP Administrative Director.

**Provisional Status**

Some students seeking admission to the MMP Program may be returning to school after a long absence or have undergraduate records that do not accurately reflect their academic ability. Some of those applicants may be accepted into the MMP Program provisionally. Applicants accepted as provisional admits should adhere to the following procedure:

• Students must complete two required graduate-level courses at Penn in the MMP Program.
• Students must receive a grade of “B” or better in both courses.
• If a student takes more than two courses in their first semester, they must receive a “B” or better grade in all of the courses.
• Students may not receive an Incomplete (I, NR, GR) in any of these courses.
• Students must receive favorable recommendations from the instructors in both courses.

Students who meet the above requirements will have their status changed to full admit status. If after two courses, students do not meet the requirements outlined above, they will not be allowed to continue in the MMP Program.

**Deferred Enrollment**

Students who are admitted to the MMP Program may defer their matriculation for up to one year. Students who wish to defer should notify the MPP Director in writing of their intentions as early as possible. It is not necessary for deferred students to reapply. However, students must inform the MPP Director if they enroll at any other institution prior to their matriculation at the University of Pennsylvania, and they must submit final official transcripts of any coursework completed prior to their first semester in the MMP Program.

**Transfer Credit**

Students who enter the MMP Program from the University’s Post-Baccalaureate Undergraduate Studies program may count up to four graduate level courses toward their MMP degree. These courses must be submitted to the MPP Director for approval during the
first semester of matriculation in the MMP Program. Only courses appropriate to the MMP degree will be considered for approval.

Courses from other graduate programs or completed degrees are not eligible for transfer; however, students may request to waive a core MMP course if a graduate-level course of equivalent content has been taken at Penn. To request a waiver, a student must submit a request form, course description, and syllabus before the first semester of matriculation. The waiver request will be reviewed by the MPP Director. If approved, the student must take an elective to replace the core course. Completion of 15 CUs at Penn are still required to complete the degree.

Courses taken outside of the University of Pennsylvania during a student’s matriculation in the MPP are not eligible for a waiver or transfer.

**Financial Aid**

There are several funding opportunities available to MMP Program students at the University of Pennsylvania, including:

- Partial stipends for select first-year students serving as Research Assistants
- Employment opportunities for second-year students working in the Roberts Proton Therapy Center by performing quality assurance measurements
- Partial stipends for select second-year students serving as Teaching Assistants for certain first-year courses
- Part-time employment opportunities (non-work study positions)

Research and teaching assistantships are limited in number and awarded selectively.

United States citizens and permanent residents are eligible to apply for loans through the University of Pennsylvania’s Office of Student Financial Services ([http://www.sfs.upenn.edu/](http://www.sfs.upenn.edu/)). Full-time students (students taking three or more courses in a semester) are eligible for full loan support. Part-time students (students taking one or two courses in a semester) are eligible for partial loan support. International students are not eligible for loans through the University. Students are encouraged to seek out scholarship support.
VII. Student Advising and Course Registration Procedures

Student Advising

The MPP Director is the primary academic advisor for all students in the program. The Program Director reviews academic performance of the students and advises on course, career, and research options. The Program Director advises students who are not meeting academic standards and provides guidance for successful completion of the program. At any time, students may request an advising appointment with the Program Director by contacting him directly or by scheduling an appointment through the Administrative Director.

Students should use the student plan of study worksheet available on Penn InTouch through the Penn Portal at https://portal.apps.upenn.edu/penn_portal/portal.php to help plan their courses and monitor degree progress. Students with questions about course logistics should contact the Administrative Director.

Course Selection

The University’s Course Register (http://www.upenn.edu/registrar/register/index.html) provides course descriptions for many courses offered at the University of Pennsylvania. Departmental webpages often include course descriptions as well. In addition, the Course Timetable may be found online at http://www.upenn.edu/registrar/timetable.

Advance Registration

The course registration process involves two registration periods. The first is Advance Registration during which students enter their requests for courses they wish to take. Students are encouraged to register during this period so that they have the best chance of getting into the courses they prefer. At the end of Advance Registration, a scheduling program processes all registration requests at the same time to determine who gets enrolled in the courses that have been requested. Students may advance register during a two-week period starting in late March for the following Summer and Fall terms and during a two-week period in late October or early November for the following Spring term. Check the LPS website (http://www.sas.upenn.edu/lps/calendar) and/or the Registrar’s website for the exact dates for Advance Registration. The MPP Administrative Director will contact all incoming students with information about specific courses in which they will need to enroll.

