

UNIVERSITY of LOUISVILLE[®]
Health Sciences Center

School of Public Health and Information Sciences

**Clinical Research Epidemiology and
Statistics Training (CREST) Program**

Student Handbook

DISCLAIMER: The material presented in this student handbook was developed in concordance with the graduate student catalog developed by the Graduate School. The information presented here is specific to the CREST Program only and is only applicable to that program. Should items not be contained herein, the Graduate School Catalog will govern items not covered.

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Welcome to the Clinical Research, Epidemiology and Statistics Training (CREST) Program at the University of Louisville School of Public Health and Information Sciences (SPHIS)! This Handbook is a compilation of information you need to know about the program, what you can expect from us and what we expect from you. If you have questions not addressed in this handbook, please contact the CREST Program Coordinator by phone or e-mail. We will find an answer for you. We are here to assist you if you have any problems, personal or academic, in the program. Do not hesitate to contact us.

CREST Program —CONTACT INFORMATION

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In addition to the staffing within the CREST Program, there are several others that comprise the CREST Program Committee. Members of the Program Committee include:

Barry Wainscott, M.D., MPH - Department of Health Management and System Sciences
Richard Baumgartner, PhD. - Department of Epidemiology and Clinical Investigative Sciences
Jane Goldsmith, PhD. - Department of Bioinformatics and Biostatistics
Robert Jacobs, PhD. - Department of Environmental and Occupational Health
Ruth Carrico, PhD, RN - Department of Health Knowledge and Cognitive Sciences

The Program Committee, in conjunction with the staff of the CREST Program, aid in the planning and implementation of program.

This handbook is organized in several sections: General Information, University (UofL) Services, University (UofL) Graduate Student Policies, CREST Program Services, CREST Academic Policies. Should you have any questions regarding any information contained within these pages, please contact the program staff.

PROGRAM OVERVIEW

The School of Public Health and Information Sciences at the University of Louisville offers the Clinical Research, Epidemiology and Statistics Training (CREST) Program (CREST). This two-tiered program consists of a Graduate Certificate in Clinical Investigation Sciences and an MSc in Epidemiology-Clinical Investigation Sciences. The MSc can be done jointly with the MD degree.

The Graduate Certificate in Clinical Investigation Sciences provides individuals with skills required for a career in a clinical research setting. The MSc degree program provides physicians, dentists, nurses and other health professionals an opportunity to acquire the clinical research skills necessary for a career in an academic health center.

The CREST curriculum integrates biostatistical and epidemiologic methods in a problem-based learning format with additional instruction in bioethics, health economics, health services and outcomes research and social and behavioral science. Students pursuing the master degree take didactic courses while they engage in mentored and independent research that culminates in the preparation of a professional paper.

Graduate Certificate in Clinical Investigation Sciences

The Graduate Certificate in Clinical Investigation Sciences includes 16 credit hours of didactic instruction with required courses in epidemiology, biostatistics, the responsible conduct of research, evaluating the health care literature and an elective in behavioral and social science, health economics or health services and outcomes research plus a 1 credit hour research paper. The Certificate Program can be completed in 1 year and is designed for those who want a career in a clinical research setting as well as those who want to upgrade their research skills. Courses taken in the certificate program can be applied toward the MSc degree.

Schedule of Courses for the Graduate Certificate in Clinical Investigation Sciences

Fall Semester

PHCI 611- Introduction to Clinical Epidemiology (2)
PHST 600 – Introduction to Biostatistics (3)

Elective Courses (Select One)

PHCI 631 - Behavioral and Social Science in Health Care (2)
PHCI 650 Medical Decision Analysis (2)
PHCI 602 - Health Services and Outcomes Research (2)

Spring Semester

PHEP 602 – Epidemiological Methods (3)
PHCI 629 – Special Topics: Epidemiological Methods (1)
PHCI 624 - Clinical Trials I (2)
PHCI 632 - Ethical Conduct of Health Research (2)

