Graduate Studies in Health Care Informatics

Dr. Beth Breeden
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• Master of Health Care Informatics

Dr. Beth Breeden, Director

Professionals who understand the relationship between people, health, information technology and the health care system are in great demand. Health Care Informatics is an emerging discipline which evaluates the acquisition, storage, retrieval and utilization of health data and the vital role it plays in enhancing the quality of care, reducing health care costs and addressing health issues.

According to a recent study from Health Care IT News, health information technology is first on the list of the top ten ‘hot careers’ for 2011 college graduates. The Nashville Technology Council’s Q2-11 Jobs Report indicated 1,161 open IT positions in the Middle Tennessee area, with health care leading all industry sectors for these open IT positions. Additionally, the U.S. Department of Health and Human Services has mandated a national health care information infrastructure, including electronic health records, by 2014. The existing demand, federal regulations and predicted growth has prompted Lipscomb University to create a Masters in Health Care Informatics degree designed to develop health care leaders ready to meet these current and future challenges.

Lipscomb’s Masters in Health Care Informatics is a 42-hour, interdisciplinary graduate degree program designed to provide the knowledge and skills needed to enhance quality, safety, efficiency and patient-centric health care delivery and outcomes through the use of information technology. It will also train health care leaders, educators and innovators who will drive the evolution of clinical systems now and in the future. This includes coursework available through the College of Pharmacy and Health Sciences, College of Business and the Raymond B. Jones College of Engineering and is the only curriculum of its kind in the nation.

• The ideal student has a passion for understanding how information and technology can be used to change and enhance health care delivery and outcomes.

• Faculty are not only leaders in their field but also work with individual students to offer personalized attention not often found at other institutions.

• The alternating weekend program is designed to meet the needs of working professionals.

• Multidisciplinary training provides the ability to communicate effectively with clinicians, administrators, business leaders and IT professionals and to understand the challenges of each role.

• The cohort program begins in the fall with coursework being delivered in only 13 months.

• This degree prepares one for jobs in hospitals, health care consulting, pharmaceutical and biotech companies, insurance companies, governmental agencies, health related software companies, business, industry and more.

Admission Policies and Procedures

Applicants to graduate programs must submit the following:

1. Application Form. Each applicant must complete an application form. The application form is available at http://gradstudies.lipscomb.edu/, then click on Admissions, then APPLY TODAY. The application can be completed online or downloaded in a PDF version.

2. Application Fee. Each application should be accompanied by a $50 nonrefundable application fee ($75 for international students).

3. Eligibility. Each applicant must submit documentation verifying coursework or demonstrated competency in medical terminology, statistics and PC literacy and must satisfy one of the following:

• Hold an advanced degree (Master’s or Doctorate) in a relevant area of health care
• Hold a bachelor’s degree in a relevant area of study, with five years of related work experience
• Hold a bachelor’s degree in a relevant area of study and submit GRE scores with application

4. **References.** Two letters of reference are required as follows: one from a college or university administrator or professor and one from a professional supervisor/employer, or personal reference.

5. **Official Transcript(s).** Each applicant must submit an official transcript, showing degree conferral when appropriate, from all schools attended.

6. **Health Form.** Each applicant must submit a completed health form signed by a health care provider. (To print a copy of the health form, visit [http://healthcenter.lipscomb.edu/Uploads/38443.pdf](http://healthcenter.lipscomb.edu/Uploads/38443.pdf)).

7. **FERPA.** The Family Educational Rights and Privacy Act affords students certain rights of access to educational records; even if you are independent of your parents, you must submit this form prior to enrollment.

8. **Resume.** A resume detailing the applicant’s work and academic experience is required.

9. **Personal Statement.** Each applicant must submit an expanded goals statement concerning the applicant’s interest in and application of the program’s curriculum to expected career progression is required.

10. **TOEFL.** The Test of English as a Foreign Language (TOEFL) is required for international students. (See section titled International Students for more information.)

All application items should be submitted to the Graduate Studies in Health Care Informatics office no later than 30 days before the beginning of the semester or term in which the student plans to enroll. Forms should be mailed to: Graduate Studies in Health Care Informatics, Lipscomb University, One University Park Drive, Nashville TN 37204-3951.

**Transfer and Waiver of Courses**

Although all graduate credit hours may be transferred from another accredited institution, a maximum of six hours will be counted toward the Master of Health Care Informatics degree. The director or appropriate faculty member of the graduate program will evaluate the course(s) being proposed for transfer and make a determination of suitability. No course with a grade below a “B” will be considered for transfer.
Documentation
Students are required to provide satisfactory documentation of personal identification for off-site learning experiences required in many programs of graduate study at Lipscomb University. Failure to provide proper credentials will result in failure to complete the desired course of study. For complete policy, see section entitled Required Documentation for Off-Site Learning Experiences in the opening section of this catalog.

