Master of Science in Health Informatics

Professionals in applied Health Informatics have skills in analysis, design, implementation, and evaluation of information systems that support a full range of clinical and patient care functions. Graduates will be prepared for entry and mid-level positions with hospital or clinic informatics departments, electronic health record (EHR) vendors, public health organizations, and as consultants and/or staff in organizations that specialize in knowledge management. Graduates also have the skills to enter the growing field of health information exchange, which includes regional health information organizations and the emerging personal health records. In addition to a foundation in applied health informatics, special skills will be acquired in organizational change, project management and impact evaluation.

This is an interprofessional program administered by the Center for Health Informatics (http://www.kumc.edu/health-informatics.html), which is sponsored by the School of Nursing. The master's degree is conferred by Medical Center Interdisciplinary Programs. The program is designed for health professionals who want a specialty focus in applied health informatics. The advisory council of this program reflects a commitment to interprofessional collaboration. Faculty with foundations in health policy and management, public health, nursing, and project management partner to offer courses for this master's degree in health informatics.

The M.S. in Health Informatics program (MSHI) endeavors to fulfill its responsibilities to the changing needs of society by selecting applicants who, in the judgment of the admissions committee, demonstrate the academic achievement, maturity, integrity, and motivation necessary for successful advancement. In addition, the committee looks for applicants who will contribute academic, nonacademic, and socioeconomic diversity to the class. The committee is interested in evidence of capacity for mature and independent scholarship.

The application process is an online process. Detailed instructions on how to apply and the application deadlines are posted on the Master of Science in Health Informatics (http://nursing.kumc.edu/academics/master-in-health-informatics.html) website.

Admission requirements:

• A bachelor's degree from a regionally accredited institution documented by submission of official transcript indicating the degree has been conferred before entering the program. Official transcripts from institutions attended post-baccalaureate are also required. Students with degrees from outside the U.S. may be subject to transcript evaluation indicating the degree is equivalent to a U.S. degree and meets the minimum cumulative GPA requirements.
• A cumulative grade-point average (GPA) of at least 3.0 on a 4.0 scale.
• Applicants who are not native speakers of English, whether domestic or international, must demonstrate they meet the Minimum English Proficiency Requirement (http://www.kumc.edu/Documents/graduate%20studies/Min%20Engl%20Prof%202016-Oct.pdf).
• A current resume or curriculum vitae.
• A personal essay outlining the applicant's reasons for wanting to pursue graduate education in health informatics, career objectives, and any other information that would help the admissions committee get to know the applicant.
• Three letters of recommendation preferably from employers, instructors, or other persons who can assess the applicant's academic and professional potential. Letters are submitted per instructions provided for the online application process.
• An informational interview with a Center for Health Informatics representative.
• A background check (http://www.kumc.edu/Documents/graduate%20studies/Background%20Check%202016-Oct.pdf) is required during the admission process; it may affect the student's eligibility to enter the program.
• A graduate level statistics course (may be completed prior to admission or during the first semester of enrollment.)

After an applicant has been admitted, a program may defer an applicant's admission for one year after which time the applicant must submit a new application.

International Students

Due to the number of required online courses for this degree, the Health Informatics Program at KUMC does not meet the U.S. student visa requirements at this time. Therefore, we are unable to accept individuals who are on student visas. If you received your university education outside of the U.S. or are in the U.S. on another type of visa, please contact HealthInformatics@kumc.edu for additional application requirements.

Admission requirements are subject to change. In most cases, use the catalog (http://catalog.ku.edu/archives/) of the year student entered the program.

The Master's in Health Informatics curriculum is divided into three cores: informatics, leadership, and research along with a discipline-specific emphasis track. A strength of the program is the close relationship between the students and their informatics advisers. The student and advisor will develop a plan of study that meets the career goals of the student.