Registration

The Regular Registration Add/Drop period opens approximately 3 weeks after the Advance Registration request period has closed and students have been notified of their schedules. During the Regular Registration period, students know immediately whether or not they will be able to enroll in the course they are requesting. Students may register for courses through the Penn InTouch on-line registration system or with the assistance of the MPP Administrative Director. Registering through Penn InTouch requires the use of a computer and access to the internet.
In order to access the system, students must have a PennKey. To establish a PennKey, go to http://www.upenn.edu/computing/pennkey. A PennKey setup code will be mailed to each new student’s home address. The Penn InTouch web address is https://medley.isseo.upenn.edu/penn_portal/intouch/splash.html.

Some important information to remember when registering for courses:

- Courses must be taken for a normal letter grade in order to count toward the MPP degree.
- Only courses numbered 400 and above may count toward the degree; for example, PHYS 531 counts, but PHYS 240 does not. The first set of three digits after the course subject is the course number.
- As a master’s student, permission may be needed from the instructor to register for some graduate courses in other departments or schools.
- Full-time MPP students should enroll in three or four courses. Students are not permitted to enroll in more than four courses per semester.
- Part-time MPP students may enroll in one or two courses per semester.

Permits

Courses that require special permission from the instructor are indicated in the Course Timetable as “Permit Required.” Permits are obtained from the instructor and entered electronically into the Student Record System (SRS) by the department offering the course. A permit is not a registration. Students must “claim” the permit by actually enrolling in the course through Penn InTouch. After both Advance Registration and Regular Registration are complete, the Registrar’s Office removes unused permits from students’ records.

Independent Study Courses

Students interested in pursuing an individualized study project should obtain a “Request for Independent Study” form from the MPP Administrative Director. The student should then approach a faculty member and obtain agreement from them to direct their project. It is the responsibility of the student to define the individualized project. Students should not approach a faculty member and request that they define a project for the student. Students must obtain the appropriate signatures from their advisor and the MPP Director. Independent Study courses may not duplicate other courses offered during the same semester. Students should bear in mind that faculty members are not required to supervise an Independent Study course. MPP students may register for up to two Independent Study courses during their career at Penn.

Independent study courses generally fall into one of two categories:

- **Reading courses** to supplement a student’s education with coursework not available in other courses: The Independent Study should have a defined reading list of relevant textbook and literature. The student and advisor should meet regularly (at least twice per month), and the final grade should be based on a defined project or assignment, such as a research paper.

- **Research projects**: Independent study research projects should be undertaken sparingly. Large research projects are more appropriate for Capstone projects.
research Independent Study should have a clear project with defined goals that can be reasonably achieved in a single semester.

Auditing Courses

MPP students may audit courses. However, they will be charged tuition and fees at the MPP tuition level. Audited courses will appear on the student’s transcript, but no grade will be issued, and the course will not count toward the 15 courses needed to complete the program. Most courses are open to auditors on a space-available basis.

Registering for Non-MPP Courses

MPP students may register for graduate courses in other University departments and schools as electives, if those courses are appropriate to their program. Students should consult with the MPP Director to determine if the course is appropriate before registering. MPP students may need permission to register for courses outside the program. In such cases, students should contact the instructor of the course they wish to take. Students may also need the approval of the Graduate Group Chair of the Department in which the course is offered. Students wishing to take courses outside of MPP may not be able to register until all students in the home department or school have had a chance to register. Permits will then be issued on a first-come, first-served basis.

Course Changes

MPP students are subject to LPS registration and drop/add deadlines, which may be different than deadlines for other schools and departments. Students should consult the current LPS Course Guide or the LPS website for deadlines regarding registration changes and for the corresponding financial obligations (http://www.sas.upenn.edu/lps/calendar). Adherence to LPS deadlines is strictly observed. Should students need to drop or withdraw from a course beyond the deadline, they should contact the MPP Director. It may be necessary to provide documentation of the situation that necessitates the drop or withdrawal, particularly if the student is requesting a refund of tuition.

