Master of Science - Health Physics

2 Graduate Program Change 2021-22

I. General Information

The faculty member originating this proposal is to complete sections I and II.

TURN ON help text before starting this proposal by clicking in the top right corner of the heading. You will need to turn on help text again after any actions that refresh the page including after saving proposals, importing information, or running impact reports.

IMPORT curriculum data from the Catalog by clicking in the top left corner.

Do not make any changes to any information until the proposal has been launched in Step 4.

Department (s) (if Dual or Interdisciplinary please add all departments)*	Health Physics & Diagnostic Sciences
Degree/ Certificate Name*	Master of Science - Health Physics
Plan Code	
Degree Type*	Master of Science
Program Type*	Master's

II. Program Changes

FILL IN ONLY fields required marked with an * after importing data. You will not be able to launch the proposal without completing required fields. Do not make proposed changes to the information that was imported until after the proposal has been launched in Step 4. Changes will only be tracked after the proposal is launched

Are you changing

Are you changing admission requirements?*	○ Yes ◉ No
Are you changing course requirements?*	◉ Yes ○ No
Are you changing degree completion requirements?*	○ Yes ◉ No
Are you changing the primary instructional mode?*	○ Yes ◉ No
Are you changing program learning objectives?*	○ Yes ◉ No
Are you changing the culminating experience?*	○ Yes ◉ No
If yes, describe changes to learning objectives:	
Provide a Brief Summary of Proposed Changes	Eliminate HPS 718 (Radiochemistry Lab: 3 credits) and HPS 719 (Introduction to Radioanalytical Chemistry: 1 credit) as Core courses. Replace the four credits with four credits of Elective courses. Therefore the proposed total Elective course credits will be 7.
Provide a rationale for each proposed change	Radiochemistry is marginally related to the general field of health physics and, as such, is not a fundamental requirement in health physics education programs. Furthermore, radiochemistry courses such as HPS 718 and 719 are very labor intensive from an instructional point of view and require specialized expertise which is currently not available in the Department. Students are better served by taking mentor-approved elective courses within, or outside the Department that are more closely related to the health physics field.

Do not make any changes to any information until the proposal has been launched in Step 4.

Follow these steps to change the program curriculum:

1. Click on  "View Curriculum Schema." Edit existing cores or click 'Add Core' and name your core (please use a comparable degree program in the current graduate catalog as a template). Edit or add any descriptive text (do not add courses until Step 2). Descriptive text is generally used in the following cores: Plan Description, Plan Admission Requirements, Plan Requirements, Plan Graduation Requirements.

2. There are two options for adding courses (see Step 3 to remove courses): "Add Course" and "Import Course." For courses already in the catalog, click on "Import Course" and find the courses needed. For new classes going through a Curriculog Approval Process click on "Add Course"-- a box will open asking you for the Prefix, Course Number and Course Title.

3. Click on  "View Curriculum Schema." Click on the area/header of the program where you would like to add courses. When you click on "Add Courses" it will bring up the list of courses available from Step 2. Select the courses you wish to add. For removing courses click on the  and proceed.

After you have launched proposal, update prospective curriculum here*

Plan Description

The Master of Science (M.S.) – Health Physics is designed to prepare students in the field of health physics to administer public and private radiation health programs; investigate medical uses of radioactivity; measure and control radiation in the workplace and the environment; ensure compliance with radiation protection regulations; assist in the cleanup of radioactive and hazardous waste sites; evaluate worker, patient, and public radiation doses; and conduct research in radiation protection.

For more information about your program including your graduate program handbook and learning outcomes please visit the Degree Directory.

Plan Admission Requirements

Application deadlines

Applications available on the UNLV Graduate College website.

Complete the Graduate College online application for admission. Completed applications, official Graduate Record Examination (GRE) scores, one copy of official transcripts from all post-secondary institutions, and all other documents (i.e., recommendation provider information and statement of professional goals) should be uploaded into the online application system.

Students seeking admission to the graduate program in health physics must fulfill the following admission requirements:

Overall GPA of 3.00 (A=4.00 or equivalent) in undergraduate work. Applicants with a GPA below 3.00, but not less than 2.75, may be admitted as a graduate provisional student.