Degree requirements:

• Degree requirements can be completed within 2 years of admission to the program although a maximum of 7 years is allowed. Part-time students normally complete requirements within 4 years of admission to the program.
• Completion of a minimum of 40 credit hours.
• Cumulative grade-point average (GPA) of at least a 3.0 for all KU graduate coursework.
• Successful completion of a general examination (http://www.kumc.edu/Documents/graduate%20studies/Masters%20Exams%20Defense%202016-Oct.pdf) the semester the student will graduate.
• Enrollment in a minimum of one (1) credit hour the semester the student will graduate.
• Successful completion of the Health Informatics Core (minimum 17 credit hours.) These courses provide the core knowledge and skills essential to the practice of health informatics.
• Degree requirements and course descriptions are subject to change. Any courses taken as an equivalent must be approved by the Graduate Director and the Office of Graduate Studies. In most cases, use the catalog (http://catalog.ku.edu/archives/) of the year student entered the program.
**Master of Science in Health Informatics**

- **Advisor** based on the student's background and career goals.

  - Courses within the core are selected in consultation with the student's advisor.

  - **Discipline-Specific Emphasis Track** (minimum 9 credit hours). Choose from:
    - **Health Policy and Management Track** (select 9 credit hours). Choose from:
      - **Health Informatics Practicum**
      - **Health Communication**
      - **Health Data: Theory and Practice**
      - **Health Data Abstraction and Modeling of Healthcare Information**
      - **Knowledge Management in Healthcare**
      - **Health Informatics Practicum**

  - **Leadership Core** (minimum 9 credit hours.) This includes a minimum of one health policy course.

  - **Research Core** (minimum 5 credit hours.) This component includes a research project that involves applying aspects of the research process to the student's area of health informatics practice.

    - **Clinical Track** (select 9 credit hours.) Choose from:
      - **Theories for Practice and Research**
      - **Professionalism in Advanced Nursing Practice**
      - **Global Perspective and Diversity in Healthcare**
      - **Complexity Science Approaches to Improve Organizational Effectiveness**
      - **Human Resources and Workforce Development**

    - **Discipline-Specific Emphasis Track** (select 9 credit hours). Choose from:
      - **Principles of Epidemiology**
      - **Introduction to Public Health**
      - **Infectious Disease Epidemiology**
      - **Social and Behavioral Aspects of Public Health**
      - **Health, Society, and Culture**

  - **Project Management Track** (select 9 credit hours).

  - **Typical Plan of Study for Part-Time Students**

  - **Year 1**
    - **Fall**
      - **IPHI 851** 3, **IPHI 850** (Spring only) 2, **IPHI 854** 3
    - **Leadership Core course**
      - **Leadership Core course** 2

  - **Year 2**
    - **Fall**
      - **IPHI 853** 3, **IPHI 852** 3, **NRSG 819** 3, **IPHI 860** 2
    - **Discipline-specific course**
      - **Discipline-specific Core course** 3

  - **Year 3**
    - **Fall**
      - **IPHI 860** 2, **IPHI 856** 2, **IPHI 856** 1
    - **Leadership Core course**
      - **Leadership Core course** 3, **Oral Comprehensive Examination** 2

  - **Total Hours 40**

**Dual Degree: Doctor of Pharmacy & Master of Science in Health Informatics**

The dual PharmD/MS in health informatics (MSHI) degree program is designed particularly for those students intending to pursue opportunities in pharmacy informatics. The dual PharmD/MSHI students will concurrently enroll in both programs during years 2-4 of the PharmD program. During the last semester, the HI practicum will satisfy 1 of 9 required advanced pharmacy practice experiences (APPEs). A Health
Informatics comprehensive oral examination occurs during the last semester of enrollment in the Dual Degree (P4 Year, Spring semester). Admission to this program is restricted to students currently in the PharmD program.