Student Classifications
Students are admitted to graduate courses in one of five categories:

1. Graduate Student: one who has satisfied all admissions requirements. (Average of 2.75 on undergraduate work, GRE acceptable scores.) A student with an incomplete admission file will be accepted to the program at the discretion of the program director but will be placed on an Academic Hold which will prevent registration for the following semester. Once the proper admissions documents have been received, the hold will be removed and the student will be allowed to register for the following semester.

2. Conditionally Admitted Student: one who has been admitted conditionally, at the discretion of the program director, without satisfying all admission requirements. Students admitted with the following criteria may be required to complete a minimum of nine hours of graduate work with a grade of “B” or above.
   a. From an unaccredited school or with a substandard GPA or GRE/MAT score.
   b. A transfer student with a graduate GPA between 2.50 and 2.99. The transfer student must be in good standing at the previous institution attended.
   c. As a student who has not completed a bachelor’s degree program. The transfer student must be in good standing at the previous institution attended.

3. Non-Degree Student: one who has been admitted to graduate studies and has met all admission requirements except GPA or GRE. The student may take up to 9 semester hours for graduate credit. Those hours may be applied toward a master's degree if the student makes a grade of “B” or better in the courses taken for credit and if all admission requirements (GPA and entrance test score) are met and the student is formally admitted to a graduate program as a degree-seeking student.

4. Visiting Student: one who is currently enrolled as a student in good standing at the post-bachelor’s level at another graduate school, wishes to take courses at Lipscomb and desires to have transcript evidence of course work done at Lipscomb provided for the school of primary enrollment.

5. Probationary Student: one who has been readmitted to a graduate program following academic suspension from the program.

Admission to a program does not imply admission to candidacy for the master’s degree. Only those students who meet the requirements for “Graduate Student” described above are eligible for candidacy.

Academic Policies

Course Load
A student enrolled for 9 hours is considered a full-time student. A student enrolled for 6 hours is considered a half-time student. A student enrolled for less than 6 hours is considered a part-time student. No student will be permitted to enroll for more than 12 hours per semester without special approval from the director of the graduate program.

Academic Standing

1. Good Academic Standing: To remain in good academic standing, the Master of Health Care Informatics student must maintain a cumulative 3.00 GPA and a 3.00 GPA on the most recent 12 semester hours of work.

2. Probation: Should the student’s cumulative graduate GPA fall below 3.00, he/she will be placed on academic probation. A student on academic probation will not be allowed to enroll for more than 6 hours during any term the probation applies.

   The probationary student is required to achieve a 3.00 cumulative GPA by the time the student has completed the next 9 hours of course work. A course(s) may be repeated to achieve the requisite GPA. If the requisite GPA is attained, the academic probation status will be removed.

3. Suspension: If the requisite GPA is not attained, the student will be suspended from graduate studies at Lipscomb for the following semester, after which the student may apply for readmission. The student may be required to appear before the Graduate Committee.
Failing grades will provide no credit toward the degree but will be included in figuring scholarship level, unless replaced with a higher grade by repeating the course(s). A 3.00 GPA must be maintained to be eligible for financial assistance.

4. **Appeals:** Appeals to suspension decisions should be made in writing to the Associate Provost for Academic Development and Graduate Studies. Appeals must be received no later than 4:30 p.m. on the Monday of the week before classes begin for the term during which the student wishes to be readmitted.

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**Degree Completion Requirements**

**Residency**
No period of formal residency is required for a degree in a master’s program.

**Statute of Limitations**
All requirements for the Master of Health Care Informatics degree must be completed within a five-year period from the time of initial matriculation.

**Candidacy**
Admission to a program does not imply admission to candidacy for the master’s degree. During the course of pursuing the Master of Health Care Informatics degree, the student must be admitted to “candidacy.” For admission to candidacy the student must satisfy the following:

1. Complete all required undergraduate deficiencies if admitted on condition.
2. Complete at least twelve hours of graduate work.
3. Maintain a 3.00 GPA on all courses taken toward the requirements for the degree with no incomplete grades.
4. File a degree plan/application for candidacy in the graduate program office which meets all requirements and is approved by the administrator of the graduate program and the dean of the college. The degree plan must be filed during the second semester of graduate work in the Program.

After admission to candidacy and approval of the degree plan, any changes in the degree plan must be approved by the administrator of the graduate program and the dean of the college. The application for candidacy must be filed before the beginning of the student’s last semester in the program. No student will be allowed to graduate in the same semester in which the application for candidacy is filed.

