PROGRAM HANDBOOK

MEDICAL PHYSICS & HEALTH PHYSICS PROGRAM

Department of Physics and Astronomy
Louisiana State University and A&M College
and
Mary Bird Perkins Cancer Center

CAMPEP ACCREDITED
MS Degree: 2006-2026
PhD Degree: 2011-2026
Post-Doctoral Certificate: 2014-2026

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Contents

I. Introduction

A. About This Handbook

This handbook is a resource to trainees enrolled in the LSU/MBPCC Medical Physics and Health Physics Program. All students should use the handbook as their starting point for finding information on a variety of tasks, such as convening advisory committee meetings, preparing research proposals, and defending dissertations. The handbook also provides sample timelines and checklists of degree requirements to be completed.

The handbook serves as a reference. Students should consult the handbook on topics as these come up. Commonly encountered topics can be found in the table of contents or by searching the handbook. Trainees should consult the handbook prior to seeking help from faculty or staff. The handbook is revised periodically to meet the needs of trainees; please report errors to the Program Director and Program Coordinator. When in conflict, Graduate School or Physics & Astronomy Department rules typically take precedence over this handbook.

Fillable electronic forms that are mentioned in the handbook are available at https://www.lsu.edu/physics/graduate/medical-physics/handbook.php and https://www.lsu.edu/graduateschool/students/grad_student_forms.php.

B. Program Overview

To meet ongoing demand of hospitals, clinics, and industry for medical physicists and health physicists, LSU's Department of Physics and Astronomy offers a Master of Science degree in Medical Physics and Health Physics, a PhD in Physics with a concentration in Medical Physics, and a post-doctoral certificate (PDC) program. The medical physics tracks of the MS and PhD degrees as well as the PDC are accredited by the Commission on Accreditation of Medical Physics Education Programs (CAMPEP) through 2026.

The M.S. degree program is oriented toward professional training, and students graduating from the program are well prepared for entry-level professional positions (including medical physics residencies) and for professional board certification exams. The PhD program provides similar preparation plus in- depth training in academic research; students graduating with the PhD are prepared for post- doctoral and/or residency training positions in medical physics, or entry-level academic or professional positions, as well as for professional board certification exams. The PDC program provides an alternate pathway for holders of a PhD degree in science or engineering fields (or from a program that was not accredited by CAMPEP) to become eligible to enter the field of medical physics.

Graduate students spend one year in the classroom learning the fundamentals of medical and health physics, radiation biology, and human anatomy. Next, students in the medical physics concentration learn to apply the knowledge gained in the classroom. For two semesters these students take additional courses in medical physics and receive clinical training and experience by working side-by-side with medical physicists, medical dosimetrists, and radiation oncologists at Mary Bird Perkins Cancer Center. Students in the health physics concentration take additional courses in applied nuclear science to prepare them for careers at hospitals, industrial companies, and national laboratories that use ionizing radiation sources.

MS students in both the medical physics and health physics concentrations are required to complete a thesis based on hypothesis-driven research. The thesis is typically begun by the fall semester of the second year and should be completed by the end of the Spring semester of the third year. A manuscript describing the thesis research is expected to be submitted for publication in a

peer-reviewed scientific journal.

For the PhD program, students typically spend the first year following the same academic plan as that of the MS program. At the end of the first year, students take the PhD qualifying exam in medical physics. In the second year, students continue with advanced coursework in medical physics, physics, and other elective topics. PhD candidates subsequently embark on hypothesis-driven dissertation research. An oral General Examination, typically on the proposed dissertation project, is completed near the end of Year 2. The final dissertation defense culminates the PhD program. The doctoral research is expected to result in publications in peer-reviewed scientific journals.

PDC students complete classroom courses covering six major topical areas. There are two tracks available to PDC students. The standard track typically requires two to three years, taken concurrently while working as a post-doctoral researcher or similar role. The coursework-intensive accelerated track can be completed in as few as two semesters of full-time effort.

C. Program Objectives

1. Medical Physics

The Medical Physics component of the Program is designed for individuals who seek the M.S. and/or Ph.D. degree, or a post-doctoral certificate, and wish to be educated in medical physics. The Program's objective is to prepare the student for a career as a professional medical physicist in academia, clinic, government, or industry. Following completion of the Program, most students seek clinical training in a medical physics residency program. Some MS graduates enter a PhD program; some PhD graduates enter a post-doctoral training program. Occasionally, graduates pursue other advanced training programs (e.g., medical school) or enter the workforce.

2. Health Physics

The Health Physics component of the Program is designed for individuals who seek the M.S. degree and wish to be educated in health physics. The Program's objective is to prepare the student for a career as a professional health physicist in academia, industry, and government. Following completion, most health physics students enter the workforce; some enter a PhD program.

D. Graduate Student Orientations

1. New Student Onboarding

Incoming graduate students typically have many questions, many of which are answered in an orientation process. Onboarding at LSU will occur in the months preceding matriculation in the first year. New students will attend Program, Department, and University/Graduate School orientations at the beginning of the semester. New students are expected to attend all orientation sessions; dates and times will be communicated to new students during the onboarding process.

At the Program orientation, you will receive a copy of the Program Handbook (this document). The current version of the Program Handbook is posted on the Program website at https://www.lsu.edu/physics/graduate/medical-physics/handbook.php. Please review the handbook during matriculation and use it for reference throughout your graduate studies.

2. MBPCC Onboarding

At the beginning of the Summer term at the end of your first year, most students complete the onboarding process for transition to your time at MBPCC during the second year. The MBPCC academic physics coordinator (academicphysics@marybird.com) manages this process.

E. Student Advising

The student's advisor is either the Program Director or the research supervisor. The Program Director is the advisor during the first year of the program, until you have been matched to your research supervisor. Once the student has been matched, the research supervisor is the student's main resource for advising and academic planning, although the Program Director remains available throughout the student's graduate studies.

The advisor will meet with the student periodically to complete tasks such as confirming satisfactory progress and updating the student's academic plan, or to ascertain the nature, scope, and magnitude of any concerns. The advisor may provide guidance to the student (e.g., addressing progress toward degree completion). A research supervisor will refer the student to the Program Director as needed. The advisor may refer a student to other qualified individuals or units (e.g., Department Chair or Associate Chair in Physics, Dean of Graduate School, Student Health Center, Title IX office) as appropriate to a particular situation.

Accreditation standards require that the Program Director monitors the performance of each student. Monitoring occurs via several methods, such as discussions with students, discussions with faculty supervisors, and review of written Supervisory Committee Reports (typically submitted twice per year). The Program Director is available to meet with a student as needed, either by office walk-in or by making an appointment through the Program Coordinator. The Program Director and/or research supervisors report periodically about all students to the Program Steering Committee, which meets at least 3 times per year.

The Program also has a Student Liaison, who is elected by the student body and serves an annual term. The Student Liaison can bring anonymized concerns to the Program Director and the Program Steering Committee. The Student Liaison assists the Program Director by coordinating student involvement with tasks that require student participation, such as meeting with prospective students or organizing Program events and activities.

F. Program Office

The Program Coordinator of the Medical Physics and Health Physics Program is Maisie Hill. Ms. Hill and the Program Office are located in room 444 Nicholson Hall on the LSU campus. The Program Office follows regular business hours, namely, from 8:00 AM to noon and again from 1:00 PM to 4:30 PM on Monday through Friday. The Program Coordinator works remotely on Wednesdays. Be aware that there will occasionally be days on which coverage is not available. Please plan accordingly.

The Program Coordinator is the primary resource to assist students with programmatic and administrative issues. The Coordinator maintains Program-related records. The Coordinator is the first point of contact for student paperwork. The Coordinator will direct students to other administrative staff as needed, including:

- Graduate Student Coordinator for Physics & Astronomy Department;
- Chair or Associate Chairs for Physics & Astronomy Department;
- College of Science Dean's Office; and
- Graduate School Dean's Office

All student-related paperwork must route through the Program Coordinator. The Program Coordinator will assist students with correction completion of forms, including obtaining required signatures, submission of forms to the Department, College or Graduate School, and keeping copies for Program records.

II. Educational Programs

A. M.S. Degree in Medical Physics & Health Physics

The LSU General Catalog (https://lsu.edu/academics/catalogs.php) stipulates the requirements for MS degree. See the Graduate School section for Requirements for Master's Degree, as well as the section on Graduate School Regulations for general rules.

1. Curriculum

The Medical Physics concentration requires 36 hours of didactic courses and clinical training, and at least 6 hours of thesis research. The coursework meets the recommendations of CAMPEP [1]. The Health Physics concentration requires 33 hours of coursework, and at least 6 hours of thesis research. Students in the Health Physics concentration usually do not participate in clinical training.

The LSU Graduate School requires that at least half of the didactic (non-research) credits counted towards degree requirements must be taken at LSU, that at least half of the didactic (non-research) credits must be taken at the 7000-level, and that only a limited amount of coursework from prior MS degrees or courses taken at other institutions can count towards degree requirements. Consult the LSU General Catalog (https://lsu.edu/academics/catalogs.php), the research supervisor, and the Program Director about these requirements.

The tables below list courses in both concentrations, including the number of credit hours.

REQUIRED COURSES (BOTH CONCENTRATIONS)

Hrs.	Course Num.	Name
(3)	MEDP-4111	Introduction to Medical Imaging
(3)	MEDP-4331	Radiation Protection and Exposure Evaluation
(2)	MEDP-4351	Radiation Detection and Instrumentation
(1)	MEDP-4352	Radiation Detection Laboratory
(1)	MEDP-7095	Professionalism and Ethics for Medical Physics (pending university approval)
(3)	MEDP-7121	Radiobiology
(3)	MEDP-7530	Radiation Shielding
(3)	MEDP-7537	Radiation Interactions and Transport
(1)	MEDP-7995	Medical Physics and Health Physics Seminar (taken twice)
(6)	MEDP-8000	Thesis Research

ADDITIONAL REQUIRED COURSES (MEDICAL PHYSICS CONCENTRATION)

Hrs.	Course Num.	Name
(3)	MEDP-4210	Radiographic Anatomy
(3)	MEDP-7111	Advanced Medical Imaging Physics
(4)	MEDP-7260	Clinical Medical Physics Rotation
(3)	MEDP-7270	Advanced Radiation Therapy Physics
(3)	MEDP-7331	Radiation Therapy Physics

ELECTIVES*

Hrs.	Course Num.	Name
(1-4)	MEDP-4991	Special Problems in Medical Physics and Health Physics
(1-4)	MEDP-4992	Special Topics in Medical Physics and Health Physics

(3)	MEDP-7210	Clinical Principles of Radiation Therapy
(3)	MEDP-7538	Monte Carlo Simulation of Radiation Transport
(1-3)	MEDP-7991	Advanced Projects in Medical Physics & Health Physics (6-h max)
(1-3)	MEDP-7992	Advanced Topics in Medical Physics & Health Physics (6-h max)
(1-6)	MEDP-7999	Research Investigation (12-h max)
(3)	NS-4352	Environmental Radiological Evaluation and Remediation
(3)	NS-4570	Nuclear Facility Safety

* Electives for Health Physics concentration include the additional required courses from Medical Physics concentration. Electives from outside of MEDP and NS are also permitted

Clinical Rotation (required for Medical Physics concentration)

The student must complete one 4-credit hour clinical rotation (MEDP-7260 Clinical Medical Physics Rotation), typically in the Fall semester of the second year. The rotation consists of spending ½ day (morning or afternoon) in the radiation therapy clinic at MBPCC under the supervision of clinical medical physicists, and additional time in group activities or observation.

Typical Academic Plan (Medical Physics concentration)

Minimum full-time registration is 9 credits in Fall and Spring semesters; in a summer term, 6 credits comprise full-time registration. Typical time to completion for the Medical Physics concentration is two years + 2 semesters.

YEAR 1, FALL SEMESTER

(3)	MEDP-4331	Radiation Protection and Exposure Evaluation
(2)	MEDP-4351	Radiation Detection and Instrumentation
(1)	MEDP-4352	Radiation Detection Laboratory
(3)	MEDP-7537	Radiation Interactions and Transport
(1)	MEDP-7995	Medical Physics and Health Physics Seminar

YEAR 1, SPRING SEMESTER

(3)	MEDP-4111	Introduction to Medical Imaging
(3)	MEDP-7121	Radiobiology
(3)	MEDP-7530	Radiation Shielding
(3)	MEDP-7331	Radiation Therapy Physics
(1)	MEDP-7995	Medical Physics and Health Physics Seminar

YEAR 1, SUMMER SEMESTER

Typically no course registration in summer terms. Available for preliminary research.

MATCHING TO RESEARCH SUPERVISOR IN CONSULTATION WITH PROGRAM DIRECTOR

YEAR 2, FALL SEMESTER

(1)	MEDP-7095	Professionalism and Ethics for Medical Physics
(3)	MEDP-7111	Advanced Medical Imaging Physics
(4)	MEDP-7260	Clinical Medical Physics Rotation
(3)	MEDP-7270	Advanced Radiation Therapy Physics
(1)	MEDP 8000	Thesis Research

REGISTRATION FOR ABR PART 1 EXAM

YEAR 2, SPRING SEMESTER

(3)	MEDP 4210	Radiographic Anatomy
(6)	MEDP-8000	Thesis Research

*** FORMATION OF SUPERVISORY COMMITTEE AND PROPOSAL***

YEAR 2, SUMMER SEMESTER

Typically no course registration in summer terms. Available for thesis research.
*** ABR PART 1 EXAM ***

YEAR 3, FALL SEMESTER

(9)	MEDP-8000	Thesis Research

YEAR 3, SPRING SEMESTER

(9)	MEDP-8000	Thesis Research

*** END OF SEMESTER IS TARGET FOR FINAL DEFENSE***

YEAR 3, SUMMER SEMESTER

Depending on the timing of completion of degree requirements, students may register for MEDP-8000 or be registered degree-only during the Summer term

Typical Academic Plan (Health Physics concentration)

Typical time to completion for the Health Physics concentration is two years. *NS-4352 and NS-4570 are offered in alternate years; take these in the semester offered.

YEAR 1, FALL SEMESTER

(3)	MEDP-4331	Radiation Protection and Exposure Evaluation
(2)	MEDP-4351	Radiation Detection and Instrumentation
(1)	MEDP-4352	Radiation Detection Laboratory
(3)	MEDP-7537	Radiation Interactions and Transport
(1)	MEDP-7995	Medical Physics and Health Physics Seminar

YEAR 1, SPRING SEMESTER

(3)	MEDP-4111	Introduction to Medical Imaging
(3)	MEDP-7121	Radiobiology
(3)	MEDP-7530	Radiation Shielding
(3)	*NS-4352	Environmental Radiological Evaluation and Remediation
(1)	MEDP-7995	Medical Physics and Health Physics Seminar

YEAR 1, SUMMER SEMESTER

Typically no course registration in summer terms. Available for preliminary research. Elective courses (3-6 credits) can be taken. ***MATCHING TO RESEARCH SUPERVISOR IN CONSULTATION WITH PROGRAM DIRECTOR***

YEAR 2, FALL SEMESTER

(6-9)	electives	Elective courses
(1)	MEDP-7095	Professionalism and Ethics for Medical Physics
(0-3)	MEDP 8000	Thesis Research

*** FORMATION OF SUPERVISORY COMMITTEE AND PROPOSAL***

YEAR 2, SPRING SEMESTER

(3)	*NS 4570	Nuclear Facility Safety
(0-3)	elective	Elective course
(3-6)	MEDP-8000	Thesis Research

YEAR 2, SUMMER SEMESTER

(6)	MEDP-8000	Thesis Research

*** END OF SEMESTER IS TARGET FOR FINAL DEFENSE***

YEAR 3, FALL SEMESTER

Depending on the timing of completion of degree requirements, students may register for MEDP-8000 or be registered degree-only during the Fall term

M.S. Thesis Milestones

The following is a typical timeline to meet the major milestones of the Medical Physics concentration.

- Year 1: Fall/Spring semesters: Introduction to Faculty Research (in MEDP 7995 Seminar)
- Year 1, Spring semester: Matching to Faculty Supervisor
- Year 1, Summer semester: Initial Research Effort
- Year 2, Fall semester: Continuing Research Effort
- Year 2, Spring semester: Continuing research Effort; Formation of Supervisory Committee; Approval of Research Proposal by Supervisory Committee
- Year 2, Summer semester: Full-time Research Effort
- Year 3, Fall semester: Full-time Research Effort
- Year 3, Spring semester: Completion of M.S. Thesis and Final Defense

The following is a typical timeline to meet the major milestones of the Health Physics concentration.

- Year 1: Fall/Spring semesters: Introduction to Faculty Research (in MEDP 7995 Seminar)
- Year 1, Spring semester: Matching to Faculty Supervisor
- Year 1, Summer semester: Initial Research Effort
- Year 2, Fall semester: Continuing Research Effort; Formation of Supervisory Committee; Approval of Research Proposal by Supervisory Committee
- Year 2, Spring semester: Continuing research Effort
- Year 2, Summer semester: Completion of M.S. Thesis and Final Defense

2. Research Supervisor and Supervisory Committee

Each student will be matched to a research supervisor. Typically, the matching of students and supervisors is a process that occurs during the first year of graduate study. In some cases, students may be matched to a research supervisor immediately upon admission. Matches are proposed by the student and prospective supervisor, with the concurrence of the Program Director.

Each student is required by the Medical Physics and Health Physics Program to have an approved Supervisory Committee, which is chaired by the major professor (research supervisor). The Supervisory Committee is charged with:

- assisting the student in developing a research plan,
- mentoring the student in completing his or her research,
- mentoring the student's writing of the research, and
- evaluating the student's research via the written thesis and public defense.