Adding a Course

Students may add a new course through the second week of the term. After that, it is not possible to add a course. Students may add a course via Penn InTouch until the last day to add a course, which is posted in the LPS calendar (http://www.sas.upenn.edu/lps/calendar).

Dropping a Course

Students may drop a course with no financial obligation until the published deadline in the current LPS academic calendar (approximately two weeks into the term). Students may also drop a course between the second and fourth weeks of the term, but in so doing they will incur a 50% financial obligation for the tuition and fees for the dropped course. Neither absence from class nor notifying the instructor constitutes a drop. Students can officially drop a course through Penn InTouch through the second week of the term. After the second week of the semester, students must contact the MPP Director directly to drop a course.
When making registration changes via Penn InTouch, it is always advisable to double check to ensure the changes have taken effect before logging out. Students who fail to drop a course officially may receive a grade of “F” and will be required to pay the full tuition rate.

**Changing Grade or Credit Status of a Course**

All MPP courses must be taken for a letter grade. However, students may register for courses that they do not want to count for their program by taking the course on an audit or Pass/Fail basis. *Before doing so, they should discuss this with the MPP Director.* Once they have done so, students may change their status in a course from credit to audit, from a letter grade to Pass/Fail, or from Pass/Fail to a letter grade until the published deadline in the current LPS academic calendar (approximately four weeks into the term). No change is permissible after the published deadline. Auditors pay full tuition and fees.

**Withdrawing from a Course**

Students may withdraw from a course after the deadline to drop a course has passed (approximately four weeks into the term). Students should discuss the reason with the MPP Director prior to completing an LPS withdrawal form. A “W” (withdrawal) will be recorded on the transcript.

After the published withdrawal deadline, students are permitted to withdraw only under extraordinary circumstances, which must be documented. To withdraw, students should discuss the reason with the MPP Director and complete an LPS withdrawal form. Additional documentation justifying the request may be required. LPS administration will review the request and communicate a decision to the student. If permission is granted, a “W” (withdrawal) will be recorded on the transcript.

Students who withdraw from a course have full financial obligation, except in documented cases of illness, military service, or other extraordinary circumstances, when they may petition for a 50% refund.

**Note:** Dropping a course is not identical to withdrawing from a course. Withdrawing from a course takes place after the fourth week of class and carries with it full financial obligation. A student’s transcript will read “W” (Withdrawal) next to the title of the course. However, if a student drops a course during the normal Add/Drop period, no record of that course will appear on the transcript.
VIII. University Policies and Procedures

The PennBook

The Pennbook is a collection of policies that relate to student life at the University of Pennsylvania (https://provost.upenn.edu/policies/pennbook). These policies govern academic activities such as grading and exams, provide guidance on the use of campus resources, and explain expectations for membership in the university community. Please read through the information carefully, as all members of the University community are expected to know and follow these policies.

Enrollment Status

MPP students who are enrolled for at least three courses per term are considered full-time students and will be billed the full general fee. This fee covers access to many of the services described below. MPP students enrolled in one or two courses per term are considered part-time students.

Code of Academic Integrity

Inasmuch as the standing of an educational institution and the value of a degree from that institution are dependent upon the integrity of study and research carried on at that institution, the Code of Academic Integrity is drawn to make clear the policy of the University concerning academic honesty. Each student attending the University must abide by this code, the text of which appears in the PennBook, which can be found online.

Provostr’s Code of Academic Integrity: https://provost.upenn.edu/policies/pennbook/2013/02/13/code-of-academic-integrity

Provostr’s Code of student conduct: https://provost.upenn.edu/policies/pennbook/2013/02/15/code-of-student-conduct

Student Guide to Academic Integrity: http://www.upenn.edu/academicintegrity/

Office of Student Conduct

The Office of Student Conduct (OSC) is responsible for acting on behalf of the University in matters of student discipline. The OSC deals with alleged instances of academic dishonesty and other student misconduct to determine how best to resolve these allegations in ways that are consistent with the goals and mission of the University. The OSC at Penn has twin goals: to help create a safe environment where academic life can flourish; and to promote the development of students.

It is the purpose of the student disciplinary system to further the educational mission of the University by resolving alleged violations of the Code of Student Conduct, the Code of Academic Integrity and other applicable policies regarding student behavior. There are numerous ways complaints about alleged student misconduct can be resolved. These include
the formal disciplinary process as outlined in the Charter of the Student Disciplinary System, referral to the University Mediation Program, and referral to other University resource offices.