## Degree Requirements

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<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td><strong>P1 Year</strong></td>
<td></td>
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<tr>
<td>Fall</td>
<td><strong>P&amp;TX 630</strong> Pharmacology I</td>
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<td><strong>P2 Year</strong></td>
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<tr>
<td>Spring</td>
<td><strong>IPHI 850</strong> Introduction to Health Informatics (2 credits required)</td>
<td>2-3</td>
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<td><strong>PHCH 626</strong> Biopharmaceutics and Drug Delivery</td>
<td>3</td>
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<tr>
<td>Summer</td>
<td><strong>IPHI 854</strong> Knowledge Management in Healthcare</td>
<td>3</td>
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<td><strong>P3 Year</strong></td>
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<tr>
<td>Fall</td>
<td><strong>IPHI 851</strong> Transforming Health Care through Use of Information Systems and Technology</td>
<td>3</td>
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<td></td>
<td><strong>PHPR 624</strong> Pharmacoepidemiology and Public Health</td>
<td>2</td>
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<td><strong>PHPR 629</strong> Research Design and Biostatistics</td>
<td>2</td>
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<td></td>
<td><strong>PHPR 635</strong> Problems in Pharmacy Practice (1 credit required)</td>
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<tr>
<td>Spring</td>
<td><strong>NRSG 880</strong> Organizational Foundations for Leading Change</td>
<td>3</td>
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<td></td>
<td><strong>NRSG 885</strong> Evaluation and Analysis for Healthcare Effectiveness</td>
<td>2</td>
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<td><strong>PHPR 630</strong> Drug Information and Literature Evaluation</td>
<td>1</td>
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<td></td>
<td><strong>PHPR 635</strong> Problems in Pharmacy Practice (1 credit required)</td>
<td>1-5</td>
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<tr>
<td><strong>P4 Year</strong></td>
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<tr>
<td>Fall</td>
<td><strong>IPHI 853</strong> Abstraction and Modeling of Healthcare Information</td>
<td>3</td>
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<td><strong>IPHI 820</strong> Program, Project, and Communication Planning</td>
<td>2</td>
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<td></td>
<td><strong>NRSG 808</strong> The Social Context for Health Care Policy</td>
<td>2</td>
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<tr>
<td>Spring</td>
<td><strong>IPHI 858</strong> Health Informatics Practicum: Pharmacy (16 weeks full-time at pharmacy informatics (site(s))</td>
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<td></td>
<td><strong>IPHI 852</strong> Health Data: Theory and Practice (3 credits required)</td>
<td>3-4</td>
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<tr>
<td></td>
<td><strong>IPHI 957</strong> Health Informatics, Human Factors, and Ergonomics as Applied to Patient Safety</td>
<td>3</td>
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The Master of Science in Health Informatics degree and Graduate Certificate signify that the holder is prepared for entry into the practice of applied health informatics. Therefore, it follows that graduates must have the knowledge and skills necessary to function in a broad range of situations. The following abilities and expectations must be met by all students with or without accommodations admitted to the program.

1. **Observation**: Students must be able to observe: lectures, demonstrations, online written and recorded audio/visual material, online meetings, and research and practice situations. Observation necessitates the functional use of the senses of vision and hearing.

2. **Communication**: Applicants also must be able to communicate effectively and efficiently in English with other students, faculty, staff, and mentors/preceptors. Communication includes not only speech, but also listening, reading, and writing. Effective communication includes the ability to comprehend conversation, presentations, assigned readings, and the ability to present information verbally and in writing.

3. **Motor**: A student must have sufficient motor function to attend classes, prepare assignments, use a computer keyboard, and make public presentations if required. Course requirements will also include field work in a variety of health organizations.

4. **Intellectual, conceptual, integrative, quantitative, and problem solving abilities**: An applicant must be able to understand and learn factual information from readings and didactic presentations, gather information independently, analyze and synthesize learned material, and apply that information. In addition, an applicant must possess the ability to understand and work with measurements, carry out calculations and engage in reasoning, analysis and synthesis based on the calculations. An applicant must be able to draw on all these abilities to be an effective problem solver.

5. **Behavioral and social attributes**: Integrity, reliability, self-direction, motivation, and the ability to work with diverse groups are qualities necessary for effective preparation for and practice in this field. A student must have the emotional health required for the full use of his or her intellectual ability, exercise of sound judgment, and timely completion of all responsibilities attendant to the completion of academic responsibilities.

NOTE: Reasonable accommodations will be considered and may be made to qualified students who disclose a disability, so long as such accommodation does not significantly alter the essential requirements of the curriculum and the training program, or significantly affect the safety of patient care. Students who disclose that they have a disability are considered for the program if they are otherwise qualified. Qualified students with a disability who wish to request accommodations should provide the appropriate documentation of disability and submit a request for accommodation to the University’s Office for Academic Accommodations.