The student should meet regularly with his or her supervisor; meetings with the Supervisory Committee should occur as needed, but typically no less than once per semester. Scheduling of meetings is the responsibility of the student with the assistance of the supervisor. The use of a scheduling tool such as when2meet or Doodle is often helpful. The use of calendar invitations and reminders a few days ahead of a scheduled meeting is advisable.

Supervisory committee meetings can be held either on-campus or at a remote work site (e.g., Mary Bird Perkins Cancer Center) with the agreement of all attendees. The student should make sure that committee members are provided with driving and parking information when meetings are held off-campus. All committee members should be invited to interim committee meetings but it is acceptable if not all members (especially the Physics & Astronomy faculty representative) can attend. All committee members must attend the final defense and public seminar.

The Supervisory Committee recommends the Examination Committee (which may be itself) to

the Department Chair and Dean of the Graduate School for approval. The Exam committee must comply with Graduate School guidelines.

Membership Guidelines

The Supervisory Committee comprises at least three members with the following requirements:

- The chair must be a member of the graduate school (full, associate, or affiliate) and must be a medical or health physicist who is a member of the Medical Physics & Health Physics Program faculty (full-time or adjunct). His or her area of research should be consistent with that of the student's research topic.
- If the chair is adjunct faculty, the Committee must have a co-chair who is full-time faculty and a full or associate member of the graduate faculty.
- There should be at least 2 members who are faculty (full-time or adjunct) of the Medical Physics & Health Physics Program.
- There should be at least one member who is a faculty of the Department of Physics & Astronomy and who is neither a medical physicist nor health physicist.
- At least 50% of the committee roster must be full-time LSU faculty.
- At least one committee member must be a full member of the LSU Graduate Faculty.
- Any non-faculty members should be appointed to the Committee based on their ability to contribute resources or expertise that would benefit the student's research.

Consult the Program Director, the research supervisor, and the Graduate School website to obtain information about Graduate Faculty status for prospective committee members. If the student is completing a minor, see the Graduate School requirements in the LSU General Catalog for additional requirements. Submit the M.S. Supervisory Committee Membership form to document the roster for Program records.

These guidelines are intended to comply with current LSU Graduate School requirements. Because LSU guidelines occasionally change, the student and supervisor should review and follow the most recent guidance from the Graduate School regarding the membership guidelines.

3. Thesis

A thesis, whose quality is sufficient for submission for publication in a refereed journal, is required. The student should begin the selection of a thesis topic and a research supervisor no later than the summer at the end of the first year, followed by formation of the Supervisory Committee. Once formed, the Supervisory Committee should meet at least twice yearly with the student. No later than the spring semester of the second year, the student's Research Plan should be approved by the student's Supervisory Committee.

The M.S. thesis is complete upon (1) the student delivering a public seminar, (2) the student passing an oral examination on the thesis given by the Examining Committee, (3) approval of the final thesis by the Examining Committee, and (4) acceptance of the final thesis by the Graduate School. The LSU Graduate School establishes deadlines each semester for the completion of these requirements, including submission of relevant paperwork. See the Graduate School website (https://www.lsu.edu/graduateschool/students/index.php) for this information, including the calendar (https://lsu.edu/graduateschool/students/calendars.php).

The student should prepare at least a first draft of at least one manuscript based on the thesis work for submission to an appropriate peer-reviewed scientific journal. This effort is beneficial in that it (1) contributes knowledge to the scientific field, (2) provides documented approval and widespread availability of the student's efforts, and (3) meets expectations and provides necessary support to the faculty members for their academic development and ability to acquire and successfully complete for externally-funded research, which subsequently supports future students.

The student should meet regularly with his or her supervisor, and meetings with the Supervisory Committee should occur as needed, but typically no less than once per semester. Scheduling of meetings is the responsibility of the student with the assistance of the supervisor. The use of a scheduling tool such as when2meet or Doodle is often helpful. The use of calendar invitations and reminders a few days ahead of a scheduled meeting are advisable.

Supervisory committee meetings can be held either on-campus or at a remote work site (e.g., Mary Bird Perkins Cancer Center) with the agreement of all attendees. The student should make sure that committee members are provided with driving and parking information when meetings are held off-campus. All committee members should be invited to interim committee meetings but it is acceptable if not all members (especially the Physics & Astronomy faculty representative) can attend. All committee members must attend the final defense and public seminar.

M.S. Thesis Proposal

Each student will develop a proposal for their thesis research project. The preparation of a research proposal is an important part of the students' education and training. Students must work closely with their principal research advisor throughout this process. In addition, the student will receive valuable advice from his or her supervisory committee.

The research proposal details the significance and scope of the planned research and demonstrates the student's relevant knowledge and skills. Typical knowledge and skills include competence in relevant physics concepts, familiarity with pertinent literature, and base skills in coding, statistical analysis, and written and oral scientific communication. Proposals are written by the student under the supervision of the student's principal research advisor. The Program does not stipulate the format of the proposal; the student should follow the recommendation of the supervisor. The style for the research strategy section of an NIH funding proposal (http://grants.nih.gov/grants/writing_application.htm) can be a useful style to follow for presenting the goals, hypotheses, aims, and timeline of a thesis proposal.

The student submits the written proposal to the supervisory committee. The student also orally presents the proposal to the supervisory committee, who typically provide constructive criticism and other feedback that is helpful in finalizing the project proposal. After approval by all committee members, the student submits the proposal to the Program for record keeping purposes. While there is not a specific deadline for final approval of the proposal, it should happen as early as reasonable in the student's research efforts, preferably no later than the end of the Spring semester of the 2nd year of graduate study.

Guidelines for Thesis Formatting and Style

Overview

The M.S. thesis is a required component of the M.S. in Medical Physics and Health Physics degree within the Department of Physics and Astronomy. A thesis must fulfill Program, Department, and University requirements.

Program Expectations

The M.S. thesis is the culmination of hypothesis-driven research in medical physics or health physics, according to the student's and supervisor's research focus. The M.S. thesis demonstrates the student's ability (1) to conduct scientific research under supervision of an experienced researcher, (2) to effectively communicate the research in writing (thesis) and verbally (public seminar), and (3) to defend the research (public defense and faculty examination).

The Program expects the M.S. thesis research to be published in an appropriate peer-reviewed scientific journal. A typical M.S. thesis research project leads to at least one publication. Examples

of relevant peer- reviewed scientific journals include Medical Physics; Physics in Medicine and Biology; Journal of Applied Clinical Medical Physics; International Journal of Radiation Oncology, Biology Physics; Radiation Research; and Health Physics. The manuscript(s) should ideally be submitted to the journal for peer review prior to the final defense. Manuscript preparation requires considerable interaction between the student and the major professor. Students have best access to their advisor while they are in the program. Also, the final preparations of a manuscript are most efficiently done while the material is fresh in the authors' memories. In short, it is best to start early and to make every attempt to complete as much as possible prior to leaving the program. Because of the length of the review and revision process relative to the timeline for completion of the MS degree, it is not uncommon that work toward publication of a manuscript continues after completion of degree requirements and the student's departure for the next phase of training (e.g., a residency program). In this case, the graduate should make every effort to complete this work in a diligent and timely manner.

Thesis Style

The LSU Graduate school provides guidelines for thesis style and formatting, as well as specific material that must be included in the thesis. Discipline-specific templates for Microsoft Word and Latex are available. The guidelines and templates, along with instructions and timeline for submission, are available at https://lsu.edu/graduateschool/students/theses_and_dissertations.php (2024). Research advisors may also have preferences and recommendations on style for theses and dissertations from their labs; Graduate School requirements must be given precedence in cases of conflicting styles.

Theses are typically written in one of two basics styles: the traditional style and the European style. Both styles comprise a unified collection of front matter (cover page, table of contents, abstract, etc.) and back matter (references, appendices, vita, etc.). Chapters in the traditional style provide background material, methods, results, and discussion; the organization of the chapters is decided by the student, the advisor, and the needs for communicating the research. In the European style, the chapters of the thesis contain individual manuscripts that are either in preparation, under review, in press, or published. The student is normally the first author on such publications; verify Graduate School rules if the student is not the first author. The LSU Graduate School requires a European style thesis to include unifying chapters for introduction and conclusion, along with the chapters and front/back matter. The text content and figures of the chapters must follow the verbatim material as accepted or published by the journal. Students must obtain permission from the journal to replicate the published work; the permissions must be included as an appendix in the thesis. Because an MS thesis typically results in one manuscript, a traditional-style thesis and the manuscript submission may be very similar, and thus the traditional style is often preferred. If the thesis produces more than one publication, the European style can be advantageous to use.

Each thesis is unique and depends on the nature and scope of the research, the style of thesis, and other factors. The Program has high expectations on the quality of both the research and the communication of the results in the thesis. Thesis length is not mandated by the Program, but students should write concisely and clearly. (For comparison, a typical manuscript submission is approximately 30 pages of text, figures, tables, and references; a thesis includes this material plus required front and back matter, as well as appendices for relevant information that is not included in the core thesis.

4. Final Exam and Thesis Defense

The Medical Physics and Health Physics Program faculty recommends that all Final Exams / Thesis Defenses be conducted in a consistent fashion for all candidates and committees. The

membership of the exam committee must follow current policies of the LSU Graduate School, the Dept. of Physics & Astronomy, and the Medical Physics and Health Physics Program.

The Program recommends the following format and content for the Public Seminar and MS Thesis Defense. These recommendations are intended to comply with the established process of the Department of Physics & Astronomy. MS thesis defenses may be held at LSU or MBPCC.

- The Exam / Defense should comprise a public research presentation by the candidate followed by a private examination between the candidate and the committee.
- The research presentation will typically be around 45 minutes in length, with an additional 15 minutes for questions by the public audience.
- The research presentation should provide a coherent overview of the candidate's dissertation research, including review of background and motivations, aims, research methods, key results and outcomes, interpretation and conclusions, and future directions.
- The length of the private examination is determined by the candidate's committee.
- The private examination typically focuses on the candidate's research, although the committee may pursue other relevant lines of inquiry about core knowledge and specialized topics as deemed appropriate.
- All committee members must have an opportunity to ask questions of the candidate, either during the public presentation or in the private examination.
- With the concurrence of the committee members, the committee chair can invite non-committee faculty with relevant interests or expertise to observe the private exam. Observers do not have input into the outcome of the examination.

Following the defense, the student should follow up with committee members regarding questions asked, recommendations for edits to the dissertation, etc.

Thesis Distribution

The student submits the approved post-final defense thesis to the LSU Graduate School as a degree requirement. After final Graduate School approval, the student provides an electronic copy of this version to the Department, the Program, and all members of the Supervisory Committee.

Timeline To Completion

The table below provides a timeline that measures deadlines backwards from the expected approval date of the final thesis by the LSU Graduate School. For degree-only registration in the semester of graduation, the Final examination must occur no later than the last day of the prior semester; the final approval of the thesis by the Graduate School must occur by the last day to add classes of the degree-only semester.

Deadline*	Task	Notes
2 months† (-61 wks)	Research (phase 1)	Literature review, initial research, etc.
minimum 4 weeks (-52 wks)	Writing and revisions of proposal	Proposal preparation can (should) overlap with Research (phase 1)
2 wks (-48 wks)	Give penultimate version of proposal to Advisor for review	Advisor requires no less than 2 weekends to review and comment (check with Advisor for actual time constraints)
1 wk (-46 wks)	Revise penultimate version of proposal	Revisions obtained from Advisor by student
2 wks (-45 wks)	Distribute ultimate version of proposal to Committee	Committee requires no less than 2 weekends to review and comment

--	1st Committee Meeting	Proposal presentation for Committee
~5 months† (-43 wks)	Research (phase 2)	Student is advised to begin compilation of thesis during this time
--	2nd Committee Meeting	Status update; presentation to Committee. Suggested schedule is ~3/4 of way through Research period
minimum 8 wks (-21 wks)	Writing and revisions of thesis	Typically, no less than two complete iterations of thesis document between student and Advisor. Writing can (should) overlap with Research (phase 2)
minimum 2 wks (-13 wks)	Give penultimate version of thesis to Advisor for review	Advisor requires no less than 2 weekends to review and comment (check with Advisor for actual time constraints)
1 wk (-11 wks)	Revise penultimate version of thesis	Revisions obtained from Advisor by student
2 wks (-10 wks)	Distribute ultimate version of thesis to Committee	Committee requires no less than 2 weekends to review and comment
1 wk (-8 wks)	Last (3rd) Committee Meeting	Presentation (mock defense) to committee. If acceptable, committee approves scheduling of defense.
minimum 3 wks (-7 wks)	Submit Exam Request form	*Exam Request* form is signed by Advisor (Committee Chair), routed through MEDP Program Office and Physics Graduate Advisor
2 wks (-4 wks)	Final Examination	Public seminar and defense of thesis. *Exam Results* form routed by Advisor via MEDP Program Office
--	Implement final Committee revisions	*Thesis Approval* form routed by Advisor via MEDP Program Office
2 wks (-2 wks)	Submit final version of thesis to Graduate School	For review and stylistic corrections by Grad School Editor
0	Final approval of thesis	Email confirmation sent by Graduate School to student and committee

*Specified as relative time prior to the subsequent deadline and (absolute) amount of time prior to completion

†Typical duration; actual length will vary depending on project and student/advisor

Tips and Traps to Graduating on Time

Do:

- Do be proactive in developing and maintaining your unique timeline. Your advisor will provide assistance and guidance.
- Do coordinate closely with your advisor at every stage.
- Do anticipate some contingencies and include some safety margin in your timeline. The guidelines presented here do not include any extra time for writer's block, unexpected absences of the student or faculty, personal issues, and professional tasks (obtaining letters of reference, job applications, interviews, relocations, etc.).
- Do remember that faculty members have other commitments and obligations, some of which cannot be rescheduled. Consequently, expect that their availability will not coincide exactly with your needs.
- Do assume scheduling of committee meetings and defenses will require significant advance planning. The availability of supervisory and examination committees as a whole is typically much more limited because each faculty member has his/her own unique scheduling constraints.
- Do be prudent and wise in requesting time commitments from your advisor and committee members.

- Do remember that finding a position can be time consuming. The residency matching process may require that a student interviews with numerous residency programs. The amount of time needed for this may be large and should be taken into account in the student's plans and time management for the final year of study.
- Do consider having a spare member on your committee. This can help in overcoming scheduling problems. The rules on committee rosters are provided elsewhere in this guidebook.

Don't:

- Don't assume that your advisor and committee can drop other commitments to accommodate last-minute scheduling requests.
- Don't assume that deadlines for degree requirements can be negotiated at the last minute.
- Don't procrastinate in completing any of the degree requirements, even ones that may seem relatively small or unimportant. Note that sustained, high levels of effort and organization are needed during the entire final year of studies.
- Don't assume that additional commitments of funding will automatically be made available by the program to cover your assistantship if you are late in completing your degree requirements.

B. PhD in Physics (Medical Physics)

The LSU General Catalog (https://lsu.edu/academics/catalogs.php) stipulates the requirements for the PhD degree. See the section for the Graduate School, Requirements for the Doctor of Philosophy Degree, as well as the section on Graduate School Regulations for general rules.

1. Curriculum

The PhD degree requires a minimum of 54 credits of coursework and dissertation research. The curriculum is separated into core requirements (min. 28 credits), advanced medical physics electives (min. 9 credits), outside electives (min. 6 credits), and at least 6 credits of dissertation research. PhD coursework can be tailored to the individual student, but students and supervisors must make sure that core CAMPEP-required material is taken. Table 1 lists the core course requirements for the Ph.D. degree in Physics (Medical Physics). The core coursework follows the recommendations of CAMPEP [1]. Table 2 lists examples of advanced medical physics elective courses. Outside elective courses should be at the 7000 level and offered outside of the MEDP rubric. The academic plan is set by the student and supervisor, with the approval of the supervisory committee and in consultation with the Program Director.

The LSU Graduate School stipulates that PhD students must take at least half of the didactic (non-research) credits counted towards degree requirements must be taken at LSU and that at least half of the didactic (non-research) credits must be taken at the 7000-level. Consult the LSU General Catalog (https://lsu.edu/academics/catalogs.php), the research supervisor, and the Program Director about these requirements. Students wishing to count course credit from other institutions towards degree requirements should consult with the Program Director.

TABLE 1. CORE COURSES FOR THE PH.D. IN PHYSICS (MEDICAL PHYSICS).

Course ID	Course Name	Credit Hours
MEDP-4111	Introduction to Medical Imaging	3
MEDP-4210	Radiographic Anatomy (pending approval of new course #)	3
MEDP-4331	Radiation Protection and Exposure Evaluation	3

MEDP-4351	Radiation Detection and Instrumentation*	2
MEDP-4352	Radiation Detection Laboratory*	1
MEDP-7095	Professionalism and Ethics for Medical Physics	1
MEDP-7111	Advanced Medical Imaging Physics	3
MEDP-7121	Radiobiology	3
MEDP-7260	Clinical Medical Physics Rotation	4
MEDP-7331	Radiation Therapy Physics	3
MEDP-7530	Radiation Shielding	3
MEDP-7537	Radiation Interactions and Transport	3
MEDP-7995	Medical Physics and Health Physics Seminar**	1

* Fulfills PHYS 7398 Graduate Laboratory requirement

** Fulfills PHYS 7857 Graduate Seminar requirement. Students enroll twice in MEDP-7995.

TABLE 2. ADVANCED MEDICAL PHYSICS ELECTIVES FOR THE PH.D. IN PHYSICS (MEDICAL PHYSICS).