Penn’s student disciplinary process is meant to set the standard for behavior on the Penn campus and to determine a student's standing in the community. It is not meant to replace or substitute for the criminal justice system or other legal avenues. However, the student disciplinary process provides an important additional forum to respond to the interests of the Penn community. The processes are designed to educate and, where appropriate, sanction those students who violate these rules. OSC seeks both to promote a student's sense of responsibility by enforcing accountability, and to protect our community by, where necessary, removing or restricting those who may pose a threat to others.

The OSC Mediation Program is available to everyone in the Penn community to facilitate the constructive resolution of disputes (excluding academic integrity complaints). The intention is to emphasize the peaceful and productive handling of conflict when possible and where appropriate.

**Student Codes of Conduct Enforced**
In addition to the Code of Academic Conduct, Penn students are expected to adhere to the provisions of all other codes as well. More information on these codes is available online. They are:

- Code of Student Conduct
- Code of Academic Integrity
- Policy on Acceptable Use of Electronic Resources
- Guidelines on Open Expression
- Acquaintance Rape and Sexual Violence Policy
- Sexual Harassment Policy
- Anti-hazing Policy
- Alcohol and Drug Policy
- Bicycle Policy

*The Student Disciplinary System does not handle alleged violations of the University's parking regulations.*

For more information, visit: [http://www.upenn.edu/osc/](http://www.upenn.edu/osc/) or call 215.898.5651
207 Duhring Wing, 236 S. 34th Street

**Confidentiality of Student Records**

Pursuant to the Family Educational Rights and Privacy Act of 1974, as amended, in general, personally identifiable information can be disclosed to people outside the University only with the written consent of the student or alumnus/na involved. A statement setting forth specific University policy concerning (1) disclosure of information to people outside the University, (2) disclosure of information to people within the University, (3) permitting students to inspect and review records and (4) providing students with the opportunity to seek the correction of their records appears in the PennBook and can be found online: [https://provost.upenn.edu/policies/pennbook/2013/02/13/confidentiality-of-student-records](https://provost.upenn.edu/policies/pennbook/2013/02/13/confidentiality-of-student-records)
Nondiscrimination Statement

The University of Pennsylvania values diversity and seeks talented students, faculty and staff from diverse backgrounds. The University does not discriminate on the basis of race, color, sex, sexual orientation, gender identity, religion, creed, national or ethnic origin, citizenship status, age, disability, veteran status or any other legally protected class status in the administration of its admissions, financial aid, educational or athletic programs, or other University-administered programs or in its employments practices. Questions or complaints regarding this policy should be directed to:

Executive Director of the Office of Affirmative Action and Equal Opportunity Programs
Sansom Place East, 3600 Chestnut Street, Suite 228, Philadelphia, PA 19104-6106
215.898.6993 (Voice)
215.898.7803 (TDD)
www.upenn.edu/affirm-action

Also see:
https://provost.upenn.edu/policies/pennbook/2013/02/13/student-grievance-procedures

Equal Opportunity and Affirmative Action Policy:
https://provost.upenn.edu/policies/pennbook/2013/02/13/equal-opportunity-and-affirmative-action-policy

Rules Governing Exams

Provost’s Policy on Common Midterm Examinations:
https://provost.upenn.edu/policies/pennbook/2013/02/13/policy-on-common-midterm-examinations

Rules Governing Final Examinations:
https://provost.upenn.edu/policies/pennbook/2013/02/13/rules-governing-final-examinations

Holidays

The University also recognizes that there are several religious holidays that affect large numbers of University community members, including Christmas, Rosh Hashanah, Yom Kippur, the first two days of Passover and Good Friday. In consideration of their significance for many students, no examinations may be given and no assigned work may be required on these days. Students who observe these holidays will be given an opportunity to make up missed work in both laboratories and lecture courses. If an examination is given on the first class day after one of these holidays, it must not cover material introduced in class on that holiday.