**Minimum Credits**
The Master of Health Care Informatics requires 42 semester hours. This requirement does not include hours accumulated to satisfy academic deficiencies. The 42-hour MHCI includes 36 hours in core courses and 6 hours of graduate level elective courses from the areas of business, IT or health sciences. Alternating weekend classes are offered Friday evenings and Saturdays, allowing the highest quality educational experience without disrupting one’s professional career. Elective courses will be chosen from other graduate course work in Business, Information Technology or Health Sciences.

**Projects**
Group projects are a required component of most graduate classes. Most group projects are facilitated with a combination of online and in-person meetings, e-mails and phone calls. As part of the MHCI core curriculum, the student will complete a capstone project which can be designed to support an employer’s strategic initiative. If necessary, faculty will work with the student to create and opportunity for capstone project.

**Minimum GPA**
The minimum cumulative grade point average (GPA) for all graduate education programs is 3.00 for all graduate courses taken for graduate credit while pursuing the degree. No grade below a “C” is acceptable. Such grades will not apply toward degree completion.

**Graduation**
Students must register for GN 999X the semester in which all coursework will be completed for graduation. Students who do not file their Intent to Graduate form in the Registrar’s Office by the end of the first week of their last semester may be delayed in graduating.

Graduate students receiving degrees are hooded during the May and December commencement exercises.

**Appeals**
Any exceptions to the above stated requirements would require approval via the appeal process established by the Graduate Academic Leadership Team.
Financial Information
Tuition and Fees for 2011-12

Basic charges* per semester for graduate program:
Tuition per semester hour of graduate credit.........$1,060
(includes all textbooks and general fees)
Tuition to audit without credit..... 50% of regular tuition

Special Fees
Application fee........... $50 ($75 for international students)
Graduation fee .............................................. $195
Late registration/Late becoming official fee**.........$195
Printed refund check fee .................................... $25
Returned check fee........................................ $30
Thesis fee (includes printing and binding) $50
TMS (Monthly Payment) ..................................... $60
enrollment fee per semester
Withdrawal fee ............................................. $195

Participants in the inaugural 2011-12 class will be eligible for a 25% scholarship. This scholarship cannot be combined with the Yellow Ribbon Program.

Room and Board Charges per semester are available in the undergraduate catalog.

*Effective June 1, 2011
** Does not apply to employer reimbursements if the university is notified in advance with written approval.

Scholarships
Participants in the inaugural 2011-12 class will be eligible for a 25% scholarship. This scholarship cannot be combined with the Yellow Ribbon Program. For complete Yellow Ribbon policy, see section entitled Veterans Aid/Yellow Ribbon Program in the opening section of this catalog.

Master of Health Care
Informatics (42 hours)
HCI 5003  Decision Support Systems (3)
HCI 5013  Information Systems Management (3)
HCI 5033  Project Management (3)
HCI 5103  Introduction to Health Care Informatics (3)
HCI 5123  Ethical and Legal Issues in Health Care Informatics (3)
HCI 5133  Health Care IT Vendor Management (3)
HCI 5153  Consumer Health Informatics (3)
HCI 5203  Leadership and Organizational Behavior (3)

HCI 5213  Operations in Health Care Organizations (3)
HCI 5223  Leading Teams in Health Care Organizations (3)
HCI 5903  Consulting Project (3)
ISEC 5113  Introduction to Information Security (3)
Electives: Graduate level elective courses will be offered Summer 2012 from the areas of business, IT or health sciences.

Course Descriptions
HCI 5003  Decision Support Systems (3)
This course allows students to explore the history, evolution and current applications of decision support. The course emphasizes the unique challenges of data representation and information retrieval techniques that are foundational to decision support systems. Students will evaluate the value of decision support systems in contrast with the complexities of implementation in the current medical, legal, financial, technological and cultural context.
HCI 5013  Information Systems Management (3)  
The role of Information Systems within the organization and how they can be used to make operations more efficient, save time and energy, will be discussed. In addition, the methods to use these strategically are evaluated. The use of critical thinking skills to explore methods of using information systems to increase productivity and, if necessary, as the competitive advantage will be a large component of this course.

HCI 5033  Project Management (3)  
Students will be taught how to develop an information systems project. The methods to manage the development and implementation of a system so that it meets all aspects of stake-holder needs are evaluated. Discussion of how to initiate, analyze, develop, implement and maintain systems projects will be made. Along with this the students will be taught how to keep a project timeline, budget and attain the highest possible results from an information setting. The concepts taught will apply to any type of organization but this course will be targeted at the health care industry in particular.