Course ID	Course Name	Credit Hours
MEDP-7210	Clinical Principles of Radiation Therapy	3
MEDP-7270	Advanced Radiation Therapy Physics	3
MEDP-7538	Monte Carlo Simulation of Radiation Transport	3
MEDP-7991	Advanced Projects in Medical Physics and Health Physics	1-3
MEDP-7992	Advanced Topics in Medical Physics and Health Physics	1-3
MEDP-7098	Radiation Research Technology and Methods	3
MEDP-7999	Research Investigation	1-6

MEDP 7260 Clinical Rotation

The student must complete one 4-credit hour clinical rotation (MEDP-7260 Clinical Medical Physics Rotation). The rotation consists of spending ½ day (morning or afternoon) in the radiation therapy clinic at MBPCC under the supervision of clinical medical physicists, and additional time in group activities or observation. Because of the levels of time commitment required for both Teaching Assistant duties and the clinical rotation, PhD students generally should not take the clinical rotation during a semester when supported as a Teaching Assistant.

Typical Academic Plan

Although the academic plan is tailored to each PhD student, the first several semesters are frequently similar for all PhD students. A preliminary academic plan can be developed by the student in consultation with the Program Director; the research supervisor will assist the student to finalize the academic plan, e.g., deciding which elective courses to take and when. Minimum full-time registration is 9 credits in Fall and Spring semesters; if a student registers in a summer term, 6 credits comprise full-time registration.

There is no set time to completion for the PhD; 5 years is typically used for planning while the average time over the past decade is around 6 years. Completion times that exceed 7 years are strongly discouraged because recertification of coursework is required after 7 years.

YEAR 1, FALL SEMESTER

(3)	MEDP-4331	Radiation Protection and Exposure Evaluation
(2)	MEDP-4351	Radiation Detection and Instrumentation
(1)	MEDP-4352	Radiation Detection Laboratory
(3)	MEDP-7537	Radiation Interactions and Transport
(1)	MEDP-7995	Medical Physics and Health Physics Seminar

YEAR 1, SPRING SEMESTER

(3)	MEDP-4111	Introduction to Medical Imaging
(3)	MEDP-7121	Radiobiology
(3)	MEDP-7530	Radiation Shielding
(3)	MEDP-7331	Radiation Therapy Physics
(1)	MEDP-7995	Medical Physics and Health Physics Seminar

YEAR 1, SUMMER SEMESTER

Typically no course registration in summer terms. Available for preliminary research.

*** MATCHING TO RESEARCH SUPERVISOR IN CONSULTATION WITH PROGRAM DIRECTOR ***

*** PhD QUALIFYING EXAM ***

YEAR 2, FALL SEMESTER

(1)	MEDP-7095	Professionalism and Ethics in Medical Physics
(3)	MEDP-7111	Advanced Medical Imaging Physics
(3)	MEDP-7270	Advanced Radiation Therapy Physics
(0-3)	elective	Elective course
	or	
(0-3)	PHYS 9000	Dissertation Research

*** REGISTRATION FOR ABR PART 1 EXAM ***

YEAR 2, SPRING SEMESTER

(3)	MEDP 4210	Radiographic Anatomy
(3)	elective	Elective course
(3)	PHYS 9000	Dissertation Research

*** FORMATION OF SUPERVISORY COMMITTEE ***

YEAR 2, SUMMER SEMESTER

Typically no course registration in summer terms. Available for dissertation research.

*** ABR PART 1 EXAM ***

YEAR 3, FALL SEMESTER

(4)	MEDP-7260	Clinical Medical Physics Rotation
(3)	elective	Elective course
(3)	PHYS 9000	Dissertation Research

*** PhD GENERAL EXAM ***

YEAR 3, SPRING SEMESTER

(3)	elective	Elective course
(6)	MEDP-8000	Thesis Research

YEAR 3, SUMMER SEMESTER

Typically no course registration in summer terms. Available for dissertation research.

YEAR 4, FALL SEMESTER

(3)	elective	Elective course
(6)	PHYS 9000	Dissertation Research

YEAR 4, SPRING SEMESTER

(3)	elective	Elective course
(6)	PHYS 9000	Dissertation Research

YEAR 4, SUMMER SEMESTER

Typically no course registration in summer terms. Available for dissertation research.

YEAR 5, FALL SEMESTER
(9) PHYS 9000 Dissertation Research

YEAR 5, SPRING SEMESTER
(9) PHYS 9000 Dissertation Research
*** END OF SEMESTER IS TARGET FOR FINAL DEFENSE***

YEAR 5, SUMMER SEMESTER
Depending on the timing of completion of degree requirements, students may register for MEDP-8000 or be registered degree-only during the Summer term

PhD Dissertation Timeline

A typical timeline for major milestones for the PhD in Physics (Medical Physics) is:

- Year 1: Fall/Spring semesters: Introduction to Faculty Research (in MEDP 7995 Seminar)
- Year 1, Spring semester: Matching to Faculty Supervisor
- Year 1, Summer semester: Initial Research Effort; PhD Qualifying Exam
- Year 2, Fall semester: Continuing Research Effort
- Year 2, Spring semester: Continuing Research Effort; Formation of Supervisory Committee
- Year 2, Summer semester: Continuing Research Effort
- Year 3, Fall semester: Continuing Research Effort; PhD General Exam
- Year 3, Spring semester: Continuing Research Effort
- Year 3, Summer semester: Continuing Research Effort; Submission of First Manuscript
- Year 4, Fall semester: Continuing Research Effort
- Year 4, Spring semester: Continuing Research Effort; Submission of Second Manuscript
- Year 4, Summer semester: Full-time Research Effort
- Year 5, Fall semester: Full-time Research Effort; Submission of Third Manuscript
- Year 5, Spring semester: Completion of PhD Dissertation and Final Defense

2. Qualifying Examination

In addition to Graduate School requirements regarding satisfactory progress, each PhD student must pass a written Qualifying Examination. The Qualifying Examination provides an assessment of broad mastery of pertinent material covered in the Medical Physics core curriculum, which forms the basis for the student's future PhD studies and future career. The Qualifying Exam also provides feedback to the faculty regarding variations in teaching or drift in topical coverage in the core curriculum. Sections of the Qualifying Exam may also be used (a) to certify competency in core curriculum topics in the case of a request to transfer credit from another institution or (b) to recertify coursework if a student exceeds a 7-year time to completion.

The Qualifying Examination is mandatory for Ph.D. students, and it is optional for terminal MS students in the Medical Physics program. For terminal MS students who elect to take the Qualifying Examination, the results will be valid for a period of five years *e.g.*, to accommodate students who later enter the Ph.D. program in Physics (Medical Physics), either immediately after graduation or after having separated from the LSU graduate school, *e.g.*, to work, because of medical leave, *etc*. A student may normally sit for the examination twice. If a passing score is not achieved in the first two attempts, the student's supervisory committee may petition the Qualifying Exam Committee on the student's behalf to sit for the exam a third and final time.

The Qualifying Examination is administered once per year, typically in August. The dates, times, and location of the exam will be announced at least four weeks prior to the start of the exam. The

qualifying examination is a written examination that is given in multiple parts. The questions for the Qualifying Examination are chosen by the Medical Physics Qualifying Examination Committee. The type, content, and number of questions may be adjusted by the exam committee from one year to the next. Exam questions from previous Qualifying Examinations will *not* be made available to students; recall of questions by students after taking the exam for the use of students preparting to take the exam is a violation of professional ethical principles and will not be tolerated. The score for a (unconditional) pass is 60% on all sections. An examinee who receives a conditional pass is expected to retake specified sections of the exam at the next offered exam date. An examinee who fails the exam is expected to retake the exam at the next offered exam date. Specific questions regarding the criteria for pass, conditional pass, and fail should be directed to the chair of the Qualifying Examination Committee.

The exam should first be attempted at the end of the first year of study. It must be passed within the first two years that the student is in the program. In the event of failing the exam, the student must take the exam when it is next offered. The Qualifying Examination Committee determines the conditions for retaking part or all of the exam. Students are strongly urged to give a full effort in every attempt at the Qualifying Examination.

Description of the Qualifying Exam

The Qualifying Exam comprises three parts (see Table 1). The Qualifying Exam is administered in three parts over the period of three consecutive days. The exam for each subject is gauged for 1 hour of effort. Consult the chair of the Qualifying Examination Committee for specific details about exam implementation and content. Books, notes, computers, or other devices or materials are not allowed during the examination; the Program provides calculators for the examinees' use.

The exam probes for knowledge of medical physics at the graduate level, including the application of general physics concepts to medical physics. Specifically, the examination seeks to quantify the student's competencies, including general knowledge (using simple questions), ability to apply general knowledge (moderately complex questions), and ability to synthesize solutions using multiple concepts (most complex questions). To answer any given question, the examinee may have to utilize the following approaches: mathematical derivation, analytical reasoning, memorization, and combinations thereof.

The qualifying exam topics are graded by medical physics faculty as assigned by the chair of the Qualifying Examination Committee; the faculty currently teaching each topic typically are the graders. Exam scores are tabulated, scaled and reviewed by the Qualifying Examination Committee, then reported to the Program faculty. Results of the exam should be reported to examinees within 3 weeks after the exam.

TABLE 1. STRUCTURE, SUBJECTS, AND CORRESPONDING COURSES OF THE QUALIFYING EXAM.

Part I	Part II	Part III
General Physics*	Radiation Detection (MEDP 4351/4352)	Radiation Biology (MEDP 7121)
Radiation Physics (MEDP 7537)	Radiation Protection (MEDP 4331)	Radiation Therapy Physics (MEDP 7331)
	Radiation Shielding (MEDP 7530)	Imaging Physics (MEDP 4111)

* The General Physics exam covers core physics concepts at the advanced undergraduate level which are relevant to medical physics, such as thermodynamics, electricity & magnetism, modern physics, relativistic mechanics, quantum mechanics, optics and waves, nuclear physics, electronics, and statistical analysis.

3. Research Supervisor and Supervisory Committee

Each student will be matched to a research supervisor. Typically, the matching of students and supervisors is a process that occurs during the first year of graduate study. In some cases, students may be matched to a research supervisor during admission or soon after matriculation. Matches are proposed by the student and prospective supervisor, with the concurrence of the Program Director.

Each student in the Ph.D. in Physics (Medical Physics concentration) is required to have an approved Supervisory Committee, which is chaired by the major professor (research supervisor). The Supervisory Committee is charged with:

- assisting the student in developing a research project that is approved by the program,
- mentoring the student in completing his or her research,
- mentoring the student's writing of the research, and
- evaluating the student's research via the written thesis and public defense.

The student should meet regularly with his or her supervisor, and meetings with the Supervisory Committee should occur as needed, but typically no less than once per semester. Scheduling of meetings is the responsibility of the student with the assistance of the supervisor. The use of a scheduling tool such as when2meet or Doodle is often helpful. The use of calendar invitations and reminders a few days ahead of a scheduled meeting are advisable.

Interim supervisory committee meetings can be held either on-campus or at a remote work site (e.g., Mary Bird Perkins Cancer Center) with the agreement of all attendees. The student should make sure that committee members are provided with driving and parking information when meeting are held off-campus. All committee members should be invited to interim committee meetings but it is acceptable if not all members (especially the Physics & Astronomy faculty representative and the Dean's Representative) can attend. All committee members must attend the General Exam and also the Final Exam & Defense which includes a public seminar; PhD examinations can only be held on the LSU campus.

The Supervisory Committee recommends the Examination Committee (which may be itself) to the Department Chair and Dean of the Graduate School for approval. The Exam committee must comply with Graduate School guidelines.

Membership Guidelines

The Supervisory Committee comprises at least three members of the Graduate Faculty with the following requirements:

- The chair must be a member of the graduate school (full, associate, or affiliate) and must be a medical or health physicist who is a member of the Medical Physics Program faculty (regular or adjunct). His or her area of research should be consistent with that of the student's research topic.
- If the chair is adjunct faculty, the Committee must have a co-chair who is a full or associate member of the graduate faculty.
- There should be at least 2 members who are faculty (regular or adjunct) of the Medical Physics Program.
- There should be at least one member who is a faculty of the Department of Physics & Astronomy and who is neither a medical physicist nor health physicist.
- At least 50% of the committee roster must be full-time LSU faculty.
- At least two committee members must be full members of the LSU Graduate Faculty.
- Any non-faculty members should be appointed to the Committee based on their ability to contribute resources or expertise that would benefit the student's research.

Consult the Program Director, the research supervisor, and the Graduate School website to obtain information about Graduate Faculty status for prospective committee members. If the student

is completing a minor, see the Graduate School requirements in the LSU General Catalog for additional requirements. A form to document the supervisory committee roster is in the appendix.

These guidelines are intended to comply with current LSU Graduate School requirements. Because LSU guidelines occasionally change, the student and supervisor should review and follow the most recent guidance from the Graduate School regarding the membership guidelines.

4. General Exam

The requirements for the PhD General Exam adhere to the conditions set by the Graduate School and by the Department of Physics and Astronomy. Additional guidelines on the format and other aspects of the exam are made by the Program. It is the responsibility of the prospective examinee to be aware of and to comply with all requirements and recommendations.

A primary focus of the General Exam is the dissertation proposal. See the sections on M.S. Thesis Proposal and Thesis Formatting Guidelines. Expectations for a Ph.D. dissertation proposal and the dissertation itself are comparable. The preparation of a research proposal is an important part of the students' education and training. The student must work closely with the research advisor throughout this process. In addition, the student should seek advice from the supervisory committee.

Requirements of the Graduate School

The requirements of the Graduate School for the General Exam are provided in the LSU General Catalog (https://catalog.lsu.edu/content.php?catoid=29&navoid=2726#general-examination). The requirements are summarized here. The Program Director and the Departmental Graduate Advisor are the best sources for information about requirements. Graduate School requirements take precedence over Departmental requirements, which take precedence over Program requirements.

The General Exam Committee is proposed by the Advisory Committee using the "Request for General Exam" form. This request must be submitted by the student via the to the Graduate School no less than 3 weeks prior to the scheduled exam date. Any changes to the examination committee must be approved by the Graduate School in advance of the exam.

The Graduate School appoints an external member, the Dean's Representative, to the committee. The Dean's Representative does not count towards any of the requirements enumerated above; see the LSU General Catalog and the Graduate School website for more information.

A student must be enrolled for at least 1 credit hours in the semester when the General Exam is taken; students on probation cannot take the General Exam. The General Exam must occur when the University is open for business. General Exams must take place on the LSU campus. All committee members must be present for the exam to take place; consult the Graduate School website for requirements about remote attendance by committee members. A student cannot pass the exam with more than one dissenting vote. The votes of all committee members are recorded and submitted to the Graduate School.

Requirements of the Department

The requirements of the Department of Physics and Astronomy are posted on the departmental website (https://www.lsu.edu/physics/graduate-programs/physics-astronomy/guide.php). The General Exam must be completed by the end of the student's fourth year, although it is greatly to the student's advantage to complete it sooner. Many faculty members are reluctant or unable to commit research support to students until they have passed their General Exam. The General Exam can occur only after the student passes the Qualifying Exam and frequently occurs approximately one year later. Note that the Graduate School requires a minimum of 3 months between the General Exam and the Final Defense.

The General Exam consists of two parts:

- An oral special topics exam covering general knowledge in the student's area of study. This comes in the form of questions from the committee answered by the student.
- An oral defense of a written thesis proposal.

Expectations and Guidelines of the Program

The General Exam assesses the student's ability to (1) formulate a research plan, (2) clearly present the rationale, goals, and methods of the proposed research plan, and (3) engage in meaningful scientific discussion regarding the merits of the proposed research plan.

The examination consists of a 2-hour meeting between the student and the general exam committee. In the first hour, the student orally presents his or her research proposal; this shall be formatted as a 40–45-minute presentation (including descriptions of the background, significance, and research design), followed by questions and answers regarding the proposed project. The proposal presentation is open to other Program students and departmental faculty, contingent upon the consent of the examinee and the Chair of the Exam Committee. After a brief recess in which non-committee member are excused from the room, the committee continues to examine the student on the proposed project and other physics of relevance to the project; because of its rigorous nature, this oral examination is expected to last for approximately 1 hour. After the examination period has ended, the student is excused, and the committee privately deliberates the student's performance and determines the outcome of the exam: "Pass" or "Fail". The committee may recommend or require revisions to the research proposal, including the research plan. Upon conclusion of the private deliberation, the committee chair informs the student of the outcome. Individual committee members may optionally provide comments at that time.

The student is expected to demonstrate the following qualities during the General Examination:

- Clear presentation skills
- Clear communications skills
- Sound scientific judgment
- A firm understanding of core and applied medical physics principles
- Proficiency in open discussion of the research plan
- General knowledge of the proposed field of study
- General knowledge of the clinical relevance of the proposed field of study

Additional recommendations

- The student should work closely with research supervisor on all matters pertaining to the General Exam. Frequent communication with the research supervisor is essential.
- The LSU Program Coordinator will assist students with administrative matters (paperwork, room reservation, parking for off-site faculty, etc.). All paperwork must be routed through the Program Coordinator. The Program Director, Deputy Program Director, and Department Graduate Advisor are available for consultation.
- On matters of procedure, the Program Coordinator, Program Director, Deputy Program Director, and Department Graduate Advisor can provide the most accurate information. Students should not rely on advice or information from other students.
- The "Doctoral Degree Audit and Request for General Examination" form is available online from the LSU Graduate School. This form, which establishes the exam committee roster and schedules the exam date, must be routed through the Program Coordinator. The form must be submitted to the Graduate School via the Program and Department at least 3 weeks prior to the planned exam date. Allow at least one business day for the department to submit the form to the graduate school.
- The General Exam should typically occur around the beginning of the student's third year in the Program, approximately 1 year after the Qualifying Exam. For additional

information, see the prior sections in this document about PhD timeline and typical academic plan.

- The Chair of the Exam Committee submits the exam results form to the Graduate School via the Program Office in a timely manner. The committee chair also submits the department assessment form to the department graduate coordinator and the program assessment form to the Program; both should be routed through the Program Coordinator.
- The student should submit a copy of the written proposal, and optionally a copy of the student's presentation, to the Program for its records.