Provost’s Policy on secular and religious holidays:
https://provost.upenn.edu/policies/pennbook/2013/02/13/policy-on-secular-and-religious-holidays

The University observes the following holidays: Martin Luther King, Jr. Day, Memorial Day, Independence Day, Labor Day, Thanksgiving and the day after, and New Year’s Day.
**Student Responsibility**

While advisors, faculty, and staff will assist students in every aspect of their graduate study, it is the responsibility of the student to ensure that all steps and necessary paperwork have been completed and submitted to the MPP Director and or LPS as appropriate. Grant proposals, awards, accepted publications and other records of achievement should also be shared with the MPP Director.
IX. University Systems Access

Student Identification

Once a student is enrolled at Penn, a student ID number (Penn ID) will be issued. This ID is used for registration and other transactions throughout the University. Never give out your social security number via email or fax. Once matriculated, students should never give out their entire social security number; the Penn ID number or the last four digits of the social security number are all that is necessary.

PennCard

The PennCard serves as the official University of Pennsylvania ID for students, faculty, and staff. The PennCard provides access to University facilities, services, cash convenience and more. To obtain a PennCard, students should bring a valid form of photo ID (e.g., driver’s license, passport) to the PennCard Center:

2nd floor of the Penn Bookstore, 36th and Walnut Streets
http://www.business-services.upenn.edu/penncard

There is no charge for your initial PennCard. Only active students registered for courses in the current or upcoming term may receive a PennCard, which should be carried at all times.

PennKey

A PennKey is required to authenticate, or verify, an individual’s identity for many of the University’s networked computer systems and services. Authorized users need a PennKey and password to access such resources as Penn InTouch (course registration), Canvas (used in most classes), certain library resources, and public campus computers. A PennKey is also required to obtain a University of Pennsylvania email address. New students should receive a letter with information on how to create a PennKey and password within a few days of their admission to the MPP Program.
http://www.upenn.edu/computing/pennkey

Penn InTouch

Penn InTouch provides secure access via the Internet to online course registration, class schedules, academic records, future academic planning, billing, financial aid application status and awards, address corrections and updates, and student health information. A PennKey is required to access Penn InTouch.
https://medley.isc-seo.upenn.edu/penn_portal/intouch/splash.html

Email

All students enrolled at the University of Pennsylvania are eligible for a University email address free of charge. Even if the student plans to use a non-University email account, they should also establish a University of Pennsylvania address. The MPP staff will send program information to this address and also contact students with important information through this
system. Course instructors will be given this address as well and will expect to contact students in this way.

Should students wish, they may forward email from their University address to another account through the University of Pennsylvania’s webmail site. Instructions on how to create and use a University email account are available through SAS Computing at http://www.sas.upenn.edu/computing/help/students/email.
X. University Student Services and Resources

The Graduate Student Center publishes a Campus Resource Guide each year for all graduate and professional students at the University of Pennsylvania. Campus Resource Guides are available in print form (pocket-sized) at the Graduate Student Center and available for download at [http://www.gsc.upenn.edu/resources/guide/](http://www.gsc.upenn.edu/resources/guide/). A comprehensive listing of all academic resources and university support services are contained in the Campus Resource Guide, and should be considered a primary resource for graduate students.

Academic Support Services

**Weingarten Learning Resources Center**  
[http://www.vpul.upenn.edu/lrc/](http://www.vpul.upenn.edu/lrc/)  
3702 Spruce Street, Suite 300, 215.573.9235  
The Weingarten Learning Resources Center provides professional instruction in skills such as academic reading, writing, study strategies, and time management free of charge to Penn students. This academic support is provided through a variety of services and programs including the very popular series of study skills workshops offered at the beginning of each fall and spring semester for students. Consult their website for specific dates and times for these workshops and additional information. Individual appointments and walk-in hours are also available.

**The Critical Writing Program**  
[http://writing.upenn.edu/critical/graduate_students/help_with_your_writing.php](http://writing.upenn.edu/critical/graduate_students/help_with_your_writing.php)  
The Marks Family Writing Center, part of the Critical Writing Program, provides graduate students in credit-bearing programs with free writing consultation. Sessions for graduate students are by appointment only and are held at the Weigl Information Commons at Van Pelt Library.

**Access & Achievement Programs**  
[http://www.upenn.edu/programs/acadsupport.php](http://www.upenn.edu/programs/acadsupport.php)  
215.898.0809  
Located at 3820 Locust Walk, these programs offer individual and group tutoring, and mid-term and finals review sessions for all Penn students. The support services help students enhance learning in core academic subjects, manage their time, find financial aid and feel more confident about their abilities. Assistance and counseling are available on an individual basis.