Successful completion (grade of C or better) of the following course work:
Seven-semester credits in biology including an introductory modern biology course and one higher level course
Ten-semester credits in chemistry or geology including a general chemistry sequence and one higher-level course
Eight-semester credits in elementary calculus (mathematics through differential equations is recommended)
Twelve semester credits in physics including a general physics sequence
A course in computer programming (an additional course in numerical methods or scientific computing is recommended) Applicants not meeting a

limited number (maximum of nine credit hours) of prerequisite requirements may still be admitted to the program. However, prerequisite deficiencies must

be completed during the first year of study and prior to registering for Thesis or Professional Paper.

Completion of a regionally accredited baccalaureate degree in health physics, one of the basic sciences, or in a closely related scientific or engineering field. Applicants holding a degree in a non-related field may be given special consideration if they have completed all prerequisite course work.

Students seeking entry to the medical physics specialization must have a strong foundation in physics and, as such, applicants are required to have either an undergraduate degree in physics or a degree in a related engineering or physical science discipline with course work equivalent to a minor in physics (includes at least three upper level undergraduate physics courses).

A score ranking in the 50th percentile or higher on the verbal and quantitative sections of the Graduate Record Exam (GRE) is preferred. Tests taken prior to August 2011 require, preferably, a composite score of 1,000 or higher on the verbal and quantitative sections of the Graduate Record Exam (GRE).

Three letters of recommendation from former instructors or employers that speak to the applicant's potential as a graduate student. Contact information for recommendation providers should be entered into the recommendation page of the online application. Recommenders will then upload their letters directly into the student's online application.

A statement of approximately 300 words indicating the student's professional goals and reason for seeking graduate education.

All domestic and international applicants must review and follow the Graduate College Admission and Registration Requirements.

Students are accepted into a degree program as described in the Graduate Catalog. The faculty and corresponding sub-disciplines and sub-plans within the described programs are subject to change at any time.

Plan Requirements

See Subplan Requirements below.

Subplan 1: Environmental Health Physics
Subplan 2: Medical Physics

Subplan 1 Requirements: Environmental Health Physics

Total Required Credits: 40

Course Requirements

Required Courses – Credits: 18

Complete 18 credits by completing all courses below:

HPS 602 Radiation Detection	3
HPS 603 Radiation Physics and Instrumentation Laboratory	3
HPS 701 Applied Nuclear Physics	3
HPS 703 Radiation Interactions and Transport	3
HPS 720 Radiation Dosimetry	3
HPS 730 Advanced Radiation Biology	3

Seminar Course – Credits: 3

Complete 3 credits of the following course:

HPS 611 Health Physics Seminar	1

Core Courses – Credits: 6

Complete 6 credits by completing all courses below:

HPS 616 Advanced Health Physics	3
HPS 670 Environmental Health Physics	3

Elective Courses – Credits: 7

Complete 7 credits from the following list of courses, any graduate-level health physics (HPS) courses, or other advisor-approved graduate-level courses.

HPS 750 Radiation Risk Assessment	3
HPS 760 Environmental Restoration and Radioactive Waste Management	3

Culminating Experience – Credits: 6

Complete 6 credits of one of the following courses:

HPS 797 Thesis	1-3
HPS 796 Professional Paper	3

Plan Degree Requirements

Maintain a cumulative grade point average of 3.00 or above each semester enrolled.

Receive a grade of B (3.00) or above in all core health physics courses. If less than a B is earned, the course may be repeated. The student must be in good standing to repeat a course, and any core course may be repeated only once.

Select a thesis advisor from the full graduate faculty in the program by the end of the student's first semester in the program. Failure to select a thesis advisor may result in probation or eventual termination from the program.

In consultation with their advisor, a student will organize an advisory committee of at least three departmental members. In addition, a fourth member from outside the department, known as the Graduate College Representative, must be appointed. An additional committee member may be added at the student and department's discretion. Please see Graduate College policy for committee appointment guidelines.