5. Dissertation

The Ph.D. dissertation is a required component of the Ph.D. in Physics (Medical Physics) within the Department of Physics and Astronomy. A dissertation must fulfill Program, Department, and University requirements. The dissertation reports the results of hypothesis-driven research in the area of medical physics chosen by the student and the research supervisor.

In the spring of 1991, a task force of the Council of Graduate Schools issued the following statement on the role of the dissertation and dissertation research:

> *The doctoral dissertation should (1) reveal the student's ability to analyze, interpret, and synthesize information; (2) demonstrate the student's knowledge of the literature relating to the project or at least acknowledge prior scholarship on which the dissertation is built; (3) describe the methods and procedures used; (4) present results in a sequential and logical manner; and (5) display the student's ability to discuss fully and coherently the meaning of the results. In the sciences, the work must be described in sufficient detail to permit an independent investigator to replicate the results. The dissertation is the beginning of one's scholarly work, not its culmination. Dissertation research should provide students with hands-on, directed experience in the primary research methods of the discipline, and should prepare students for the type of research/scholarship that will be expected of them after they receive the Ph.D. degree (Excerpt from A Policy Statement: The Role and Nature of the Doctoral Dissertation).*

Journal Publication

The expectation of the Program is that the dissertation research will be published in an appropriate peer-reviewed scientific journal. Two to three published manuscripts are a typical outcome of the dissertation. For the PhD dissertation, it is a departmental degree requirement that a major part of the results of the dissertation research must have been accepted for publication in an appropriate refereed professional journal by the time of the Final Defense. Examples of appropriate peer-reviewed scientific journals: Medical Physics; Physics in Medicine and Biology; Journal of Applied Clinical Medical Physics; International Journal of Radiation Oncology, Biology Physics; Radiation Research; Health Physics; J. of Magnetic Resonance Imaging, IEEE TMI, etc. Publication is essential and beneficial in that it (1) contributes knowledge to the scientific field, (2) provides documented approval and widespread availability of the student's efforts, and (3) meets expectations and provides necessary support to the faculty members for their academic development and ability to acquire and successfully complete externally funded research, which in turn supports future students.

See the section on MS thesis style and formatting, which is directly applicable to PhD dissertation requirements. The scope of a dissertation is typically substantially larger than that of an MS thesis. Although there is no specific length requirements, students should write concisely and clearly. Additional material that is not essential to the core document may be placed in appendices of

the dissertation. Note that because of the expectation of publishing multiple manuscripts on the dissertation research, the European style thesis format can be very advantageous.

6. Final Exam and Dissertation Defense

The Medical Physics and Health Physics Program faculty recommends that all Final Exams / Dissertation Defenses be conducted in a consistent fashion for all candidates and committees. The membership of the exam committee must follow current policies of the LSU Graduate School, the Dept. of Physics & Astronomy, and the Medical Physics and Health Physics Program.

The Program recommends the following format and content for the Public Seminar and PhD Dissertation Defense. These recommendations are intended to comply with the established process of the Department of Physics & Astronomy. PhD defenses must be held on the LSU campus.

- The Exam / Defense should comprise a public research presentation by the candidate followed by a private examination between the candidate and the committee.
- The research presentation will typically be around 45 minutes in length, with an additional 15 minutes for questions by the public audience.
- The research presentation should provide a coherent overview of the candidate's dissertation research, including review of background and motivations, aims, research methods, key results and outcomes, interpretation and conclusions, and future directions.
- The length of the private examination is determined by the candidate's committee.
- The private examination typically focuses on the candidate's research, although the committee may pursue other relevant lines of inquiry about core knowledge and specialized topics as deemed appropriate.
- All committee members must have an opportunity to ask questions of the candidate, either during the public presentation or in the private examination.
- With the concurrence of the committee members, the committee chair can invite non-committee faculty with relevant interests or expertise to observe the private exam. Observers do not have input into the outcome of the examination.

Following the defense, the student should follow up with committee members regarding questions asked, recommendations for edits to the dissertation, etc.

Dissertation Distribution

The student submits the approved post-final defense thesis to the LSU Graduate School as a degree requirement. After final Graduate School approval, the student provides an electronic copy of this version to the Department, the Program, and all members of the Supervisory Committee.

C. Post-Doctoral Certificate Program

1. Program Goal and Objectives

This document describes the policies and procedures of the LSU/MBPCC Post- Doctoral Certificate Program for use by faculty, staff, and trainees.

The goal of the Post-Doctoral Certificate Program in Medical Physics is to prepare trainees for acceptance into a CAMPEP accredited Medical Physics Residency. In particular, the Certificate Program is designed for trainees whose doctoral degree was not conferred in medical physics. Thus, the Certificate Program aims to equip the trainee with sufficient theoretical and practical background knowledge in medical physics to excel in a CAMPEP accredited residency program and a career in medical physics.

Our Certificate Program comprises six classroom courses covering radiation physics, radiation

protection, radiobiology, radiation oncology physics, medical imaging, and anatomy/physiology. The program follows the recommendations of AAPM Report 197S (2011), entitled "The Essential Medical Physics Didactic Elements for Physicists Entering the Profession through an Alternative Pathway".

2. Curriculum

The required courses for completing the Certificate Program are summarized in Table 1, including course number, title, and semester when taught. All courses are part of the existing curriculum for the CAMPEP-accredited MS and PhD degrees at LSU. The course work represents 18 credit hours and can be completed in as little as two regular semesters (Fall and Spring). Completion of the Certificate Program is documented by a memo from the instructor of each course together with a summary letter from the Program Director. The completion memo for each course documents the grade received (or equivalent grade for non-registered participation). Two tracks are available for trainees in the Certificate Program.

The Standard track will be utilized by post-doctoral fellows who are currently employed by faculty in the medical physics program, or on a case-by-case basis in the LSU physics department or other departments at LSU. Typically, our post-doctoral fellowships last two years with fellows attending the courses outlined in Report 197S as part of their professional development. Fellows in the Standard track will take the 6 courses from Table 1 on a schedule developed by the fellow and the post-doctoral advisor, typically 1 course per semester to ensure that they are able to meet their commitments in research and other areas. The schedule of coursework must be approved by the Program Director prior to enrollment in the first course.

Post-doctoral fellows on this track are responsible for tuition, fees or other expenses, if imposed by LSU; note that LSU waives tuition for LSU employees in some circumstances. A post-doctoral fellow may be allowed to informally sit in courses with the agreement of the course instructor and the Program Director. The fellow must complete all course requirements (e.g., homework assignments, exams, etc.) to receive a completion memo for the course, regardless of the method of enrollment (i.e., formally registered or informally participating).

In the Accelerated track, trainees will typically take three courses per semester, which allows completion of all required coursework in two regular semesters. Accelerated track participants complete the 6 courses from Table 1: MEDP-4331, MEDP-7537, and KIN-2500 in the Fall semester, followed by MEDP-4111, MEDP-7121, and MEDP-7331 in the Spring semester. The schedule of coursework must be approved by the Program Director prior to enrollment in the first course. Accelerated track participants must formally register for each course; they are responsible for any tuition and fees imposed by LSU, textbooks, supplies, and related educational expenses.

Certificate students are strongly encouraged to also take MEDP 7095 Professionalism and Ethics for Medical Physics and MEDP 7260 Clinical Medical Physics Rotation.

TABLE 1. REQUIRED COURSES FOR THE CERTIFICATE PROGRAM. COURSES ARE 3 CREDIT HOURS.

Topic	Course	Title	Semester
Imaging physics	MEDP-4111	Introduction to Medical Imaging	Spring
Anatomy and physiology	MEDP-4210	Radiographic Anatomy	Spring
Radiation protection	MEDP-4331	Radiation Protection & Exposure Evaluation	Fall
Radiobiology	MEDP-7121	Radiobiology	Spring
Radiation therapy physics	MEDP-7331	Radiation Therapy Physics	Spring
Radiological physics & dosimetry	MEDP-7537	Radiation Interactions and Transport	Fall

3. Eligibility

To be eligible to begin the Certificate Program, candidates must hold a PhD degree in physics, engineering or similar science or technical field. Participants must also have previously satisfied the required undergraduate background as set forth by the American Board of Radiology for eligibility to sit for the Part I of the ABR certification exam in medical physics.

Participants in the Accelerated track must meet any additional enrollment requirements set forth by the LSU Graduate School for non-matriculating students. International applicants must meet any English language requirements imposed by LSU. Any deficiencies in eligibility must be remediated prior to beginning the Certificate Program.

Applicants to the Standard track must have received an offer of employment from a member of the faculty prior to entering the Certificate Program or already be employed as a post-doctoral fellow at LSU or MBPCC. For Standard track applicants, any deficiencies in eligibility should be remediated on a schedule determined with the postdoctoral supervisor.

Prospective certificate program applicants are encouraged to contact the Program Director for information. For the standard track, prospective faculty supervisors discuss prospective certificate program participation with the Program Director early in the process of searching for a post-doctoral researcher. It is the responsibility of the faculty advisor to differentiate the post-doctoral employment application from the certificate program application during the search and recruitment process. Employment as a post-doctoral researcher does not guarantee admission to the certificate program.

4. Application

Applications are submitted electronically through LSU's graduate application portal. Applications for the accelerated track are due on January 1 for the Fall semester and will be reviewed during the graduate admissions cycle. Applications for the standard track will be reviewed within 90 days of submission or of the start date of post-doctoral employment, whichever is later. Application decisions for the standard track must be finalized by the university application deadline for the requested semester. Applicants to the standard track and faculty employers should be cognizant of the lead time associated with the admissions process and make plans accordingly.

An application must include the following items to be considered complete.

- A cover letter from the applicant to the Program Director stating the applicants desired track (standard or accelerated).
- Official transcripts from all graduate and undergraduate universities attended. Transcripts provided in a language other than English must be accompanied by an English language version prepared by the institution or a certified translation service.
- Copies of all undergraduate and graduate diplomas.
- An up-to-date copy of applicant's academic Curriculum Vitae.
- Applicant's statement of purpose including a summary of academic and professional background and goals. This should be approximately one page in length.
- For Standard Track applicants, a proposed academic plan comprising a semester-by-semester list of courses to be taken, and any planned transfer credit request for prior coursework. The academic plan should be jointly developed by the applicant and the faculty employer. Sample academic plans are provided later in this section.
- An applicant may request transfer credit for up to two courses (6 credits). For each requested transfer course, the applicant must provide documentation (e.g., course syllabus with topical outline) from which the faculty can assess equivalence to the corresponding LSU course. Course content will be assessed on a topic-by-topic basis. Courses completed at other CAMPEP-accredited institutions may qualify with proof of completion of the course.

- No fewer than two letters of recommendation. Three to four letters are preferred.
  - All letters should speak to the applicant's capabilities, their potential to successfully complete the program, and suitability to enter the profession of medical physics. Letters should be on official letterhead.
  - The letters of support must be written specifically for admission to the LSU Post-Doctoral Certificate Training Program. For Standard Track applications, letters pertinent only to employment as a post-doctoral fellow are not acceptable.
  - For Standard Track applicants, one letter must be from the LSU post-doctoral supervisor. It must state a commitment to mentor the applicant for the duration of the course of study. The mentor's funding plan to support the applicant's employment during the course of study should also be described.
- Documentation of English language proficiency, such as TOEFL scores, must meet LSU's requirements for graduate admission.

5. Admissions

Applications will be screened by the MEDP Admissions Committee. Evaluation of applications and processing of admission offers will follow the same processes used for graduate program admissions. Failure to matriculate in the semester of admission may require the applicant to reapply; requests for deferment must be endorsed by the faculty supervisor for the standard track.

6. Advisor

For trainees on the Standard Track, the postdoctoral fellow's supervisor serves as advisor for the Certificate Program. For trainees on the Accelerated Track, the Program Director may designate a Medical Physics faculty member to serve as the trainee's advisor.

7. Academic Plans

The academic plan should be reviewed and approved by the faculty advisor before each semester. MEDP 7260 Clinical Medical Physics Rotation is only offered in Fall semesters; capacity is limited so discuss participation with the course director in advance of the desired semester.

TYPICAL ACADEMIC PLAN: STANDARD TRACK

Timeline	Course Num.	Course Name
Fall Semester year 1:	MEDP-7537	Radiation Interactions & Transport
Spring Semester year 1:	MEDP-7121	Radiobiology
Fall Semester year 2:	MEDP-4331	Radiation Protection & Exposure Evaluation
Spring Semester year 2:	MEDP-4111	Introduction to Medical Imaging
Spring Semester year 2:	MEDP-4210	Radiographic Anatomy
Fall Semester year 3:	MEDP-7095	Professionalism and Ethics for Medical Physics
Spring Semester year 3:	MEDP-7331	Radiation Therapy Physics

TYPICAL ACADEMIC PLAN: ACCELERATED TRACK

Timeline	Course Num.	Course Name
Fall Semester	MEDP-4331	Radiation Protection & Exposure Evaluation
Fall Semester	MEDP-7537	Radiation Interactions and Transport
Fall Semester	MEDP-7095	Professionalism and Ethics for Medical Physics
Spring Semester	MEDP-4210	Radiographic Anatomy
Spring Semester	MEDP-4111	Introduction to Medical Imaging
Spring Semester	MEDP-7121	Radiobiology
Spring Semester	MEDP-7331	Radiation Therapy Physics

Course Descriptions

Course descriptions are available from the LSU General Catalog (http://www.lsu.edu/academics/catalogs.php). Recent course syllabi can be obtained from the instructors, or by request from the Medical Physics Program office.

D. Disclosures

1. CAMPEP Disclosures

The Commission on Accreditation of Medical Physics Education Programs (CAMPEP) requires a public disclosure posting if a Program is found to be out of compliance with CAMPEP standards. Compliance issues could include curriculum, admissions procedures, and other operational issues. In the (unexpected) event that this Program is found to be non-compliant, the disclosure statement will be posted on the Program website at https://www.lsu.edu/physics/graduate-programs/medical-physics/disclosures.php.

2. Federally-Mandated Disclosures

The following information is disclosed in accordance with requirements of the US Government. The information here is also posted on the Program website at https://www.lsu.edu/physics/graduate-programs/medical-physics/disclosures.php.

Degrees: "MS in Medical Physics and Health Physics (Medical Physics Option)", "PhD in Physics (Medical Physics)", and "Post-Doctoral Certificate Program"

- Provide a list of all states for which the program's curriculum meets the educational requirements for professional licensure;
  TX, NY, HI, and FL. In addition, PA and MA are targeting future licensure.
- Provide a list of all states for which the program's curriculum **does not** meet the educational requirements for professional licensure; and
  None.
- Provide a list of all states for which the program has not made a determination of whether the curriculum meets the educational requirements for professional licensure.
  ID, MT, WY, OK, and GA.

Degree: "MS in Medical Physics and Health Physics (Health Physics Option)"

- Provide a list of all states for which the program's curriculum meets the educational requirements for professional licensure;
  None. We are unaware of any state that provides professional licensure in health physics.
- Provide a list of all states for which the program's curriculum **does not** meet the educational requirements for professional licensure; and
  None. We are unaware of any state that provides professional licensure in health physics.
- Provide a list of all states for which the program has not made a determination of whether the curriculum meets the educational requirements for professional licensure.
  None. We are unaware of any state that provides professional licensure in health physics.

All Degrees:

- Our curricula satisfy the educational requirements for **professional board certification** in medical physics and in health physics in all states of the United States.
- Students may file a complaint (after going through the grievance policies of the institution) to SACS sent via ground mail to:

  President
  Southern Association of Colleges and Schools Commission on Colleges
  1866 Southern Lane
  Decatur, GA 30033-4097

and to the state authorization agency (if a distance education student and are unable to resolve the complaint through the grievance policies of the institution)

Louisiana Board of Regents
P.O. Box 3677
Baton Rouge, LA
70821-3677
ATTN: SARA Student Complaints

III. Graduate Assistantships

A. Funding

The goal of the Medical Physics and Health Physics Program is to provide student funding through graduate assistantships to students. This is typically a period of up to 2 years and 2 semesters for M.S. in medical physics students when enrolled full-time. The typical period for Ph.D. students is 5-6 years. Students in the M.S. in health physics program will be supported as funds are available, typically for a period of up to 2 years.

Graduate Assistants (GAs) provide support for the teaching and research programs of the Department of Physics and Astronomy. The duties of a GA require approximately 20 hours of work per week during the regular semester, and if the appointment extends through the summer the appropriate corresponding amount due to condensed summer schedule or depending on research funding). Minimum qualifications for a GA are:

- a bachelor's degree in Physics or equivalent technical degree
- good academic standing in pursuit of an advanced technical degree

Stipend amounts vary with the type of service performed, the degree program in which the student is enrolled, and other factors. Typical annual stipend rates are listed below (data listed are current as of Fall 2025).

Degree	Service Assistantship	Teaching Assistantship	Research Assistantship*
MS	Generally, not applicable	$23,000 for 9-month academic year	$29,000 for 12 months
PhD	Generally, not applicable	$26,000 for 9-month academic year	$32,000 for 12 months

* RA stipends may vary, depending on the source of funding, research duties, and other factors.

LSU defines graduate assistantships as 50% effort, which is a commitment of 20 hours per week. This means that a student on a graduate assistantship is obligated to the source of funds to provide 20 hours of professional service each week. The source of funds is the Department for Teaching Assistantships. For Research Assistantships, the research advisor is the typical source of funds. The remaining effort each week should be devoted by the student to their academic and research training, including time spent on coursework and thesis or dissertation research.

Students are expected to be present in their designated work areas (e.g., on-campus, at MBPCC, or at PBRC) during designated working hours (typically 9:00 AM to 5:00 PM). Exceptions include lunch break, medical appointments, and other approved leave. Experience shows that students must devote a large and sustained effort to the timely completion of their degree requirements. Typically, successful graduate students devote on average 60 h/week and utilize good time management skills.

1. Assistantship Descriptions

Information on graduate assistantships is available online from the Graduate School and in LSU Policy Statements. Provided here are brief descriptions of each type of assistantship.