HCI 5103  Introduction to Health Care Informatics (3)  
This course surveys the fundamental concepts and activities of information technology as applied to health care. Topics include computer-based medical records, electronic health record, knowledge-based systems, decision theory and decision support, e-Health, ARRA/HITECH and Meaningful Use and the personal health record. Students will learn health care informatics history, informatics competencies, concepts, legal and ethical implications and applications within the health care industry. This course will introduce the student to the software development life cycle; human factors issues in health care informatics; critical issues affecting the development and implementation of information and communication systems and technologies, professional practice trends and explore some of the emerging information and communication technology in health care (CPOE, eMAR, barcode medication administration systems, e-Prescribing, etc.)

HCI 5123  Ethical and Legal Issues in Health Care Informatics (3)  
This course will allow the student(s) to gain insight to the ethical and legal issues in informatics, currently in place and on the horizon in health care organizations. The instructor will utilize the evaluation of case studies, group and class discussions and problem-based learning of the effective utilization of information technology applications. The learning experience will be enhanced through guest lecturers with relevant experience in health care informatics.

HCI 5133  Health Care IT Vendor Management (3)  
This course focuses on evaluating the environment and activities necessary to plan, select, contract, implement and maintain systems from vendors in the health care IT sector. We will evaluate all aspects of the vendor/client relationship, noting the benefits and challenges inherent within.

HCI 5153  Consumer Health Informatics (3)  
Consumer Health Informatics studies from a patient/consumer perspective the use of electronic information to improve health outcomes and the health care decision-making process. This course focuses on aspects of the consumer health information process as well as resources which are utilized in fulfilling the information needs.

HCI 5203  Leadership and Organizational Behavior (3)  
This course will examine the challenges associated with leading and managing organizational behavior within complex situations in a health care setting. Leadership/Organizational Behavior focuses on developing skills for identifying behavioral and organizational problems, creating alternative solutions, making and communicating decisions and winning commitment for your position. We will be looking for nuances of behavior that will lead to a higher level of understanding and hence more effective leadership – nuances of adapting to different management styles, understanding the boss or subordinates, coping with conflict, developing career strategies and meeting other leadership
challenges. This course will also focus on understanding the general theme of how health care organizations' behave. Students gain an understanding of how individual values, preferences and behaviors integrate with organizational policies and dynamics. Students are also exposed to organizational processes and behaviors that ultimately contribute to both organizational success and employees' production and satisfaction.

HCI 5213 **Operations in Health Care Organizations (3)**
Operations management involves designing, operating and improving the processes whereby any firm (such as a hospital) transforms raw materials (like sick patients) into finished goods (like cured patients). A key role of operations is to manage the flow of work through these process steps, with the goal of closely matching supply with demand, while enhancing quality and minimizing cost. Thus we develop a framework for analyzing process flows in within a form and across firms, applying the principles to service industries.

HCI 5223 **Leading Teams in Health Care Organizations (3)**
Teams are one of the most basic and enduring organizational groups. Teams have more talent and experience, more diverse resources and greater opportunity than individuals. Organizations are using teams to: develop new products; solve difficult problems; improve performance; develop ideas for new business; and deal with complex projects. This course will examine the design and leadership of teams in an organization. We will focus on the effectiveness of teams, individual behavior and the dynamics of interpersonal relationships.

HCI 5903 **Consulting Project (3)**
Learners will serve as consultants for an area business and will be expected to develop solutions to current problems and issues. Students will gain invaluable, hands-on experience while working on actual business projects, interact with area business professionals and be advised by a faculty member. Guidance will be provided regarding consulting techniques and methodology. A formal report will be delivered at the conclusion of the project that details findings, conclusions and recommendations.

ISEC 5113 **Introduction to Information Security (3)**
This course is designed to communicate the fundamental concepts of risk based Information Security Planning and introduce to the student the importance of securing all aspects of the organization. This includes everything from the Physical plant, to human resources, to databases, networks and all communications that concern the transmission of data/information.

Graduate level elective courses will be offered Summer 2012 from the areas of business, IT or health sciences. For additional elective course descriptions, consult the Graduate Program Director of the Master of Health Care Informatics.

**Health Care Informatics Faculty**

Elizabeth Breeden, B.A. (University of Tennessee), M.S. (Austin Peay State University), B.S. Pharmacy (Samford University McWhorter School of Pharmacy), Director of Graduate Studies in Health Care Informatics, Assistant Professor of Pharmacy Practice

Donald R. Geddes, B.B.A. (Middle Tennessee State University), M.S. (Middle Tennessee State University), Ph.D. (Southern Illinois University), Assistant Professor and Chair of Computing and Information Technology