Summer Semester

PHCI 601 - Evaluating Health Care Literature (1)

PHCI 699 – Mentored Research Paper (1)

Masters of Science: Epidemiology, Clinical Investigation Sciences

The 25 hours of required course work provide students with a broad base of knowledge in epidemiologic research methods, biostatistics, bioethics and the methodologies of health services and outcomes research. Early in their first semester MSc students are required to identify a faculty member who will serve as a mentor. The MSc in Epidemiology-Clinical Science can be completed in two years. However, a three-year option is also available.

Two Year MSc Option

Year 1

Summer Semester

PHCI 501 – From Bench to Bedside: Introduction to Clinical Research (1)*

Fall Semester

PHCI 611 - Introduction to Clinical Epidemiology (2)

PHST 600 – Introduction to Biostatistics (3)

PHCI 631 – Social and Behavioral Science in Health Care (2)

PHCI 610 – New Drug and Device Development (2)

PHCI 699 – Mentored Research

Spring Semester

PHEP 602 – Epidemiological Methods (3)

PHCI 629 – Special Topics: Epidemiological Methods (1)

PHCI 624 – Clinical Trials I (2)

PHCI 632 – Ethical Conduct of Health Care Research (2)

PHCI 699 – Mentored Research

Year 2

Summer Semester

PHCI 601 - Evaluating the Health Care Literature (1)

PHCI 699 - Mentored Research

Fall Semester

PHCI 625 – Clinical Trials II (2)

PHCI 650 – Medical Decision Analysis (2)

PHCI 602 – Health Services and Outcomes Research (2)*

PHCI 699 – Mentored Research

Spring Semester

PHCI 699 – Mentored Research

* = a 3 hour course may be substituted for the electives of PHCI 501 and PHCI 602 with the approval of the Program Director.

Three Year MSc Option

Year 1

Fall Semester

PHCI 611 – Introduction to Clinical Epidemiology (2)

PHST 600 – Introduction to Biostatistics (3)

PHCI 699 – Mentored Research

Spring Semester

PHEP 602 – Epidemiological Methods (3)

PHCI 629 – Special Topics: Epidemiological Methods (1)

OR

PHCI 624 – Clinical Trials I (2)

PHCI 699 – Mentored Research

Year 2

Summer Semester

PHCI 501 – From Bench to Bedside: Introduction to Clinical Research (1)*

PHCI 699 – Mentored Research

Fall Semester

PHCI 610 – New Drug and Device Development (2)

PHCI 631 – Social and Behavioral Science in Health Care (2)

PHCI 699 – Mentored Research

Spring Semester

PHCI 632 – Ethical Conduct of Health Care Research (2)

PHCI 624 – Clinical Trials I (2)

Year 3

Summer Semester

PHCI 601 – Evaluating Health Care Literature (1)

PHCI 699 – Mentored Research

Fall Semester

PHCI 625 – Clinical Trials II (2)

PHCI 650 – Medical Decision Analysis (2)

PHCI 602 – Health Services and Outcomes Research (2)*

PHCI 699 – Mentored Research

Spring Semester

PHCI 699 – Mentored Research

* = a 3 hour course may be substituted for the electives of PHCI 501 and PHCI 602 with the approval of the Program Director.

Joint MD-MSc Degree Program

Students admitted to the University of Louisville School of Medicine can pursue a joint MD-MSc degree program with only one additional year of study beyond the traditional four-year medical school curriculum. Medical students pursuing the joint MD-MSc degree begin the MSc course work after completing one year of clinical training (i.e., the third year of medical school). Joint degree students spend the fall and spring semesters of their fourth year and the summer and fall semesters of their fifth year completing the MSc course work. They complete their professional paper/thesis for the MSc degree and their clinical rotations for the MD degree in the spring semester of their fifth year. Graduates of the program can expect to be highly competitive for residency and fellowship positions at prestigious institutions.