SERVICE ASSISTANTSHIPS

Service Assistantships are assigned to students who have not received "Certification of Proficiency in Spoken English for Faculty/ Teaching Assistants" by the Graduate School (Act 756 of the Louisiana Legislature – LSU Policy Statement 81). SA duties generally include:

- grade homework and exams for assigned courses and maintain written records of all grades earned by students in consultation with the course instructor
- proctor for tests, including mid-term and final exams, which may be given at various

times and locations about the campus
- work in the Physics & Astronomy tutoring center
- provide support for lecture setup and demonstrations
- attend all meetings and training sessions scheduled by the supervisor

TEACHING ASSISTANTSHIPS

Teaching Assistants (TAs) are required to teach 1 or 2 laboratory courses under the supervision of a faculty laboratory supervisor. TA duties generally include:

- prepare and present a brief lecture/ review to introduce each laboratory procedure
- supervise students in performance of procedures to ensure safety, completeness, and accuracy of results
- grade laboratory reports and mid-term and final exams
- proctor for tests, including mid-term and final exams, which may be given at various times and locations about the campus
- attend meetings scheduled by the supervisor
- work in the Physics & Astronomy tutoring center.

GRADUATE ASSISTANTSHIPS (Medical Physics M.S. Year 2 only)

In the Fall of the second year, Graduate Assistants in the Medical Physics Program are expected to spend 20 hours per week training and participating in clinical medical physics activities under the supervision of a qualified medical physicist at MBPCC. During the Spring semester, the Graduate Assistants may assist the Program Director in developing instructional materials or perform teaching duties, similar to those described above for the first year of study.

RESEARCH ASSISTANTSHIPS

Research Assistants (RAs) in the Program are expected to perform thesis research under the supervision of their faculty supervisor. Funding for RAs is the primary responsibility of the student's faculty supervisor.

B. Tuition and Fees

Graduate assistantship appointments (20 hours) receive a full in-state tuition exemption and, if applicable, an out-of-state tuition waiver. Students are responsible for paying student fees; however, most graduate fees have recently been eliminated per State law. To qualify for a nonresident fee waiver and/or tuition exemption, students must be employed on an assistantship on or before the following dates: March 1st for spring, July 1st for summer, and October 1st for fall.

A recent example schedule of tuition and fees is listed in the table below. Check https://www.lsu.edu/bgtplan/Tuition-Fees/fee-schedules.php for the most up-to-date information.

Student Work Hour Guidelines

C. Student Health Insurance Plan

The Graduate School has recently started offering health insurance. Follow the link below for the most up to date information: https://www.gallagherstudent.com/students/student-home.php?idField=1357.

IV. Course Schedules, General Catalog, and Academic Calendar

A. General Catalog

The LSU General Catalog (https://www.lsu.edu/academics/catalogs.php) is the master repository of the university's academic rules and regulations, courses, and related information. A student is typically governed by the active catalog for the year of matriculation; a student can elect to follow a newer catalog – consult the Program Director and Department Graduate Advisor with questions.

B. Academic Calendar

The university's Academic Calendar is posted at https://www.lsu.edu/registrar/academics/academic-calendars/index.php. The calendar lists key dates related to registration deadline, beginning and end of semesters, holidays, and other events.

C. Course Offerings

Courses offered each semester are listed at https://courseofferings.lsu.edu/LSU and in Workday. Most medical physics and health physics courses are offered annually; some classes may be offered each semester or may occur only in alternate years. Course offerings and instructor assignments may vary from year to year, depending on availability of faculty, student interest, and other factors.

D. Schedule Booklet and Final Exam Schedule

Students and course directors are expected to follow the University's posted final examination schedules. Following the official schedule minimizes scheduling conflicts with exams from other courses, TA duties, and program-related activities. The Schedule Booklet (for class registration) and Final Examination schedules for each academic year are available at https://lsu.edu/registrar/academics/schedule-booklet/. University policies for rescheduling exams in the case of a conflict are posted with the Final Exam schedule information.

V. Policies and Procedures

A. Safety and Security

1. IMPORTANT PHONE NUMBERS (Area Code 225)

• Emergency (from any phone)	911
• LSU Police	578-3231
• Facility Services	578-3186
• Baton Rouge City Police	389-2000
• Battered Women's Program	389-3001
• Campus Information	578-3202
• Crime Stoppers	344-STOP
• Environmental Health & Safety	578-5640
• The Phone (Personal Crisis Hotline)	924-5781
• Radiation Safety	578-2008
• Stop Rape Crisis Center	383-7273
• Student Health Center	578-6271

2. LSU EMERGENCY TEXT MESSAGE SYSTEM

LSU provides an emergency text message system. LSU also uses emails and postings on the university website to convey emergency information and campus status. To sign-up for the text message system:

- Log into myLSU.
- Select "Campus Community" in the left navigation bar.
- Select "Emergency Test Message" from the drop-down menu.
- The users will be required to input their cellular service provider and cell phone number, and to choose a unique password which must be different than your myLSU password.

3. BUILDING

A few tips for security on the fourth floor of Nicholson Hall follow.

- Doors should be closed and locked when a room is unoccupied for any length of time.
- Keys are assigned to the student by Department office staff in the main office (202 Nicholson Hall). It is the student's responsibility to safeguard their keys. All keys must be returned to the Department Main Office when the student leaves the Program. Keys to the LSU student offices should be returned when students are assigned office space elsewhere (typically at the end of the summer of the first year).
- If you encounter any maintenance problems (plumbing, lighting, etc.) after hours or during the weekend, report the matter to Facility Services (8-3186).
- If you see someone in the building whom you don't believe belongs, notify Program faculty or staff, Department faculty or staff, or Campus Police (8-3231).
- As a general rule, discourage propping open the hallway doors, especially because the hallway door is the only barrier to most student desks. Most doors are equipped with a toggle on the lock mechanism that can be used to unlock the door while still keeping it closed.
- If you leave a room and nobody else is there (or even if you are not sure if anyone else is there), lock the hallway door. Err on the side of caution.

- If you are sitting in an interior office with a closed door, consider keeping the hallway door closed and locked since you are not watching traffic in the area.
- If you see a hallway door propped open and nobody appears to be around, please close the door. We would rather drive back to campus to unlock a door for someone than to deal with a theft or worse.
- If you see someone on the 4th floor that you don't recognize, act courteous and ask if you can help them find where they are going or whom they wish to see.

4. PERSONAL

- Do not leave valuables unattended/unsecured.
- Respect the privacy of other students' desks.
- Campus provides bus service on campus and to some off-campus areas; bus routes and schedules are available on the website for LSU's Parking, Traffic and Transportation Office.
- Jitney Service is available to students needing on-campus transportation during afterhours to their vehicle or to another campus building. Jitney Service can be reached by calling 8-5000.

5. RADIATION SAFETY

- Radiation Safety Office website: https://www.lsu.edu/radiation-safety/
- Radiation safety orientations and training will occur within MEDP 4331 Radiation Protection and Exposure Evaluation and MEDP 4352 Radiation Detection Laboratory.
- If a student will work with radioactive sources or radiation producing, training resources and application forms are available on the RSO website. Research supervisors are responsible for ensuring that training is completed.
- In case of a radiation accident or spill, secure the area and notify the Radiation Safety Office (225-578-2008).
- Radiation and radioactive materials shall not be used or transported without the supervision of a faculty member and approval of the Radiation Safety Officer.

B. Record Keeping

The program, department, and other units at LSU are required to keep student records for a variety of purposes, including monitoring progress, reporting, and analysis. When submitting records, students should always submit records through the Program Office – specifically to the Program Coordinator. The Program Coordinator will assist with transmitting documents to another unit, such as the Graduate School, as necessary, ensuring that copies are placed into Program records.

C. Professional Conduct

1. Code of Student Conduct

Disciplinary procedures for students who exhibit severe breaches of conduct can result in the students' separation from the University or in other disciplinary action, as outlined in the Code of Student Conduct. The full version of the LSU Code of Student Conduct is located at https://www.lsu.edu/saa/students/codeofconduct.php**.** All students are expected to adhere to the Code of Student Conduct, as well as tenets of professionalism in the medical physics profession.

Definitions of academic misconduct: "Academic Misconduct" includes, but is not limited to, cheating, plagiarism, collusion, falsifying academic records, and any act designed to give an unfair

academic advantage to the student (such as, but not limited to, submission of essentially the same written assignment for two courses without the prior permission of the instructors, providing false or misleading information in an effort to receive a postponement or an extension on a test, quiz, or other assignment), or the attempt to commit such an act. Other specific examples of academic misconduct include:

- Copying from another student's test paper or assignment;
- Allowing another student to copy from a test paper or assignment;
- Using during a quiz/test, the course textbook or other materials such as a notebook normally brought to a class meeting but not authorized for use during a quiz/test by the person giving the quiz/test. Having such forbidden material open and in sight of the student will be considered prima facie evidence of use;
- Failing to thoroughly follow requirements related to the preparation and presentation of work, including group projects, submitted for credit in a manner that results in submitting as one's own the work of another or misleading an instructor as to the condition under which the work was prepared;
- Collaborating during a test or any other assignment with any other person by giving, receiving or otherwise sharing information without prior approval of the instructor. Speaking to another person without the consent of the person proctoring the exam may be considered prima facie evidence of collaboration;
- Using specially prepared materials (e.g., notes, formula lists, and notes written on student's clothing or body) during a test. Bringing such forbidden material to a test will be considered prima facie evidence of use or attempted use;
- Stealing, buying, or otherwise obtaining through unauthorized access, all or part, including answers, of an unadministered test;
- Seeing or giving away all or part of an unadministered test, including answers to an unadministered test;
- Bribing any other person to obtain an unadministered test or information about an unadministered test;
- Substituting for another student, or permitting any other person to substitute for oneself, to take a test;
- Submitting as one's own, in fulfillment of academic requirements, any work (such as a theme, report, term paper, essay, computer software, other written work, painting, drawing, sculpture, or other scholastic artwork) prepared totally or in part by another;
- Selling, giving, or otherwise supplying to another student for use in fulfilling academic requirements any theme, report, term paper, essay, computer software, other written work, painting, drawing, sculpture, or other scholastic art work;
- Entering a building or office for the purpose of changing a grade in a grade book/computer, on a test paper, or on other work for which a grade is given;
- Changing, altering, or being an accessory to changing and/or altering a grade in a grade book/computer, on a test paper, on other work for which a grade is given, on a "drop slip," or on any other academic record of the University;
- Entering into an arrangement with an instructor to receive a grade of "F" or any other reduced grade in a course, on a test, or any other assigned work in lieu of being charged with academic misconduct under the Code of Student Conduct;
- Committing Plagiarism. "Plagiarism" is defined as the unacknowledged inclusion of someone else's words, structure, ideas, or data. When a student submits work as his/her own that includes the words, structure, ideas, or data of others, the source of this information must be acknowledged through complete, accurate, and specific references,

and, if verbatim statements are included, through quotation marks as well. Failure to identify any source (including interviews, surveys, etc.), published in any medium (including on the internet) or unpublished, from which words, structure, ideas, or data have been taken, constitutes plagiarism;
- Violating any applicable professional code of ethics or conduct while enrolled in a course of study designed to qualify the student for certification in a profession or while in the course or scope or any required practicum or clinical experience;
- Attempting to commit or assisting someone in the commission or attempted commission of an offense listed above.

2. Core Tenets of Graduate Training

Students should read and understand the following core tenets of graduate training. The program encourages each student and his/her their major professor (research supervisor) to review and discuss these tenets.

LSU Commitment

The mission of the LSU Medical and Health Physics Program is to train students in the effective and safe use of radiation in the medical, industrial, and academic fields. LSU is committed to maintaining the highest standards of training and education, and to providing a program for the graduate student to learn to function independently as scientific professionals in a variety of settings. The Office of Academic Affairs provides oversight for terms of appointment, grievance procedures, and other matters relevant to the support of its graduate students.

Quality of Training

Individuals should be trained to independently formulate meaningful hypotheses, design and conduct interpretable experiments, adhere to good laboratory practices, analyze results critically, understand the broad significance of their research findings, and uphold the highest ethical standards in research. The development of additional skills—including oral and written communication, grant writing, and laboratory management—are considered integral to this training.

Importance of Mentoring

Effective mentoring is critical for graduate education and requires that the primary mentor dedicate time to ensure personal and professional development. A good mentor builds a relationship with the student that is characterized by mutual respect and understanding. Attributes of a good mentor include being approachable, available, and willing to share his/her knowledge, listening effectively, providing encouragement and constructive criticism, and offering expertise and guidance.

3. Course-related Conduct

Students and faculty are expected to be professional, ethical and courteous at all times, both in and beyond the classroom. lassroom to be a space that is supportive of your thoughts, ideas and perspectives, and is respectful of every person. Behavior that is inappropriate, demeaning, bullying, intolerant, and unsupportive to or of others is not acceptable.

Materials distributed by instructors in courses are for your exclusive use in your graduate studies. You are not to obtain any materials from any other student, nor to give any of your materials to anyone else. This includes verbal, recorded, and written content. Redistributing, sharing or posting (physically or electronically) of any course-related materials is prohibited, including handouts, homework, exams, and recordings of lectures.

D. Student Office Policies

1. Student Desks

Students are provided a desk or appropriate workspace during their time as a student in the Program. First-year students are typically assigned space in room 460 Nicholson Hall. Students are expected to maintain their workspaces in a professional and collegial manner.

Second-year students in the Medical Physics area of concentration will have their primary desk at Mary Bird Perkins Cancer Center during their Fall and Spring clinical rotations. They should also be provided a desk or work surface by their supervisory professor so as to be able to conduct research in his or her research area. Subsequently, all students will be provided a desk or work surface by their supervisory professor so as to be able to continue and complete his or her thesis or dissertation research.

Second-year students in the Health Physics area of concentration will be provided a desk or work surface by their supervisory professor so as to be able to conduct research in his or her research area through completion of the thesis or dissertation.

2. Utilization of Program Supplies

The Program Office maintains a supply of 8 1/2" x 11" paper for the copier in Room 459 and for the printer in Room 460. If you should notice the supply is getting low, please inform the Program Coordinator. Limited standard office supplies are available for Program students. If your research project requires special supplies or scientific products, you should coordinate your request for purchase of such with the Program Office. You should be provided a copier code from the Physics Office for your TA duties. Please adhere to copy limits established by the Department.

3. Phone Utilization

The campus has migrated to Teams telephones for University-owned phones. Students will typically use their personal cell phones for on- and off-campus communication.

E. Scheduling Committee Meetings, Candidacy Examinations, and Defenses

Trainees benefit from the participation of faculty on their advisory and examination committees. Committee members generously share their time and expertise. Trainees are responsible for organizing their various committee meetings, with consultation with their major professor or mentor. To ensure that meetings of a student and faculty committees occur smoothly, please observe the following guidelines. The Program Coordinator can assist with scheduling.

- Allow sufficient lead time when scheduling committee events. Short lead times seem to cause relatively more problems, e.g., postponements, than longer lead times. The lead time obviously varies with the event so good judgment is needed.
- When scheduling the committee events
  - For the initial contact, send out at least three possible options, including the date, time, and location for each option. Confusion about location is apparently somewhat of an issue. Therefore, specifying location early on should help to eliminate confusion in that regard. For members who will be traveling to the meeting from far away or teleconferencing in, be sure to specify the time zone (CST) and, as a courtesy, be sure to provide the corresponding local time at the remote committee member's location.
  - Inform the committee members that their participation is essential and that there is

a strong preference for local committee members to be physically present at the meeting.
    - Specify if teleconferencing or videoconferencing will be available (e.g., "for committee members who are not on campus or who have special circumstances, teleconferencing is available upon request."). Typically, we offer this for members who are not in town at the time of the meeting.
- Send reminders by email to committee members and their administrative assistants.
    - One calendar week prior to the event
    - One business day prior to the event
    - Include the date, time, location, and offer to provide a map upon request (or just provide it).
    - Put the committee member and the administrative assistant's addresses in the "To:" field, i.e., don't use the cc field for either. Some people who are awash in email naturally tend to skip over email on which they are only copied, thus increasing the chance for a breakdown in communication.
- If teleconferencing or videoconferencing is planned,
    - Be sure to provide the dial in number or other teleconferencing connection information well in advance of the schedule event. For first time users, plan on at least a week. For seasoned users, one business day is enough.
    - Do a dry run the week before the committee event (videoconferencing only). The experience with videoconferencing has been largely disappointing and I would recommend avoiding this until the video conferencing systems work reliably. In the meanwhile, teleconferencing seems to work very well.
    - Get to the event room at least 30 min early to make sure the video/teleconferencing equipment is present and working. If videoconferencing, you will probably need to have an AV tech present. Sometimes they just don't show up so be prepared to call in for support.
    - Send PDF version of the slides out to the remote participants at least 48 hours prior to the event. Note that PPT files are commonly too large to make it through some email systems. Send slides even if videoconferencing is planned; the slides provide a contingency solution to unexpected video problems. One day prior to the event confirm that that the recipient is able to view the slides. Make sure that each slide is numbered so the remote participant can stay in sync with the speaker during the presentation.
- The student is responsible for the logistics of his/her meeting, exam, defense, etc. With the consent and at the discretion of the student's supervisor, assistance may be available from the supervisor's administrative support staff. If provided, this assistance should be used judiciously.

F. Student Leave Policy

1. Purpose

Being a graduate student in the Program is a full-time obligation; think of it as the first job of your professional career. Students are expected to be on site (i.e., at their assigned workplace, which may be LSU, MBPCC, or other sites) daily during typical working hours. Common working hours are 9:00 AM to 5:00 PM Monday through Friday, but specific hours will be determined by your supervisor, your TA assignments, or educational activities. Students on graduate assistantships are governed by LSU Policy Statement, PS-21 (https://www.lsu.edu/policies/ps/ps_21.pdf). The policy

here is meant to be consistent with that and other LSU policies and procedures.

