

## INTERPROFESSIONAL HEALTH SCIENCES PH.D.

All students must meet the Requirements for the Doctor of Philosophy Degree

### OVERVIEW

Interprofessional Health Sciences is translational in nature focusing on understanding the spectrum of human functioning from the basic physiological function of cells and body systems to overall physical and psychological health and unified by the common theme of human performance. The program is designed to consider health at 3 levels: 1) status of body structures and functions (molecular, cellular, and organ systems levels); 2) ability of the individual to participate in human activities and assume societal roles; and 3) psychological and social aspects of the environment that support the health of individuals and populations. This program prioritizes interprofessional and translational research. Students come from a wide range of disciplines (e.g., physical therapy and movement science, special education, communication disorders, nursing, neuroscience, psychology, nutrition, and related health professions). They learn side by side with other students and faculty from unique but related health professions to address the contextual nature of health conditions that affect body functioning and/or societal participation.

Doctoral student preparation considers three central principles:

1. Educating students as researchers and scientists, including how to contribute to evidence-based practice.
2. Fostering in students an interdisciplinary approach to education, research, and practice.
3. Engaging students in innovative instruction and assessment that is interprofessional and aligns with changes in delivery of health and human services.

### SPECIFIC REQUIREMENTS

#### Requirements for Admission to Graduate Studies for the Degree of Doctor of Philosophy

Students with at least a master's degree or the equivalent in a health-related field (e.g., kinesiology, exercise physiology, exercise science, movement sciences, communication sciences and disorders, rehabilitation science, nursing, psychology, education) may apply. Evaluations will be based upon the applicant's grade point average, previous research experience, a statement of purpose for graduate study, and 3 letters of reference. Although not required, it is strongly recommended that one of those letters come from a graduate faculty in the College of Nursing in Health Sciences (or Osher Center if appropriate) expressing support for the student as well as interest in the student's area of scholarship. In rare circumstances students with a bachelor of science degree showing exceptional

promise as evidenced by their previous research experience, mentor recommendations, undergraduate GPA will be considered.

#### Minimum Degree Requirements

For students entering with a prior graduate degree in a relevant field, the Ph.D. in Interprofessional Health Sciences requires 76 credits, 30 of which are required course credits and 20 of which are required research credits. The remaining 26 credits are elective, 15 of which may transfer in from the prior degree. Students must maintain a 3.0 average in coursework, have no more than 1 grade below a B, have acceptable evaluations of their research, and pass their qualifying examination. Students will be required to develop a teaching portfolio to demonstrate competence in a range of teaching activities. Students are also required to submit an article to a peer-reviewed journal as a first or co-author and to present research at a national or international conference. The dissertation will be based on original research focusing on a significant problem in the student's area of specialization with an interprofessional application.

#### BIOMEDICAL AND HEALTH SCIENCES (BHSC)

Students in this concentration may focus in 2 general areas, that include, but are not limited to, the following topics:

##### BASIC SCIENCE RESEARCH

- Cancer
- Cell signaling and metabolism
- Immunology and Infectious diseases
- Genomics and Genetics

##### MEDICAL LABORATORY SCIENCE

- Molecular diagnostics and genomic medicine
- Molecular pathology and functional genomics
- Clinical microbiology
- Clinical hematology

Students should contact the IHS PHD program director for more information on concentration requirements.

#### COMMUNICATION SCIENCES & DISORDERS (CSD)

Students in this concentration may focus communication disorders that include:

- Apraxia of speech
- Autism and other developmental disabilities
- Fluency disorders
- Neurogenic disorders
- Social cognition
- Speech sound disorders

Students work with their academic advisor, research mentors, and committee to design and complete 3 professional rotations in the department of CSD or related field. This provides students with an

opportunity to work in depth on multiple projects relevant to current CSD theories and methodologies.

**INTEGRATIVE HEALTH**

Students in this concentration may focus on Integrative Health topics such as:

- Traditional European Medicine (TEM)
- Yoga
- Nature Therapy / Forest Bathing
- Culinary Medicine
- Mindfulness
- Anxiety Management Strategies
- Integrative Pain management
- Integrative psychology
- Acupuncture
- Integrative Oncology
- Behavior change/ health coaching
- Integrative physical therapy/ manual therapy

Students work with their research mentors and committee to design and complete 3 professional rotations within an approved Integrative Health research setting and educational elective requirements. This provides students with an opportunity to work in depth on multiple projects relevant to current Integrative Health theories and methodologies. UVM Integrative Health is a member of the Academic Consortium for Integrative Medicine and Health (ACIMH) and students are encouraged to take an active role in the Consortium’s Research Working Group.

**REHABILITATION AND MOVEMENT SCIENCE (RMS)**

Students in this concentration may focus on topics that include, but are not limited to:

- Biomechanics
- Motor control
- Muscle physiology
- Exercise and physical activity
- Neurophysiology and neurorehabilitation
- Movement analysis
- Physiological biomarkers
- Imaging
- Outcome measure assessment

Students work with their research mentor(s) and committee to design and fulfill degree requirements within this concentration. 3 professional rotations should take place in the department of RMS or in an RMS-approved research laboratory. This provides students with an opportunity to work in-depth on various research projects relevant to current RMS research areas.

Students in all concentrations are required to take the following courses:

| Requirement Description  |                                | Credits   |
|--|--------------------------------|-----------|
| CTS 6200   | Analyze Clin&Translational Res | 3         |
| CTS 6250   | Multi Analysis Clin&Trans Res  | 3         |
| EDRM 6310  | Mixed Methods Research: Adv    | 3         |
| IHS 7010   | Topics & Measurement in IHS    | 2         |
| IHS 7020   | Applying the ICF Model in IHS  | 3         |
| IHS 7300   | Sem/Pract Teach & Learn IHS    | 3         |
| IHS 7500   | Prof Writing & Grantsmanship   | 3         |
| IHS 7000-Level Doctoral Seminar/Professional Rotation  |                                | 10        |
| 20 credit hours of IHS 7491, Doctoral Dissertation Research  |                                | 20        |
| Elective courses related to Interprofessional Health Sciences (face to face, online, evening)  |                                | 12        |
| Students coming into the program with a graduate degree will transfer in 15 credits from their prior degree  |                                | 15        |
| <b>Total Credits</b>   |                                | <b>76</b> |
| Students coming into the program with an undergraduate degree will need to earn an additional 12 credits of elective courses, for a total of 88 credits. |                                |           |

**COMPREHENSIVE EXAMINATION**

The qualifying examination process (QE), which serves as a comprehensive exam and the exam for advancement to candidacy for the PhD, will be undertaken after students have completed all of the didactic course requirements of the program with a GPA of 3.0 or better. This exam process will consist of 2 portions, a research proposal written in the form of a grant proposal and an oral defense of this proposal, and a dissertation concept paper.

**REQUIREMENTS FOR ADVANCEMENT TO CANDIDACY FOR THE DEGREE OF DOCTOR OF PHILOSOPHY**

Doctoral candidacy is achieved after the student passes a formal proposal defense. After approval of the concept paper, the student works on the formal dissertation proposal, and, with guidance from his/her dissertation chair, schedules a date with the committee for the formal proposal defense.