MD-MSc Option:

M4 Year, Fall/Summer Semester Graduate School

Choice of 3, all 4 weeks, 5 credits each

- In-Patient Medicine (IPM)
- AHEC
- Neurology
- In-Patient Surgery (IPS)
- Ambulatory Care (AR)
- Ambulatory Primary Care (APC)

AND REQUIRED

- Anesthesiology, 2 weeks, 2 credits

M4 Year Fall/Fall Semester Graduate School

PHCI 611 - Introduction to Clinical Epidemiology (2)
PHST 600 – Introduction to Biostatistics (3)
PHCI 631 – Social and Behavioral Science in Health Care (2)
PHCI 610 – New Drug and Device Development (2)

M4 Year, Spring/Spring Semester Graduate School

Clinical Electives (2-10 credits). Need to take a minimum of 2 credits.

PHEP 602 – Epidemiological Methods (3)
PHCI 629 – Special Topics: Epidemiological Methods (1)
PHCI 624 – Clinical Trials I (2)
PHCI 632 – Ethical Conduct of Health Care Research (2)

M5 Year, Fall/Summer Semester Graduate School

PHCI 601 – Evaluating Health Care Literature (1)
PHCI 501 – From Bench to Bedside: Introduction to Clinical Research (1)*

M5 Year, Fall/Fall Semester Graduate School

PHCI 625 – Clinical Trials II (2)
PHCI 650 – Medical Decision Analysis (2)
PHCI 602 – Health Services and Outcomes Research (2)*
PHCI 699 – Mentored Research (6 credits)**

***The student has the choice of when to take these hours based on what financial assistance they want to receive. Options 1) take all in the fall 2) take all in the spring or 3) split the hours up between semesters. If all hours are taken in the fall the student must register for 1 hour of masters candidacy in the spring.*

M5 Year, Spring/Spring Semester Graduate School

Choice of 3 and remaining electives, all 4 weeks, 5 credits each

- In-Patient Medicine (IPM)
- AHEC
- Neurology
- In-Patient Surgery (IPS)
- Ambulatory Care (AR)
- Ambulatory Primary Care (APC)

MSC Courses - See above**

USMLE Step 2 exam must be scheduled no later than block 8 of the M5 year.

* = a 3 hour course may be substituted for the electives of PHCI 501 and PHCI 602 with the approval of the Program Director.

GENERAL UNIVERSITY INFORMATION

UNIVERSITY ADMINISTRATION

General university administration can be found at the main university website <http://www.louisville.edu>. Information about the University central administration, financial aid office, bursar's office, can all be accessed through the main university website.

IDENTIFICATION CARDS

U of L identification cards will be issued during new student orientation. Lost identification cards must be reported as soon as possible to the Cardinal Card Office <http://www.louisville.edu/campuscard>. All found Cardinal Cards should be immediately returned to the Campus Card Office. If you have lost your card or it has been stolen, contact the Campus Card Office at (502) 852-7520 to see if you're Cardinal Card has been turned in. If you have a meal plan, immediately contact the Campus Card Office to have a hold placed on your meal plan account to restrict further use. If you have used your card at the University Libraries you should also alert them of the missing Cardinal Card. If the theft occurred on campus, it should be reported to the Department of Public Safety at (502) 852-6111.

INCLEMENT OF WEATHER

In the event of inclement weather please listen to local radio and television stations to determine if the U of L campus is open. The U of L website <http://www.louisville.edu> and telephone information line (502-852-5555) broadcast delays or closings. If U of L employees are sent home due to inclement weather during the course of a work day then the campus will remain closed during evening hours.