Students, like faculty, are expected to be at work when the university is open for business, *even if classes are not in session*. Students are not required to be at work on weekends or when the university is closed for business. The University calendar specifies official holidays and university closures. Taking leave is not an issue, so long as it is cleared with your supervisor and/or Program Director. Work-related obligations (e.g., TA duties, classes, meetings) must not be adversely impacted. The Program tracks student leave primarily for safety and security, with no intention to unreasonably hinder medical appointments, time spent visiting family, or general well-being.

It is important that the Program Director and Coordinator know where you are, whether at LSU, MBPCC, or other sites. All sick, vacation, travel, and other leave should be communicated in advance, if known. If not, it should be communicated as soon as feasible. Your faculty supervisor must approve time off; please also notify the Program Coordinator and/or Program Director. Students are responsible for any missed classes due to leave. In accordance with PS-22 "a student who finds it necessary to miss class assumes responsibility for making up examinations, obtaining lecture notes, and otherwise compensating for what may have been missed." Please consult PS-22 for more details (https://www.lsu.edu/policies/ps/ps_22.pdf).

2. Types of Leave

Sick Leave

Students that are not on premises during scheduled hours due to health reasons will be on sick leave. Sick leave occurs as necessary.

Holiday Leave

Holiday leave days are those days specified as holidays for students, faculty, and staff by LSU. The holidays are listed in the LSU academic calendar; the university is closed for business on these dates. Note that some additional dates in the academic calendar specify days when classes are not in session but the university is open for business. These are not automatically holiday leave; please consult with your Supervisor regarding work expectations on these days.

Annual (Vacation) Leave

Graduate students are allowed 3 weeks of vacation leave annually, so long as it does not interfere with the duties of any graduate assistantship, fellowship, or academic learning. Prior to vacation, there should be approval from the Program Director (1st year students) or your supervisor (2nd & higher year students). Leave not taken during the allocated academic year cannot be carried forward.

Travel Leave

Travel leave occurs whenever the student travels to a laboratory, healthcare facility, or scientific or professional meeting on official LSU business. In such cases travel must be approved by the student's supervisor or the Program Director prior to the travel. All travel and reimbursement for travel will follow LSU policies and procedures. All travel should be coordinated through the Program Coordinator, to ensure compliance. All students must submit the required LSU paperwork (Workday Spend Authorization) for travel approval, *regardless of whether the trip is paid by LSU*.

Other Leave

Other valid leave can be serious family emergency, special curricular requirements such as science fair judging or field trips, court-imposed legal obligations such as subpoenas or jury duty, military obligations, serious weather conditions, and religious holidays.

G. Training Resources

1. LSU Mandatory Annual Training

To remain knowledgeable about important policies and procedures, and to stay in compliance to state and federal regulations, all LSU employees are required to complete the following mandatory training e-courses. Course descriptions and instructions for registration are outlined below. The courses are:

- Cybersecurity Awareness Training (required upon employment only)
- The Louisiana Code of Governmental Ethics
- Power-based Violence Prevention & Response
- Digital Resource and Content Accessibility Awareness

The Power-based Violence training is due by September 30 each year. The other trainings are due by December 31 each year. See details at https://www.lsu.edu/hrm/employees/employee_resources/training_and_development/mandatory_training.php.

2. LSU Research and Safety Training

LSU uses the CITI system for research-related training. Available training modules include Responsible Conduct of Research, IRB, and IACUC. Completion of some training modules will occur within the context of the ethics & professionalism topics in MEDP 7995 seminar. Extramural funding agencies such as NIH and NSF may require specific training as part of grant-funded research; research supervisors will provide relevant information as needed.

LSU's Environmental Health and Safety Office provides generalized lab safety training through EHSAssistant. Training resources can be accessed at https://www.lsu.edu/ehs/training/ehs-assistant.php and https://www.lsu.edu/ehs/training/online-lab-safety.php.

Radiation safety training is managed by the LSU Radiation Safety Office. Study modules, information and forms are available at https://www.lsu.edu/radiation-safety. Students will complete radiation safety training as part of some courses (e.g., MEDP 4352 Radiation Detection Laboratory and MEDP 7260 Clinical Rotations), and as mandated by your supervisor for research purposes.

3. MBPCC Training

Students go through an orientation process when they transition over to Mary Bird Perkins Cancer Center (MBPCC) at the end of their first year. The Physics Academic Coordinator (academicphysics@marybird.com) coordinates this activity. The orientation process will follow steps mandated by MBPCC Human Resources. The process will include, for instance, training videos such as:

- Safety Orientation for Healthcare "Preparation Meets Opportunity"
- Successful Service Recovery Encounters – Making it Right in Healthcare
- Privacy, Security and You: Protecting Patient Confidentiality Under HIPPA

As part of the clinical rotations course, students may view procedures such as prostate brachytherapy. To be allowed into the Operating Room they must complete required Aseptic Training. The course coordinator will inform students if the course will include activities requiring aseptic training. The Physics Academic Coordinator will coordinate any required training.

Angela Stam, Radiation Safety Director at MBPCC, will conduct MBPCC-specific radiation safety training with students as part of their transition to MBPCC. Training should be completed typically within 2 weeks of beginning your presence at MBPCC.

Students undergo health assessment testing as required by MBP which may consist of a TB test, drug screen, or other requirements. A student who receives a TB test or other immunizations from

the LSU Student Health Center or another facility can typically provide this documentation to MBPCC.

H. Travel Policies

1. Workday

LSU uses a business enterprise software platform called Workday. This platform is used for many different things including Travel. Workday is used to create Spend Authorizations before a trip, as well as Expense Reports after a trip. For additional details regarding travel, contact the Program Coordinator. They can assist with conference registration, booking flights and hotel reservations prior to a trip, as well as filing an expense report for reimbursement after the trip. LSU has specific travel rules which must be followed – get help, don't try to make these arrangements on your own! Please utilize the Program Coordinator to arrange all travel.

2. Spend Authorization

Spend (driving, travel) authorization using personal vehicles is not required for routine Program/Department-related business. This includes both LSU-based faculty and adjunct faculty, as well as all graduate students. Examples of driving on Program/Department-related business include:

- Faculty or students traveling between LSU and MBP for class, research, etc.
- Faculty transporting students between LSU and MBP for class, research, etc.
- Students transporting other students between LSU and MBP for class, research, etc.
- Faculty or students transporting visitors (e.g., to airport, LSU, MBP, etc.)

When traveling on university business away from Baton Rouge, especially when travel reimbursement will be sought, a spend authorization must be filed prior to travel, even if you do not plan to request reimbursement. Spend authorizations are required for graduate students even if another entity (e.g., MBPCC or PBRC) provides reimbursement.

3. Expense Report

Expense reports must be filed in a timely fashion following travel. Expense reports are filed through Workday and must be linked to the prior spend authorization. The Program Coordinator and Department staff should be consulted to make sure the expense report is completed properly.

4. State Ethics Form 413 for Expenses Paid by a Non-LSU Entity

If any travel expenses (e.g., airfare, lodging, and registration) are paid or reimbursed by a non-LSU entity, students and faculty must submit State Ethics Form 413 to document this. MBPCC is not an LSU entity in this context. Please work through the Program Coordinator to submit this form if any travel expenses for students are paid by MBPCC or other non-LSU entities.

I. Professional Society Memberships

All Program students should join professional societies pertaining to their program of study and research interests and maintain membership through graduate training. Most societies provide student memberships at reduced or no cost. There are several benefits to joining, including scholarships, travel awards for conferences, and access to scientific journals. Additionally, being a member of a professional society such as those listed below is an appropriate item to put on a CV, and this will appeal to future employers. Students are responsible for paying their own memberships dues.

American Association of Physicists in Medicine (AAPM)

Membership Type: Student Membership

Annual Dues: $51 with an in initial $25 application fee. Dues waived for 1st year.

Benefits of Membership:

- Access to *Medical Physics* online journal archives
- Discounted rates on multiple physics publication subscriptions and offerings, including *Physics in Medicine and Biology*
- Reduced registration fees and financial assistance for society meetings https://aapm.org/students/

American Nuclear Society (ANS)

Membership Type: Student Membership

Annual Dues: $35

Benefits of Membership:

- Subscription to Nuclear News and ANS News
- Discounted rates on ANS publication subscriptions and offerings
- Free membership in two specialty divisions. Extra divisions cost $10 each.
- Scholarship opportunities
- Financial assistance for conferences http://www.ans.org/join/

Health Physics Society (HPS)

Membership Type: Student Membership

Annual Dues: 1st year free. $42 renewal. Section memberships $5 per section.

Benefits of Membership:

- Scholarship opportunities
- Access to Health Physics and Operational Radiation Safety online archives
- Opportunities for participation in professional committees
- Reduced registration fees and financial assistance for society meetings https://hps.org/join/

Radiation Research Society (RRS)

Membership Type: Scholar-In-Training Program (Junior SIT)

Annual Dues: $60

Benefits of Membership:

- Financial support for meetings and career development
- Networking with investigators from different professional backgrounds
- Opportunities for research and further education in all areas of radiation research https://radres.site-ym.com/general/register_member_type.asp?

American College of Radiology

The American College of Radiology provides free member-in-training memberships. https://www.acr.org/Member-Resources/membership

J. Registering for Research and Other Non-didactic Courses

Special procedures are required for registering for selected research and other non- didactic

courses. The courses for which the special procedures apply are summarized in the following table.

Course	Who May Enroll	Purpose
MEDP-7991 Advanced Projects in Medical Physics and Health Physics	MS and PhD students	Directed study
MEDP-7992 Advanced Topics in Medical Physics and Health Physics	MS and PhD students	Directed study
MEDP-7999 Report Investigation	MS and PhD students	Directed investigation or design project
MEDP-8000 Thesis Research	MS students only	Thesis Research
PHYS-9000 Dissertation Research	PhD students only	Dissertation Research

The special registration procedures are described in the remainder of this section. Because the forms change occasionally, always obtain the most recent versions of forms from the Program website, the Program Coordinator or Director, or Department staff.

1. MEDP-7991, 7992, 7999

- Student identifies an instructor willing to take on the responsibility.
- Student contact the Associate Departmental Chair (Dr. Dana Browne) with the request (browne@phys.lsu.edu). It would be best to give as much advance notice as possible.
- Instructor completes a departmental syllabus (see forms on following pages), including project description, number of credit hours with expected time commitment, written/oral report requirements, and grading basis.
- The instructor and student must sign and date the form.
- The course section will then be added to the schedule, and the student will be enrolled in the course by Department staff.
- MEDP-8000 and PHYS-9000:
- Student obtains a permission form (see recent example form on following pages) from the Graduate Student Coordinator.
- Student fills out the form.
- Instructor (major professor) signs the form and sends it to the Graduate Student Coordinator.
- Graduate Student Coordinator enroll the student into the appropriate section for that instructor.

SYLLABUS for MEDP 7991 Advanced Projects in Medical Physics and Health Physics Department of Physics and Astronomy LOUISIANA STATE UNIVERSITY	
Course Description:	MEDP 7991 Advanced Projects In Medical Physics and Health Physics provides an opportunity for individual study for graduate students under the direction of a faculty member. Advanced treatment of a specific area of medical physics or health physics technology of current interest. *The Department's expectation is that through a combination of reading, laboratory work and/or theoretical calculations that a student gain knowledge of an advanced area of medical physics and/or health physics. The* course will provide an independent study experience that will enhance student learning and student preparation for advanced training (e.g., graduate school) or employment.
Academic Credit:	As a general guide, each credit hour is earned for three clock hours of independent study per week during a regular semester (summer A session, 1 credit hr = 6 clock hrs/wk). Credit in MEDP 7991 can be earned even if the student receives monetary compensation for the same research activity, as per department policy. This course is variable credit (1-3 hours) and can be repeated for up to a total of 6 hours of credit.
Registration:	Prior to registering for the course, the student should obtain approval from the faculty member who will supervise them. A student enrolls in MEDP 7991 by filling out the information below in consultation with the faculty member. The form must be signed and dated by the faculty member and a copy provided to the Associate Chair for approval before the student can register.
Description of Project: Briefly describe the independent study activity the student will perform. Expectations regarding time commitment, specific tasks or projects, frequency of meetings, lab notebooks, written reports, etc. should be clearly set forth. . Faculty expectations regarding grades (A,B,C...) and student performance should be clearly outlined.	
Academic Credit Hours:	Please indicate how many credit hours the student will earn. (max. 6)
Name of Student	
Signature of Student/Date	
Name of Faculty Member	
Signature of Faculty/Date	
Syllabus for 7991 (rev. 6/2/2008)	

SYLLABUS for MEDP 7992 Advanced Projects in Medical Physics and Health Physics Department of Physics and Astronomy LOUISIANA STATE UNIVERSITY	
Course Description:	MEDP 7992 Advanced Topics In Medical Physics and Health Physics provides an opportunity for individual study for graduate students under the direction of a faculty member. Advanced treatment of a specific area of medical physics or health physics technology of current interest. *The Department's expectation is that through a combination of reading, laboratory work and/or theoretical calculations that a student gain knowledge of an advanced area of medical physics and/or health physics. The* course will provide an independent study experience that will enhance student learning and student preparation for further training or employment.
Academic Credit:	As a general guide, each credit hour is earned for three clock hours of independent study per week during a regular semester (summer A session, 1 credit hr = 6 clock hrs/wk). Credit in MEDP 7992 can be earned even if the student receives monetary compensation for the same research activity, as per department policy. This course is variable credit (1-3 hours) and can be repeated for up to a total of 6 hours of credit.
Registration:	A student enrolls in MEDP 7992 by filling out the information below in consultation with the faculty member who will supervise them. Also attach a detailed syllabus. The form must be signed and dated by the faculty member and a copy provided to the Associate Chair for approval before the student can register.
Description of Project: Briefly describe the independent study activity the student will perform. Expectations regarding time commitment, specific tasks or projects, frequency of meetings, lab notebooks, written reports, etc. should be clearly set forth. . Faculty expectations regarding grades (A,B,C...) and student performance should be clearly outlined.	
Academic Credit Hours:	Please indicate how many credit hours the student will earn. (max. 3)
Name of Student	
Signature of Student/Date	
Name of Faculty Member	
Signature of Faculty/Date	
Syllabus for 7992 (rev. 6/2/2008)	

SYLLABUS MEDP-7999 REPORT INVESTIGATION (Medical Physics and Health Physics) Department of Physics and Astronomy LOUISIANA STATE UNIVERSITY	
Course Description:	MEDP 7999 Report Investigation (1-6) *Prereq.: MEDP 4111 or 7331 and consent of instructor.* May be taken for a max. of 12 sem. hrs. credit. Detailed investigation of a research problem or a technical design project.
Academic Credit:	As a general guide, each credit hour is earned for three clock hours of independent research per week during a regular semester (e.g., fall semester, 3 credit hrs = 9 clock hrs/wk). Credit in MEDP 7999 can be earned even if the student receives monetary compensation for the same research activity, as per department policy. This course is variable credit (1-6 hours) and can be repeated for up to a total of 12 hours of credit.
Registration:	Prior to registering for the course, the student should obtain approval from the faculty member responsible for the student's supervision. A student enrolls in MEDP 7999 by filling out the information below in consultation with the faculty member. Also attached a detailed syllabus. The form must be signed and dated by the student and the faculty member, and submitted to the Associate Chair for approval and processing.
Description of Project: Briefly describe the independent study activity the student will perform. Expectations regarding time commitment, specific tasks or projects, frequency of meetings, lab notebooks, written reports, etc. should be clearly set forth. . Faculty expectations regarding grades (A,B,C...) and student performance should be clearly outlined.	
Academic Credit Hours:	Please indicate how many credit hours the student will earn (max. 6)
Name of Student	
Signature of Student/Date	
Name of Faculty Member	
Signature of Faculty/Date	

K. Letters of Recommendation for Residency Programs

Begin this process early! Proper planning and preparation ensure that faculty members have enough time to prepare the strongest and most personalized letters possible. When applying for residency programs, we recommend obtaining three letters of recommendation. Keep in mind that the primary purpose of residency training is the development of *clinical* medical physics skills, so pick your letter writers appropriately. Ideal writers are

- Your thesis advisor: focuses on applicant's strengths, attributes, and potential.
- The Program Director or Deputy Program Director: focuses on your strengths and attributes relative to your peers and the goals of the MS/PhD training programs.
- Another faculty member who can speak to strengths that are relevant to residency and a future career as a clinical physicist, such as the Clinical Rotations course director.

Sequence of Steps

- Take the time to properly prepare your application materials. Strive to make your application be the best representation of you.
- Discuss with your advisor to identify the best letter writers for your particular case.
- Contact faculty to request letters, typically no less than 6 weeks before the application due date. Ask faculty what supplemental materials they would like to have, to help them with letter writing. This could include: details about the targeted residency program (not applicable for the Match system), suggested talking points that you would like the writer to address, copies of the personal statement and CV that you plan to submit, and other materials. Make sure you provide the writers with letter submission deadlines and addressee information. Writers may ask who else is writing letters, to allow some coordination of content.

Tips

- The faculty are supportive of you and your career progress; your letters are also testimonials about you. This means that you should ask for letters from those who are best able to advance your application. Consult your Supervisor, the Program Director, or other faculty for advice about the choices of letter writers. Err on the side of more communication than less.
- Request letters and provide relevant information with sufficient time prior to the submission deadline – weeks in advance, not days! Keep in mind that some faculty may be writing letters for multiple students.
- Attend residency fairs, including virtual fairs. Speaking with current and recent residents of a program can provide valuable insights; utilize our alumni for information!
- Reach out to residency program directors to ask questions and express interest. If interested in the MBPCC program, contact the residency program director as you would for any other program.