Pass the comprehensive oral examination. The comprehensive oral exam will be taken by all students after completion of the second semester of enrollment in the program. The exam will be pass/fail. Students who fail the exam may re-

in the program. The exam will be pass/fail. Students who fail the exam may re-take the exam prior to the start of their third semester of enrollment. Students who fail their second attempt will be separated from the program. Students may not defend their thesis prospectus or proceed with their professional paper until successful completion of the oral exam. The exam will be administered by the graduate faculty from Health Physics.

Continuously register for three credit hours of thesis or professional paper each semester while working on the thesis or professional paper until completion.

Credit by Challenge Examination: Graduate courses in the Health Physics program may not be challenged for credit.

Allotment of Credits: Students have a choice of catalog under which they wish to graduate
The year of official matriculation, or
The year of graduation
Students are encouraged to meet the requirements of the current catalog.

A final oral examination will be held following completion of the thesis or professional paper resulting from a research project. The final examination must be held by the Graduate College deadline in the term in which the student plans to complete the degree requirements.

Graduation Requirements

See Plan Graduation Requirements below.

Subplan 2 Requirements: Medical Physics

Total Required Credits: 40

Course Requirements

Required Courses – Credits: 18

Complete 18 credits by completing all courses below:

HPS 602 Radiation Detection	3
HPS 603 Radiation Physics and Instrumentation Laboratory	3
HPS 701 Applied Nuclear Physics	3
HPS 703 Radiation Interactions and Transport	3
HPS 720 Radiation Dosimetry	3
HPS 730 Advanced Radiation Biology	3

Seminar Course –Credits: 3

Complete 3 credits of the following course:

HPS 611 Health Physics Seminar	1
HPS 792 Ethics for Medical Physicists	1

Core Courses – Credits: 13

Complete 13 credits by completing all courses below:

HPS 676 Sectional Anatomy	3
HPS 740 Medical Imaging Physics	3
HPS 742 Radiation Therapy Physics	3
HPS 742L Therapy Physics Clinical Rotation and Lab	3
HPS 795 Independent Study	1 – 3

Culminating Experience –Credits: 6

Complete 6 credits of one of the following courses:

HPS 796 Professional Paper	3
HPS 797 Thesis	1-3

Plan Degree Requirements

Maintain a cumulative grade point average of 3.00 or above each semester enrolled.

Receive a grade of B (3.00) or above in all core health physics courses. If less than a B is earned, the course may be repeated. The student must be in good standing to repeat a course, and any core course may be repeated only once.

Select a thesis advisor from the full graduate faculty in the program by the end of the student's first semester in the program. Failure to select a thesis advisor may result in probation or eventual termination from the program.

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Students are encouraged to meet the requirements of the current catalog.

A final oral examination will be held following completion of the thesis or professional paper resulting from a research project. The final examination must be held by the Graduate College deadline in the term in which the student plans to complete the degree requirements.

Graduation Requirements

See Plan Graduation Requirements below.

Plan Graduation Requirements

The student must submit all required forms to the Graduate College and then apply for graduation up to two semesters prior to completing their degree requirements.

The student must submit and successfully defend their thesis or professional paper by the posted deadline. The thesis defense must be advertised and is open to the public.

After the thesis defense, the student must electronically submit a properly formatted pdf copy of their thesis to the Graduate College for format check. Once the thesis format has been approved by the Graduate College, the student will submit the approved electronic version to ProQuest. Deadlines for thesis defenses, format check submissions, and the final ProQuest submission can be found here.

The Degrees Directory provides current and consistent degree information. Submission of this form indicates acknowledgment and understanding that every department is responsible creating and maintaining accurate and updated program information on the UNLV Degrees Directory.

If the changes included on this form impact the program handbook attach the updated handbook before submitting this form. If you need a Word version of the most recent handbook please email GradCurriculum@unlv.edu.

If new courses are added as placeholders within this proposal, new courses must be created using a Course Create form simultaneously to the process of this proposal.

Degrees Directory Program Entry* ☑ Check this box to acknowledge the above statement.