**Bookstore**

The University of Pennsylvania Bookstore carries textbooks and trade books as well as stationery, art supplies, school supplies, gifts, and other items. There is also a check cashing service, notary, SEPTA token machine and ATM located within the store.

3601 Walnut Street
The Computer Connection, located on the second floor of the Penn Bookstore, carries computers, software, and computer supplies at student rates. Call 215.898.3282 for additional information or visit http://cms.business-services.upenn.edu/computerstore.

Note that many faculty use the Penn Book Center to order their course texts. The Book Center is located at 130 S. 34th Street and can be reached at 215.222.7600 or online at http://www.pennbookcenter.com.

**Student Financial Services**

Student financial aid, including applications and disbursement of money, are handled through Student Financial Services (SFS).

http://www.sfs.upenn.edu
3451 Walnut Street, Suite 100 (the Franklin Building)
215.898.1988

**Computer Resources**

Visit this website for a current list of computer labs on campus, along with a list of software installed and eligibility for usage: http://www.upenn.edu/computing/view/labs/.

Information on how to use wireless connections in DRL may be found in Section III of this handbook.

**Office of Student Affairs**

The Office of Student Affairs (OSA), a department within the Division of University Life, serves as a primary source of information and advice about co-curricular opportunities and resources. Staff members assist students in becoming involved in campus life, conduct leadership development programs, provide continuity for organizations from year to year, manage organizational finances, educate students about University policies, mediate disputes, advise event planners, and help students put classroom learning into practice through the techniques of experiential education.

OSA seeks to provide a range of co-curricular experiences designed to supplement students' classroom experience and contribute significantly to their personal development. Staff members encourage students to create and participate in intellectual, artistic, social, recreational and multicultural activities; to assume campus leadership and governance responsibilities; to develop positive interpersonal relationships and skills within groups; to explore different cultures, ideas and experiences; and to put their learning into practice in the laboratory of co-curricular programs. Staff members support students through various forms of advocacy, through the encouragement of proactive approaches to campus problems and concerns, and through a commitment to the creation of a Penn community.

http://www.vpul.upenn.edu/osa/
OSA provides information on student organizations categorized as follows.

- Academic and Educational
- Cultural and Support
- Environmental Organizations
- Governmental and Umbrella
- Hobbies and Recreation
- Honor Societies
- Performing Arts
- Political Issues
- Publications and Media
- Religious
- Service
- Social
- Graduate and Professional Organizations
- Registered Organizations

**Career Counseling**

The University provides career counseling through the Career Services office. Appointments can be made by contacting the office at 215.898.7530 or scheduling a meeting online.

http://www.vpul.upenn.edu/careerservices/
Located in the McNeil Building at 3718 Locust Walk, Suite 20

**Counseling, Support and Crisis Intervention**

*Public Safety Special Services Unit Hotline*

The Special Services Hotline at 215.898.6600 provides crisis intervention and support, escort to the hospital, assistance with police administration and/or court proceedings, transportation, temporary housing and other assistance to help you overcome a traumatic event. For general Special Services business, call 215.898.7297.

*Counseling*

Counseling and Psychological Services (CAPS) fosters personal growth to enable Penn students to take full advantage of academic and social opportunities at Penn. Students learn to manage personal challenges, psychological problems, and situational crises and develop strategies to cope with academic stress and skills for life-long learning. CAPS also provides professional psychological and psychiatric services to students who are having personal problems involving social, emotional, academic, and career issues. The most frequent concerns are poor academic performance, stress management, depression, anxiety, low self-esteem, eating problems, drug and alcohol abuse, racial/ethnic identity issues, relationship conflicts, sexual identity concerns, career conflicts, and loss/grief. Services are free and confidential.

For additional information or to schedule an appointment, visit http://www.vpul.upenn.edu/caps/ or call 215.898.7021 during normal business hours.
Clinicians are available for confidential counseling, consultation and psychotherapy on a walk-in basis or by appointment during office hours. After-hours calls are referred to the CAPS clinician on call.

Counseling Emergencies
If you are experiencing an emergency that cannot wait until CAPS next day office hours, please call the Hospital of the University of Pennsylvania (HUP) operator at 215-349-5490 and ask for the CAPS clinician on call. Please note that this HUP operator number is only for emergencies.

Suicide Prevention Hotline
Please call 215.686.4420 24 hours a day, 7 days a week.