VI. Appendix: Facilities and Resources

A. Computers

1. High Performance Computing

Note: This information may not be up-to-date. Notify the Program Coordinator and Director if you find outdated or erroneous information.

One helpful computational research resource is the High-Performance Computing (HPC) center at LSU (https://www.hpc.lsu.edu/). The HPC offers a number of large parallel computer clusters available for use by all students. The two most widely used in our group are *Philip* and *SuperMike II*.

To uses these resources, you will need to sign up for an HPC account (https://accounts.hpc.lsu.edu/login_request.php). You will need a faculty sponsor to gain access to the HPC, note: the sponsor has to be a full-time faculty, adjuncts can't sponsor students for this. Once you have set up your account you will need to request allocations for the various machines.

Philip

- Relatively small cluster
- Does **not** require an allocation
- Best used as a test bed before larger scale calculations.

SuperMike II

- Has two types of allocations: Research and Startup.
- Startup allocation is 50,000 CPU hours and is a simple one-page request for. All that is required is a brief description of the project.
- Research allocations can go up to millions of CPU hours but requires a more formal proposal and review process. Generally speaking, it is best to use a startup allocation to provide the results used as a foundation for a research allocation proposal.

In addition to gaining access to these clusters, you HPC account will also give you access to regular classes for leaning about how to use the clusters (https://www.hpc.lsu.edu/training/). To access these resources, you will need software to allow remotes access through sftp and ssh clients. WinSCP (https://winscp.net/eng/index.php) and Putty (https://www.putty.org) have proven to be very useful for this purpose.

B. Library Resources

Program students have access to the libraries of LSU, the Medical Physics Program, the Department of Physics and Astronomy, and Mary Bird Perkins Cancer Center.

1. Archive of MS Theses and PhD Dissertations

To access:

- Visithttps://repository.lsu.edu/gradschool/
- You can search by year, type (MS thesis vs. PhD dissertation), and other criteria.

2. LSU Library Resources

LSU Interlibrary Loan Programs

For books and journals not directly available, the LSU library offers an online Interlibrary Loan Internet Access Database (ILLiad) service (http://www.lib.lsu.edu/ILL/)

LSU Library's Online Resources

Note: This information may not be up to date. Notify the Program Coordinator and Director if you find outdated or erroneous information.

Many resources are available from the LSU libraries, including the LSU library catalog, links to journal search databases, interlibrary loan, eTextbooks, online renewal of materials, and so forth. Links to the most common resources are available under the *Library Resources* tab in myLSU (https://my.lsu.edu/). The LSU library offers over 30,000 full text electronic journals. Examples of medical physics, radiology, and biomedical engineering journals with on-line access include:

- Acta Radiological: 1995-present
- Annals of Biomedical Engineering: 1998-present
- Annals of Nuclear Medicine: 1999-present
- Applied Radiology: 2004-present
- Australasian Radiology:1998-present
- British Journal of Radiology: 1997-present
- Clinical Radiology: 1996-present
- Computerized Medical Imaging and Graphics: 1995-present
- European Journal of Radiology: 1995-present
- European Radiology: 1997-present
- IEEE Transactions on Biomedical Engineering: 1988-present
- The Internet Journal of Radiology: 2000-present
- Journal of Applied Clinical Medical Physics: 2000-present
- Journal of Biomechanical Engineering: 2000-present
- Journal of Digital Imaging: 2001-present
- Journal of Radiation Research: 1999-present
- Nuclear Medicine and Biology: 1995-present
- Medical Engineering & Physics: 1995-present
- Medical Image Analysis: 1996-present
- Medical Radiology: 1997-present
- Physica Medica: 2005-present
- Physics in Medicine and Biology: 1956-present
- Radiation Research: 2000-present
- Radiology: 1980-present
- Radiotherapy and Oncology, Journal of European Society for Therapeutic Radiology and Oncology (Green Journal): 1995-present
- International Journal of Radiation Oncology, Biology, Physics (Red Journal): 1995-present
- Radiation Oncology: 2006-present

NCRP reports as full PDFs are available to AAPM members. NCRP reports also can be obtained (for free) from the LSU Libraries as *individual sections* in PDF format from Knovel. The procedure is:

- Start at the LSU home page, www.lsu.edu
- Click on: Quick Links → LSU Libraries → Go
- Click on: Resources → Databases
- Click on: By Title → K
- Click on: Knovel
- (Login with your myLSU ID and password, if prompted)
- Click on: Safety & Industrial Hygiene → Radiation
- Search through the list for the desired report (the list is alphabetical)

- Click on the desired report
- Click on the desired section to open it in a browser window

LSU has an institutional subscription to the ICRP documents. This must be accessed via the LSU Libraries site for the ICRP site to recognize the subscription.

- go to the LSU Libraries site, select Databases, select Web of Science
- search on "ICRP 106" (or whatever title you want) -- you may want to refine the search strictly for the journal "Annals of the ICRP"
- Browse to the entry that you want.
- Below the summary info, if there's a little "LS" logo, click on it and it will take you to the PDF copy of the report.

To access Radiotherapy and Oncology from the LSU library,

- Go to http://atoz.ebsco.com/Search/491
- Search for "Radiotherapy and Oncology" with checkbox "journals only" selected Click on ScienceDirect Freedom link.

LSU also has institutional subscriptions to the following journals.

- 'Physics in Medicine and Biology' from vol. 1 (1956) – present.
- https://lsu.louislibraries.org/uhtbin/cgisirsi/x/0/0/57/5/3?searchdata1=2627089{CKEY}&sear chfield1=GENERAL^SUBJECT^GENERAL^^&user_id=WEBSERVER
- 'Radiation Research' From 1954 (vol. 1) – present https://lsu.louislibraries.org/uhtbin/cgisirsi/x/0/0/57/5/3?searchdata1=2628898{CKEY}&sear chfield1=GENERAL^SUBJECT^GENERAL^^&user_id=WEBSERVER

There are many resources available through the School of Veterinary Medicine Library, including the International Journal of Radiation Oncology, Biology, Physics:

- Navigate to page https://lsu.edu/vetmed/library/index.php
- Login with PAWS ID (works both on and off campus)
- Search for journal or resource in search box

To Access Physics in Medicine and Biology

- Direct Browser to http://lib.lsu.edu
- Select "Databases" in the box on the top left.
- Under "Databases by Subject" scroll and select "physics and astronomy"
- Scroll down the list of databases and select IOPscience
- If the MyLSU login screen appears, login with LSU username and password
- On the IOPscience website, select "Journals list" from the "Journals" dropdown navigation bar
- Select Physics in Medicine and Biology from the list of journals

3. LSU Medical Physics Library

Medical Physics textbooks and key medical physics journals are available in the Medical Physics Library (MPL), Room 439A Nicholson Hall. In addition, faculty may have hardcopies of some journals. To ensure that everyone has access to these materials, please do not remove materials from the library. You are welcome to make copies, access the materials electronically if available, or to purchase your own copies. Thank you for your courtesy toward others in following this policy.

MAJOR COLLECTIONS IN THE LSU MEDICAL PHYSICS LIBRARY.

Item	Volumes in Library
Program Theses and Dissertations	2004-2010 All documents are available electronically through the Graduate School website

TEXTBOOKS AND REFERENCE BOOKS IN THE LSU MEDICAL PHYSICS LIBRARY.

Title	Author	Edition
Physics of Radiology	Wolbarst	
Techniques for Nuclear and Particle Physics Experiments	Leo	2nd
Christensen's Physics of Diagnostic Radiology	Curry et al	4th
The Essential Physics of Medical Imaging	Bushberg	2nd
Handbook of MRI Pulse Sequences	Bernstein et al	
Digital Mammography	Peitgen	
Specification, Acceptance Testing and Quality Control of Diagnostic X-Ray Equipment	Seibert et al	
Specifications, Performance Evaluations, and Quality Assurance of Radiographic and Fluoroscopic Systems in the Digital Era	Goldman et al	
Acceptance Testing of Medical Imaging Equipment	Lin et al	
The Selection and Performance of Radiologic Equipment	Hendee	
Medical CT and Ultrasound: Current Technology and Applications	Goldman et al	
Handbook of Biomedical Imaging Analysis Volume I: Segmentation Models, Part A	Suri et al	
Handbook of Biomedical Imaging Analysis Volume II: Segmentation Models, Part B	Suri et al	
Handbook of Biomedical Imaging Analysis Volume III: Registration Models	Suri et al	
Naked to the Bone: Medical Imaging in the Twentieth Century	Bettyman et al	
Physics in Nuclear Medicine	Sorensen at al	2nd
The Physics and Instrumentation of Nuclear Medicine	Sprawls	
Recent Advances in Nuclear Medicine, Vol. 5	Lawrence et al	
University Physics	Bauer et al	
MIRD Radionuclide Data and Decay Schemes	Eckerman et al	
Imaging Processes and Materials	Sturge et al	8th
MIRD Primer for Absorbed Dose Calculations	Loevinger et al	
Physical Aspects of Brachytherapy	Godden	
Non-Ionizing Radiation	Moseley	
Radiation Protection	Kathren	
Fundamentals of Radiation Dosimetry	Greening	
Radiotherapy Treatment Planning	Mould	
Medical Lasers	Carruth et al	
Thermoluminescence Dosimetry	McKinlay	

Computing Principles and Techniques	Vickery	
RPL Dosimetry	Perry	
Computers in Radiotherapy and Oncology	Mould	
A Primer on Theory and Operation of Linear Accelerators in Radiation Therapy	Karzmark et al	
Evaluation of Radiation Exposure from Diagnostic Radiology Examinations	U.S. Department of Health	
The Use of Iodine-125 for Interstitial Implants	U.S. Department of Health	
The Physics of Radiation Therapy	Khan	4th
Introduction to Radiological Physics and Radiation Dosimetry	Attix	
Radiation Detection and Measurement	Knoll	4th

4. MBPCC Library Resources

The MBPCC library and its holdings are located on the first-floor physics area of MBPCC.

5. Personal Subscriptions

Students have access to Medical Physics journal through their AAPM membership. Several faculty and staff subscribe to additional journals that may be of interest. Subject to the constraints of the laws on "fair use" of copyrighted material, it is possible to request access to literature from colleagues. It is the student's responsibility to understand and comply with "fair use" rules.

Writing Resources

VII. Appendix: Forms

The forms on the following pages are *samples only*. Do not use these copies. The current correct forms, often in fillable format, are available from https://www.lsu.edu/physics/graduate/medical-physics/handbook.php and https://www.lsu.edu/graduateschool/students/grad_student_forms.php.

A. Medical Physics FERPA Waiver Form

The Family Educational Rights and Privacy Act (FERPA) is a Federal Law that protects the privacy of student education records, *including financial, academic, and/or advising records*. For the student's protection, FERPA limits release of student record information without the student's explicit written consent. A student may withdraw a waiver atany time.

The Medical Physics Graduate Program is a joint academic venture of Mary Bird Perkins Cancer Center (MBPCC) Radiation Oncology Clinic and the Louisiana State University (LSU) Department of Physics and Astronomy. LSU students enrolled in the program attend classes and do research on the MBPCC campus. Access to student records at LSU and MBPCC is essential.

This waiver serves to allow LSU Medical Physics Graduate Program student records to be transferred and/or discussed between LSU Department of Physics and Astronomy and MBPCC at will and as needed, as determined by the director of the Medical Physics Program. Institutional information listed below.

LSU Department of Physics and Astronomy
Medical Physics Program
439 Nicholson
Baton Rouge, LA 70803

Mary Bird Perkins Cancer Center
Radiation Oncology Clinic
4950 Essen Lane
Baton Rouge, LA 70809

Student Disclosure and Release of Information

Student Name *(Please Print)*_____ **LSU ID Number (Required)** _____

I understand that any and all personally identifiable information concerning my student education records is protected under FERPA. I further understand that I may waive that protection and give access of my records to individuals and/or institutions of my choice.

This release allows individuals at MBPCC to gain access to my student education records, *including financial, academic, and/or advising records* from the LSU Department of Physics and Astronomy.

Access granted to student education records via this form remains in effect until officially revoked by the student.

By signing and submitting this release, I agree to waive my rights under FERPA and allow MBPCC Radiation Oncology Clinic to receive access to my student education records. I authorize LSU Department of Physics and Astronomy to release any of my student education records to MBPCC. I understand that I can revoke this access at any time.

_____ _____
Student Signature (Required) **Date**

Revocation of the Release of Financial and/or Academic Information

I acknowledge that by signature below, I no longer waive my rights under FERPA, and I am withdrawing my permission to release any student education records, *including financial, academic, and/or advising records* to those individuals or institutions identified on this document. I further understand that if I wish to grant access to my records that a new release form will need to be completed.

_____ _____
Student Signature (Required) **Date**_____

Program Coordinator (225)578-6312 pamedphys@lsu.edu

Office Use Only: Received by:_____Date:
_____Form MEDP-FERPA-1, Revised 11 Aug 2015

B. Course Schedule Form

All graduate students must turn in their semester schedule to the graduate student secretary. ***Please submit your approved schedule (Grad. Advisor or Major Professor's signature required).*** TA's: Any time periods unaccounted for will be considered "*free*" time and TA duties will be assigned accordingly.

SCHEDULE NAME: _____

SEMESTER: _____

	MONDAY	*TUESDAY*	*WEDNESDAY*	*THURSDAY*	*FRIDAY*
7:30					
8:00					
8:30					
9:00					
9:30					
10:00					
10:30					
11:00					
11:30					
12:00					
12:30					
1:00					
1:30					
2:00					
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5:30					
6:00					
6:30					
7:00					
7:30					
8:00					
8:30					
9:00					
9:30					
10:00					

ADVISORS'S SIGNATURE: _____

Note: Submit a copy to the Medical Physics Program Coordinator.

Form MEDP-COURSREQ-1, Revised 02 Aug 2019

C. MS Supervisory Committee Membership Form

This can be found in the directory of program of faculty. Submit completed form to the Medical Physics Program Coordinator.

Student Name: _____

Proposed Member Name, Degree	Member's Graduate Faculty Status full, associate, affiliate, ad hoc, or non-member) *	Member's Program Faculty Status/ Department Rank (regular, adjunct, or non-member / professor, associate, or assistant professor) *	Member's Areas of Expertise (Research interests of relevance) *	Member's Major Department /Institution*	Member's Approval (initials)
1. (Major Professor and Committee Chair)					
2.					
3.					
4.					
5.					

Signature of Committee Chair: Date:

Signature of Program Director: Date:

Form MEDP-MSSUP-2, Revised 13 Aug 2020

D. Report of Supervisory Committee Meeting Form

Each student's Supervisory Committee should meet at least once every six months. Within one week of each meeting the Student and their Advisor (Chair of the Committee) should complete this report form, sign it, and submit it to the Medical Physics Program Coordinator, 439 Nicholson Hall, Tower Dr., Baton Rouge, LA 70803. The student should complete their section and sign the form prior to the Committee Chair completing their portion and signing the form. A copy of this report should be sent to each member of the Committee and to the student. This form is also available as an editable electronic document.

Name of student:_____Date of meeting:_____

Committee Members	Role	Present	Absent
	Committee Chair	☐	☐
		☐	☐
		☐	☐
		☐	☐
		☐	☐
		☐	☐

To Be Completed by the Student

- Briefly review the research accomplishments of the student since the last meeting.

- What specific recommendations were made by the Committee for future research?

- What is the timetable for completion of degree requirements by the student (attach academic plan)?

Signature of Student:_____Date:

TO BE COMPLETED BY COMMITTEE CHAIR

- In the opinion of the committee, should this student continue in the degree program? ☐ Yes ☐No

- Evaluate the student's research performance and intellectual development over the past six months.

  Summarize the student's current strengths and weaknesses (as an independent scientific investigator).

- Comment on the student's oral and written communication skills.

- If there are any present weaknesses or deficiencies, how will they be remedied?

- Is there anything about the student's performance, his/her interactions with the advisor, or the student's prospects for the completion of the degree that should be brought to the attention of the Program Director?

Signature of Committee Chair: Date:

E. Request for MS Examination and Degree Audit Form

LSU | Graduate School

Request for Master's Defense and Degree Audit

This form must be submitted to The Graduate School ***three weeks prior*** to the defense date or by current semester deadline for graduation.
Email submission to gradsvcs@lsu.edu

Name:

LSU Student ID: Department:

Degree Type (M.A., M.S.): Official Major: Official Minor:

Defense Information:

Defense Date/ Time: **Select One:** ☐ Thesis ☐ Non-Thesis

Location/ Room: Thesis Title:

Note: If the title changes after the defense, please ensure the Approval Sheet reflects the new title.

Committee Members *(Print Names Below):*

Committee Chair: _____ Signature: _____

Co-Chair (if applicable): _____

Minor Professor (if applicable): _____ Signature: _____

Member: _____

Member: _____

Department Chair/Grad Advisor: _____ Signature: _____

Dean of the Graduate School: _____ Date: _____

Coursework Information:
List all relevant LSU graduate courses and hours required toward this degree only. (Ex: CHEM 7947 (3), CHEM 8000 (6), etc.)

Coursework Earned in Major Program:

Coursework Earned in Minor Program (if a formal minor has been declared):

Courses Transferred or Petitioned (list institution):

Total Hours Completed: ____

Courses Remaining:

Total Hours Remaining: ____

For Office Use Only:
GPA: REG: CW: COM: TIME: MINOR:

Page 2 of 2
Updated 1/2019

Notes

- See https://www.lsu.edu/graduateschool for latest version of form.
- Membership guidelines for the Examination Committee are the same as for the Supervisory Committee (see guidelines elsewhere in the document).
- Submit completed form to MEDP program cooridnator.

F. PhD Supervisory Committee Request Form

Student Name:

Proposed Member Name, Degree	Member's Graduate Faculty Status (full, associate, affiliate, or non-member) *	Member's Program Faculty Status/ Department Rank (regular, adjunct, or non-member / professor, associate or assistant professor) *	Member's Areas of Expertise (research interests of relevance) *	Member's Major Department and Institution*	Member's Approval (initials)
1. (Major Professor and Committee Chair)					
2.					
3.					
4.					
5.					