Changes will be applicable to* ○ Current Students ○ New Students ◉ Both Current and New Students

If applicable to current students, changes are ◉ Mandatory ○ Optional

Effective Date* Fall 2021

4. LAUNCH proposal by clicking in the top left corner.

5. After launching the proposal, make all changes and fill in all additional fields.

6. Finish the launch of your proposal by clicking the icon located in the Proposal Toolbox on left side at top. Make your decision, comment is optional, and click on "Make decision".

You can check the status of the proposal by clicking in Proposal Toolbox to verify that the proposal has gone to the next step.

III. Department Vote Information

Note: This section is to be filled out by the Department Chair on behalf of the committee.

(The role has been assigned to the corresponding person on this step. If incorrect, please notify GradCurriculum@unlv.edu)

1. Review the proposal. Discuss and make appropriate revisions.

2. Fill in vote information.

3. Then go to the proposal toolbox at the top right side. Click on and select the corresponding decision for the committee. This will enable the proposal to go to the next person on the workflow.

You can check the status of the proposal by clicking in Proposal Toolbox to verify that the proposal has gone to the next step.

If Dual or Interdisciplinary: add votes from all departments/colleges involved

(e.g. "Dpt A: .... / Dpt. B ....)

Date faculty voted on proposal 11/10/20

Result of vote 6 for; 0 against

Manner of vote	Email poll

IV. Unit Vote Information

Note: This section is to be filled out by the College Committee Chair on behalf of the committee.

(The role has been assigned to the corresponding person on this step. If incorrect, please notify GradCurriculum@unlv.edu)

1. Review the proposal. Discuss and make appropriate revisions.

2. Fill in vote information.

3. Then go to the proposal toolbox at the top right side. Click on and select the corresponding decision for the committee. This will enable the proposal to go to the next person on the workflow.

You can check the status of the proposal by clicking in Proposal Toolbox to verify that the proposal has gone to the next step.

If Dual or Interdisciplinary: add votes from all departments/colleges involved

(e.g. "College A: .... / College B ....)

Date faculty voted on proposal	11/15/20	**Result of vote**	3/3 yes
Manner of vote	email vote		

V. Processing Notes (Graduate College/Registrar Use Only)

Program Alerts (E.g. This program is no longer accepting applications)			
PS Processing Notes			
PS Processing Date		**Initials**	
Acalog Processing Notes			
Acalog Processing Date		**Initials**	

Comments for Master of Science - Health Physics

Curriculog — 12/1/2020 3:04 pm Reply

Emily Lin has approved this proposal on Graduate College Dean.

Curriculog — 12/1/2020 1:24 pm Reply

Graduate Curriculum has approved this proposal on Graduate Programs Committee.

Gregory Moody — 12/1/2020 1:17 pm Reply

13 voted in favor. WebEx vote.

Curriculog — 12/1/2020 1:17 pm Reply

Gregory Moody has approved this proposal on Graduate Programs Committee.

Curriculog — 11/19/2020 11:32 am Reply

Janet Dufek has approved this proposal on School/College Associate Dean/ Dean.

Janice Pluth — 11/16/2020 11:23 pm Reply

3/3 voted yes to approve this change

Curriculog — 11/16/2020 11:23 pm Reply

Janice Pluth has approved this proposal on School/College Committee.

Curriculog — 11/12/2020 2:18 pm Reply

HPDS Chair has approved this proposal on Department Chair.

Curriculog — 11/12/2020 2:15 pm Reply

HPDS Chair has approved this proposal on Graduate Coordinator.

Curriculog — 11/12/2020 12:09 pm Reply

System Administrator Graduate Curriculum has restarted the Graduate Coordinator step as a result of participants being added to or removed from the step.

Curriculog — 11/12/2020 11:12 am Reply

Graduate Curriculum has approved this proposal on Technical Review.

Curriculog

11/6/2020 4:03 pm Reply

Steen Madsen has approved this proposal on Originator.

Curriculog

11/2/2020 3:39 pm Reply

Steen Madsen has launched this proposal.

Curriculog

11/2/2020 3:24 pm Reply

Steen Madsen imported from the map 2021-2022 Working Graduate Catalog into the following proposal fields: I. General Information: Degree/ Certificate Name, I. General Information: Degree Type, I. General Information: Program Type, II. Program Changes: After you have launched proposal, update prospective curriculum here.