Rape Counseling
Please call the Women Organized Against Rape (WOAR) hotline at 215.985.3333 (available 24 hours a day, 7 days a week). WOAR provides telephone counseling, crisis intervention, emergency room counseling, and other follow-up services and referrals for victims of sexual assault.

Office of Alcohol and Other Drug Initiatives
This office seeks to identify methods to reduce substance abuse and violence, control and mitigate campus environments where potential abusive behavior exists, and foster a campus culture in which healthy living efforts are plentiful and successful.

For more information:
www.vpul.upenn.edu/alcohol
215.573.3525

Penn Violence Prevention (PVP)

The University of Pennsylvania is committed to the safety of all students, and is at the forefront of handling cases involving sexual violence, relationship violence, and stalking. The Penn Violence Prevention (PVP) is a collaborative program that grew out of the Penn Women’s Center. PVP aims to engage the Penn community in the prevention of sexual violence, relationship violence, and stalking on campus. The goal is to not only ensure students have access to safe and effective resources, but to provide preventative education focused on building healthy relationships, understanding consent, reaching out to friends in need, and being an active bystander.

https://secure.www.upenn.edu/vpul/pvp/

Sexual Violence, Relationship Violence, and Stalking Policy:
https://provost.upenn.edu/policies/pennbook/2013/02/15/sexual-violence-relationship-violence-and-stalking-policy
Student disciplinary procedures for resolving complaints of sexual assault, sexual violence, relationship violence and stalking:


Sexual Harassment Policy:

https://provost.upenn.edu/policies/pennbook/2013/02/15/sexual-harassment-policy

Emergency Phone Numbers

Fire, Police and Medical Emergencies
Call 511 to reach University Police.

Tell the dispatcher that you need an ambulance and stay on the phone until you have given the location of the emergency. If you can, stay with the patient until University Police arrive. If the Philadelphia Police or Fire Department arrives before the University Police, inform the attendant or police officer that the patient is to be taken to the Hospital of the University of Pennsylvania emergency services unit. In cases of drug or alcohol overdose, the primary concern of the University Police is the safety of the individual, not prosecution and punishment.

Other Medical Emergencies
Student walk-in emergencies are handled at the Student Health Service located at 3535 Market Street, Suite 100. When Student Health is closed, students should go to the HUP emergency services unit in the Silverstein Pavilion, 3400 Spruce Street.

Off-campus
Call 215.573.3333 to reach University Police or 911 to reach Philadelphia Police.
Call 911 to reach the Philadelphia Fire Department.

Graduate Student Resources

Graduate Student Center
The Graduate Student Center (GSC) is the only hub on campus specifically for graduate and professional students. It provides a common area for meeting other students, meeting and study group space, academic support, and personal enrichment and social programs. The GSC is located at 3615 Locust Walk and can be reached at 215.746.6868 or online at http://www.gsc.upenn.edu/.

Graduate and Professional Student Assembly
The Graduate and Professional Student Assembly (GAPSA) serves as the University-wide student government for all graduate and professional students, functioning as the advocate and political representative body for these constituents. GAPSA also sponsors activities, elects representatives for University-wide committees, provides funding for student organizations and for students attending conferences. Learn more at http://gapsa.upenn.edu/.
Housing

A wide range of housing options are available to graduate students at the University of Pennsylvania. On campus, graduate students can choose to live at Sansom Place, which accommodates graduate and undergraduate students. Alternatively, a limited number of graduate staff positions provide subsidized room and board in a College House or at Sansom Place. For more information on this option, visit http://www.business-services.upenn.edu/housing/graduate.html.

A variety of off-campus housing options are available as well. Penn’s Office of Off-Campus Services (OCS), located at 3702 Spruce Street, is designed to assist students at all stages of their off campus living experience. For more information contact OCS at 215.898.8500 or visit http://www.upenn.edu/offcampusservices.

Libraries

Van Pelt Library, the main University library, is located at 3420 Walnut Street (the entrance is on the College Green across from College Hall). Van Pelt has extensive holdings, computers, and the Weigle Information Commons. For information about holdings and hours for each of the University libraries, visit http://www.library.upenn.edu/

The Physics and Astronomy Library is located on the third floor of David Rittenhouse Laboratory (DRL) building at 209 S. 33rd Street, where most of your physics courses will be held. You will find helpful and current information on physics topics relevant to your coursework. For more information, contact the library at 215.746.0228 or visit their website at http://www.library.upenn.edu/scitech/mpa/.