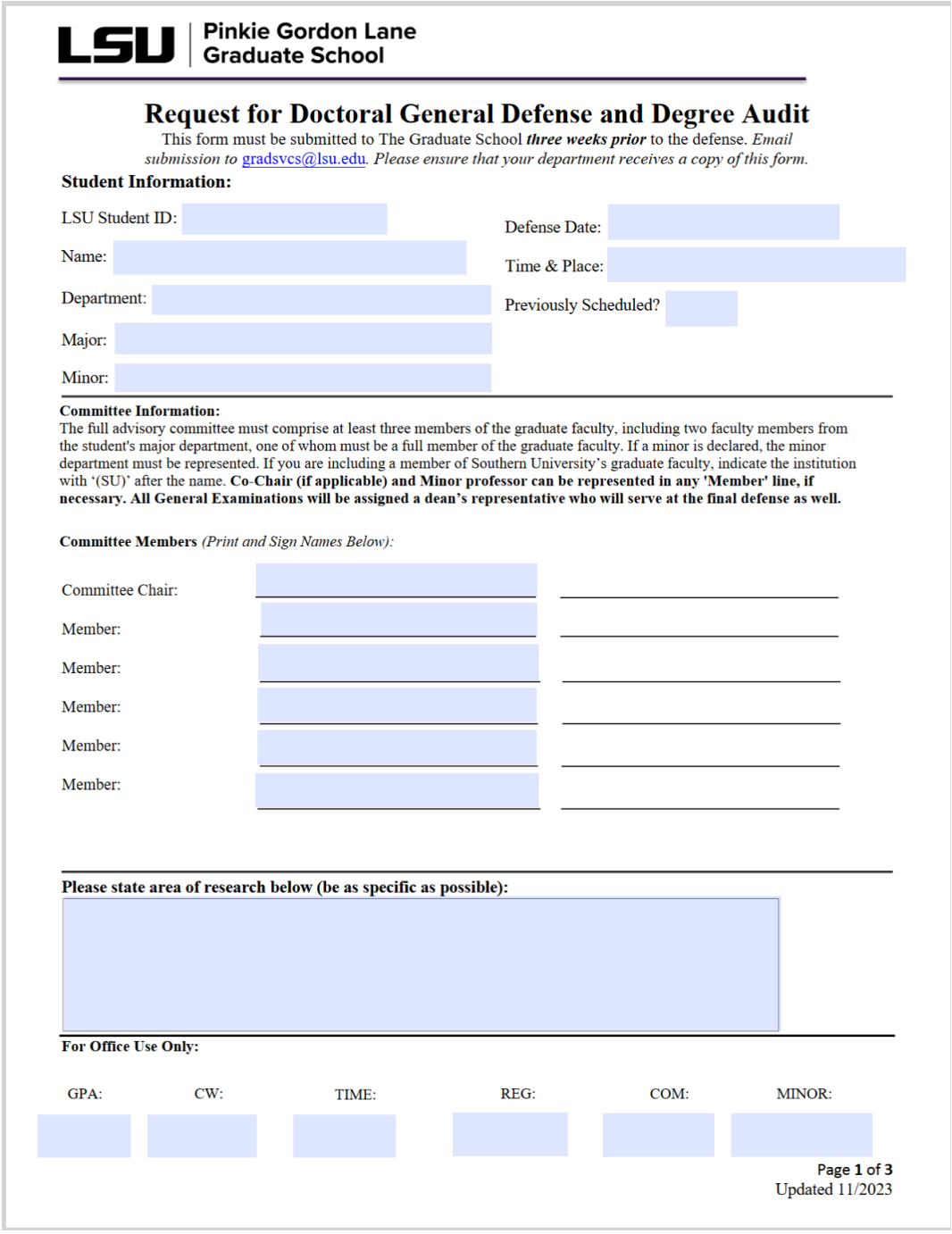
This can be found in the directory of program of faculty listed elsewhere in this handbook.

Signature of Committee Chair: Date:

Signature of Program Director: Date:

Note
Submit completed form to MEDP program coordinator.
Form MEDP-PHDSUP-2, Revised 13 Aug 2020

G. Request for General Exam and Degree Audit Form



LSU | Pinkie Gordon Lane Graduate School

Request for Doctoral General Defense and Degree Audit

This form must be submitted to The Graduate School ***three weeks prior*** to the defense. *Email submission to* gradsvcs@lsu.edu. *Please ensure that your department receives a copy of this form.*

Student Information:

LSU Student ID: | Defense Date:

Name: | Time & Place:

Department: | Previously Scheduled?

Major:

Minor:

Committee Information:

The full advisory committee must comprise at least three members of the graduate faculty, including two faculty members from the student's major department, one of whom must be a full member of the graduate faculty. If a minor is declared, the minor department must be represented. If you are including a member of Southern University's graduate faculty, indicate the institution with '(SU)' after the name. **Co-Chair (if applicable) and Minor professor can be represented in any 'Member' line, if necessary. All General Examinations will be assigned a dean's representative who will serve at the final defense as well.**

Committee Members *(Print and Sign Names Below):*

Committee Chair: _____ _____

Member: _____ _____

Member: _____ _____

Member: _____ _____

Member: _____ _____

Member: _____ _____

Please state area of research below (be as specific as possible):

For Office Use Only:

GPA:	CW:	TIME:	REG:	COM:	MINOR:

Page **1** of **3**
Updated 11/2023

Only a sample of the first page is shown. Additional notes:

- See https://www.lsu.edu/graduateschool/students/files/student_forms/doctoral_general_defense_and_audit_2023.pdf for latest version of form.
- Membership guidelines for the Examination Committee are the same as for the Supervisory Committee (see guidelines elsewhere in the document).
- Submit completed form to MEDP program coordinator.

H. Request for Final Doctoral Examination Form

LSU | Graduate School

Request for Final Doctoral Defense

This form must be submitted to The Graduate School ***three weeks prior*** to the defense date or by current semester deadline for graduation.
Email submission to gradsvcs@lsu.edu.

Student Information:

LSU Student ID: Defense Date:

Name: Time & Place:

Department: Previously Scheduled?

Major: Minor :

Dissertation Title:

Note: If the title changes after the defense, please ensure the Doctoral Approval Sheet reflects the new title.

Committee Information:
Doctoral committees must include a total of 3 members plus the Dean's Representative: two full members of the graduate faculty, including one from the major department. If a minor is declared, the minor department must be represented. If you are including a member of Southern University's graduate faculty, indicate the institution with (SU) after the name. **Please remember to include the Dean's Representative.**

Committee Members (Print Names Below):

Committee Chair: _____ Member: _____

Co-Chair (if applicable): _____ Member: _____

Dean's Representative: _____ Member: _____

Minor Professor: _____

Required Signatures:

Committee Chair: _____ Date: _____

Chair, Head of Department, or
Graduate Advisor: _____ Date: _____

Dean of the Graduate School: _____ Date: _____

For Office Use Only:

GPA: CW: TIME: REG: COM: MINOR:

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Updated 2/2019

Notes

- See https://itservice.lsu.edu/TDClient/37/gradschool/Requests/ServiceDet?ID=575 for latest version of form.
- Membership guidelines for the Examination Committee are the same as for the Supervisory Committee (see guidelines elsewhere in the document).
- Submit completed form via MEDP program coordinator.

I. Trainee Exit Interview Form

Trainee Name:

Instructions: Students should be aware of the items on the program checkout list below and complete these tasks in a timely manner. Please work with various staff listed below to document completion of all items.

Program Checkout: (Please have designated initials for each field)

Program Coordinator:

___Student returned identification badge(s) to administrative staff.

___Student returned any personal radiation badges and rings to Radiation Safety Office.

___Student cleaned work area, removed any temporary materials, and returned any borrowed equipment or supplies remaining from your research.

___Student provided copy of proof of submission of thesis or dissertations to LSU.

___Student returned all LSU keys to the LSU Physics Department Building Coordinator.

___Student completed Exit Questionnaire Form (see next page)

Advisor

___Program Director notified main office staff (Maisie Hill) of the separation date. (This should be done two weeks prior to separation date). Date:_____

___Program Coordinator provided student with letter of attestation of completion of all degree requirements (*i.e.*, needed for employment verification), signed by Prog. Dir.

___Faculty supervisor confirmed date of separation from LSU:_.

Student

___Student identified desired date of separation from LSU:____.

The information provided above is complete and correct to the best of my knowledge. Student Signature: Date:

Reviewed and approved by:

MEDP Program

Coordinator: Date: Program Director:Date:

Form MEDP-EXIT-2, Revised 13 Aug 2020

Note: Submit completed form to MEDP program coordinator.

J. Trainee Exit Questionnaire Form

- **Contact Information:** Please provide your personal contact information so that we can reach you after you have completed your training with us. If you do not yet have a new mailing, please indicate that and provide it to us once you have it.

Field	Answer
Student's Name (last, first)	
Today's Date (MM-DDD-YYYY)	
Phone Number	
Personal Email Address	
Personal Postal Address (Street)	
(City, State, Zip Code)	
(Country)	

- **Status of Next Position:** What is the status of your next position? Check one.

  I have not received an offer. ☐

  I have received, but not yet accepted an offer. ☐ I accepted an offer. ☐

- **Type of Next Position:** If you have accepted an offer, indicate the type of position Check one.

Field	Check Box		
Residency Training Program			
Clinical Position			
Another Degree Program			
Industry			
Government			
Still Seeking a Position			
Other			

- **Start Date:** If you have accepted an offer, what is the start date of your next position? Note that you may estimate an approximate anticipated start date if the actual date is not known.

Start Date:

- **Contact Information at New Position:** If you have accepted an offer, provide your new contact information. If some items are not yet available, please so indicate.

Field	Answer
Name of Institution	
Department or Unit	

Work Email Address	
Work Postal Address (Street)	
(City, State, Zip Code)	
(Country)	
Work Phone Number	

Form MEDP-QUEST-2, Revised 24 Jul 2020
Note: Submit completed form to MEDP program coordinator.

K. Annual Certification Status Update Form

Student or Alumnus Name:____Report for the calendar year of _____ Date this form was completed: _____

- ABR Track (choose one or more as applicable):

☐ Diagnostic medical physics ☐ Therapeutic medical physics ☐ Nuclear medical physics

- ABR Part I

*In order to be eligible to take Part I, a candidate must be enrolled in or have graduated from a CAMPEP-accredited education program, certificate program, or residency. **

Did you pass Part I in a previous calendar year? ☐Yes ☐No

If yes, what year? _____ Proceed to Question 3 Did you become eligible for Part I in this calendar year? ☐Yes ☐No

Did you take Part I in this calendar year? ☐Yes ☐No

If yes, indicate result ☐Pass ☐Fail

If you have not yet taken or passed Part I, when do you anticipate taking it? __

- ABR Part II

*In order to be eligible to take Part II, a candidate must have passed Part I and completed the CAMPEP-accredited program that was used for Part I eligibility, as well as hold an advanced degree from an approved program.**

Did you pass Part II in a previous calendar year? ☐Yes ☐No

If yes, what year? _____ Proceed to Question 4 Did you become eligible for Part II in this calendar year? ☐Yes ☐No

Did you take Part II in this calendar year? ☐Yes ☐No If yes, indicate result. ☐Pass ☐ Fail

If you have not yet taken or passed Part II, when do you anticipate taking it? __

- ABR Part III

*In order to be eligible to take Part III, a candidate must have passed Part I and the candidate's chosen exams in Part II.**

Did you pass Part III in a previous calendar year? ☐Yes ☐No

If yes, what year? Proceed to Question 6 Did you become eligible for Part III in this calendar year? ☐Yes ☐No

Did you take Part III in this calendar year? ☐Yes ☐No

- Other Certification

If applicable, indicate any other boards, e.g., ABMP, ABHP, including your current status ___, any changes in this calendar year, and anticipated examination dates_____.

- State Licensure and Registration

Were you licensed or registered in this calendar year? ☐Yes ☐No If yes, indicate state _____and type: ☐Inaugural ☐ Renewal

Student or Alumnus Signature___Date:__

Form MEDP-ABR-1, Revised 23 Aug 2016. **Note:** Submit completed form to MEDP program coordinator.

L. Independent Study Approval Form

MEDP-8000 AND PHYS-9000

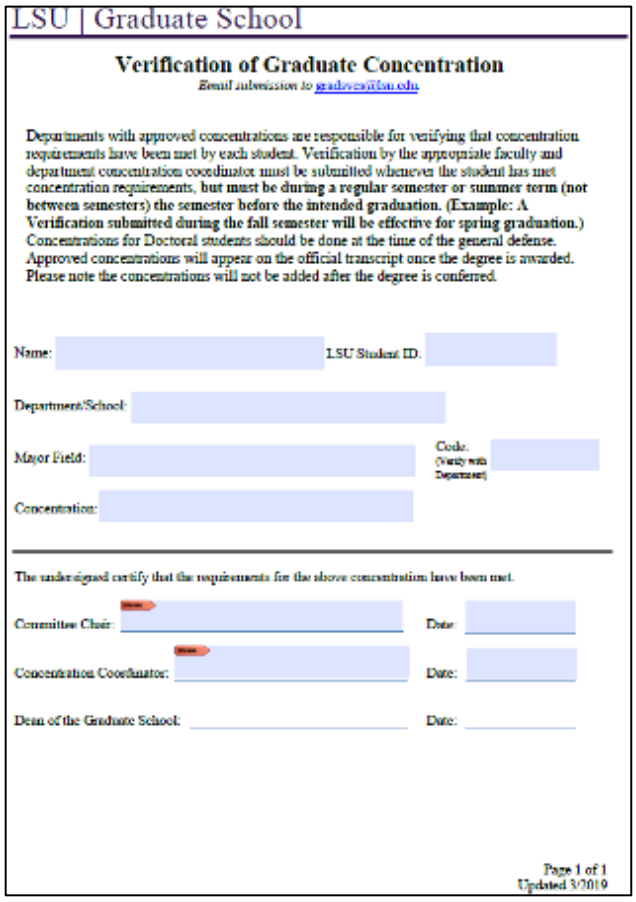
Please return the form below to the Graduate Administrative Coordinator in the Graduate Secretary Office (Room 202A) if you are registering for an independent student course (MEDP-8000, PHYS-8000, 9000, etc.). Full-time enrollment for the Fall and Spring semesters is nine or more hours and Summer is six or more hours.

INDEPENDENT STUDY APPROVAL FORM

Field	Answer
GRADUATE STUDENT NAME:	
LSU STUDENT I.D. NUMBER:	
SEMESTER:	
INDEPENDENT COURSE NO. & Section:	
NUMBER OF CREDIT HOURS:	
GRADUATE ADVISOR:	
GRAD ADVISOR SIGNATURE:	

Note: Submit a copy of the completed form to MEDP program coordinator.

M. Verification of Graduate Concentration Form



LSU | Graduate School

Verification of Graduate Concentration

Email submission to gradcert@lsu.edu

Departments with approved concentrations are responsible for verifying that concentration requirements have been met by each student. Verification by the appropriate faculty and department concentration coordinator must be submitted whenever the student has met concentration requirements, **but must be during a regular semester or summer term (not between semesters) the semester before the intended graduation. (Example: A Verification submitted during the fall semester will be effective for spring graduation.)** Concentrations for Doctoral students should be done at the time of the general defense. Approved concentrations will appear on the official transcript once the degree is awarded. Please note the concentrations will not be added after the degree is conferred.

Name: LSU Student ID:

Department/School:

Major Field: Code: (Verify with Department)

Concentration:

The undersigned certify that the requirements for the above concentration have been met.

Committee Chair: Date:

Concentration Coordinator: Date:

Dean of the Graduate School: Date:

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Updated 3/2019

Notes

- All students in our program must submit this form.
- Submit at least one semester before your defense (MS students) or at time of your general exam (PhD students).
- By submitting this form, your final transcripts will be designated correctly with the Medical Physics or Health Physics concentration. This is required by CAMPEP, ABR, and ABHP as evidence completed of an approved curriculum.
- Download the latest version of form (fillable PDF) from https://itservice.lsu.edu/TDClient/37/gradschool/Requests/ServiceDet?ID=96 Complete the form electronically.
  - In the form, the Department is "Physics & Astronomy" for all students.
  - See the official versions of the degree concentration codes listed by LSU here: https://catalog.lsu.edu/mime/media/view/19/1843/GRAD+TABLE+2019-20+for+catalog2.pdf.
  - Use the following to determine the fields of relevance to you:
- For Health Physics Masters students, Major Field is "Medical Physics and Health Physics", Concentration is "Health Physics", and Code is "HLTPHM"
- For Medical Physics Masters students, Major Field is "Medical Physics and Health Physics", Concentration is "Medical Physics", and Code is "MEDPHM"
- For PhD students, Major Field is "Physics", Concentration is "Medical Physics", and

Code is “PMPHP”

- For Post Doctoral Certificate students, Major Field is “Physics”, Concentration is “Medical Physics”, and Code is “PDCMP”.
- After you have completed the form, your thesis/dissertation supervisor should sign electronically as Committee Chair. Then our Concentration Coordinator (Kip Matthews) will add his signature; he will then forward the signed form to the Graduate School and send copies to the Program Office and the Physics Department Office.

N. Other Forms

Many other forms may be required by the Graduate School, the College of Science, the Physics & Astronomy Department, or the Program. Always obtain the most current versions of forms. The latest forms can be obtained on the respective websites:

Program forms: https://www.lsu.edu/physics/graduate/medical-physics/handbook.php

College forms: https://www.lsu.edu/science/index.php

Graduate School forms: https://www.lsu.edu/graduateschool/students/grad_student_forms.php