Recreation Facilities

MPP students have access to all of the recreation facilities available to the University community including the Pottruck Health and Fitness Center, intramural leagues, group exercise, massage therapy and more. http://www.upenn.edu/recreation/ 215.898.6100

Office of the University Ombudsman

The Office of the Ombudsman assists individuals in finding solutions to problems that they may not be able to resolve through normal channels. The office is concerned with safeguarding individual rights and promoting better channels of communication throughout the University. It is independent of all administrative offices. The Ombudsman is not an advocate for any one individual or group. He or she is an advocate for fairness, adherence to University regulations, due process, and personal responsibility. The Office supplements, but does not replace, any existing grievance mechanisms or modes of redress. It can and does recommend changes in the existing rules and practices when necessary. http://www.upenn.edu/ombudsman 215.898.8261
Student Disabilities Services

Penn is committed to providing equal education opportunities for all students, including students with disabilities. The Office of Student Disabilities Services (SDS) provides comprehensive professional services and programs for students with disabilities to ensure equal academic opportunities and participation in University sponsored programs. Reasonable accommodation to a qualified student’s known disability may be provided to ensure equal access. The University invites students with disabilities to identify themselves at any time during their course of study as enrolled students. Although the self-identification process is confidential and completely voluntary, it is required for those requesting accommodation.  
http://www.vpul.upenn.edu/lrc/  
215.573.9235 or TDD at 215.746.6320

Weather Emergencies

Severe weather, such as winter storms, may force the closing of non-essential offices and the cancellation of classes. To find out the operating status of the University in the event of severe weather, call the special information number: 215.898.MELT and/or listen to KYW (1060 AM) for school closing announcements. The University’s number is 102 for daytime classes and 2102 for evening classes.
XI. University Student Health

Student Health Information

The University has a number of health-related requirements for students. These include completion and submission of health and immunization records, coverage for outpatient medical care through the Student Health Service (SHS) and maintenance of health insurance coverage for in-patient and catastrophic care. Students are advised to call SHS at 215.746.3535 or consult their web site at http://www.upenn.edu/shs for the most current information on student health requirements.

Student Health Insurance

The University requires all full-time students to maintain medical insurance with coverage for in-patient care and catastrophic illness and injury. Students may satisfy insurance requirements through private or employer-sponsored plans or through enrollment in PSIP. All full-time students must carry coverage for care at the Student Health Service, either through payment of the Clinical Fee, through enrollment in the Penn Student Insurance Plan (PSIP), or submit a waiver indicating alternative coverage. Students who fail to provide information about coverage will be enrolled in and billed for PSIP. Part-time students may enroll voluntarily in PSIP, but they are not subject to the insurance requirement, and will not be enrolled by default in PSIP. Coverage for the Student Health Service (either through the Clinical Fee or through enrollment in PSIP) is optional for part-time students.

Student Health Service

The University provides outpatient medical care to students through its Student Health Service. SHS offers an array of clinical services, including initial and follow-up treatment of acute medical illness and injury, management of chronic health problems, health screening and preventive care. Full-time students who have private or employer-sponsored insurance do not have to purchase the student plan, but they must still pay the clinical fee for coverage at the Student Health Service. Coverage for the Student Health Service (either through the clinical fee or through enrollment in PSIP) is optional for part-time students.

The Student Health Clinic is located at 3535 Market Street, Suite 100. Be sure to bring your PennCard and insurance information whenever you go for medical care. SHS can be reached at 215.746.3535 or online at http://www.vpul.upenn.edu/shs/.

Immunization

Students enrolled in the MPP program are part of the University community and benefit from the University’s efforts to provide a safe and healthy environment. All MPP students are required to comply with immunization requirements upon first enrolling in credit courses. Penn requires all incoming students to be immunized against certain diseases and to submit this information online using the Immunization Worksheet. Please visit http://www.vpul.upenn.edu/shs/immunization.php for additional information on fulfilling these important requirements.

In the event of an outbreak of a communicable disease in any University class, all students in that class would be required to comply immediately with the University’s immunization requirements. Contact the Immunization Coordinator at 215.349.5047 for more information.