PARKING

Please refer to the website below for parking requirements and information http://www.louisville.edu/admin/dps/parking/parking_home.htm

EMAIL AND BLACKBOARD

NetMail This is an email account assigned to every student at the university. NetMail is a basic email program; you can send and receive email, add attachments and save and sort your mail. It is virus protected. **NetMail is where you will receive important information from the university or your professors and you are REQUIRED to use it if you are taking an online class.**

To access NetMail go to: <https://www.netmail.louisville.edu/>. Log in using **userID** and **password** the click **Start Netmail**.

Students within the CREST Program will also have **GroupWise** email accounts.

TECHNOLOGY FEES

The SPHIS has a technology fee of \$750 per year (\$375 for fall semester; \$375 for spring semester). Students enrolled prior to June 2004 are exempt from the fee and those enrolled between June 2004 and June 2005 will pay \$500 per year (\$250 fall and spring semesters) for the duration of their academic studies in the SPHIS. Students enrolled after July 1, 2005 will pay \$750 per year

An international student service fee of \$50 for each semester (fall and spring) and \$25 for the summer is charged for international students.

COUNSELING SERVICES

Counseling services are available to all full-time students through the UOFL Student Mental Health Services. These services offer personal assessment, short-term individual counseling, crisis intervention, and referral for psychiatric services or long-term counseling. They are available to help students. <http://campuslife.louisville.edu/counseling/>

COURSE REGISTRATION

The University of Louisville uses a touch-tone and an on-line web registration system. The schedule of courses for each term may be reviewed at <http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm>. A student must participate in touchtone or on-line web registration. No in-person registration is permitted.

Students must first contact the CREST Program Coordinator to discuss course selections.

- If a student is in good academic standing and admitted UNCONDITIONALLY, he/she may proceed with the registration process. If, however, a student has conditions on his/her admission or is on academic probation, he/she must contact the Graduate Dean's office for further instructions;
- A student may add courses through the touch-tone or on-line system through the first day of classes;
- Students may also drop or withdraw from courses by touch-tone or on-line.

For more formation, consult: <http://www.louisville.edu/student/services/registrar>.

Within SPHIS, the Student Services addresses all items pertaining to the registration process for all degree programs housed at SPHIS.

STUDENT RECORDS

The privacy and confidentiality of all student records are preserved in accordance with applicable laws and the Universities records policy. All official student records are housed in and maintained by the Student Services at SPHIS.

UNIVERSITY LIBRARIES

The University library system consists of the Main Library, the Fine Arts Library, the Law Library, the Music Library, the Health Sciences Library, the Engineering, Physical Science, and Technology Library and the University Archives and Records Center. The libraries' collections are accessed through the Minerva online catalog at: <http://library.louisville.edu/>

The Kornhauser Health Sciences Library, located in the downtown medical center on the Health Science Center campus, is a Regional Resource Library of the National Network of Libraries of Medicine, representing a significant resource for the entire health sciences community of the Louisville metropolitan area and the western half of Kentucky. Additional information on the Kornhauser library can be found at: <http://library.louisville.edu/kornhauser>.

HEALTH INSURANCE

U of L offers a Comprehensive Medical Plan to meet student health care needs. This Comprehensive plan is a major medical and hospitalization plan which has coverage for both inpatient and outpatient services. Similar to an HMO, the Health Services Office (HSO) serves as the primary care provider and a referral is necessary for most services rendered outside of the Student Health Services. Purchase of the Comprehensive Plan provides coverage for physician visits at the HSO which has two clinical locations.

To be eligible for coverage under the Comprehensive Plan, students must be one of the following:

- an undergraduate student taking 6 or more credit hours
- a graduate student taking 3 or more hours or degree candidate,

GTA, GTS and GRA students receiving a stipend check from the University receive the Comprehensive Plan coverage as a benefit of their employment. If you believe you are eligible for this benefit please check with your department to verify coverage.

Dependents of insured students are eligible for the Comprehensive Medical benefits for an additional premium. Insured spouses are eligible for coverage at the HSO facilities. Children under the age of 18 are not eligible for the Health Services benefit and cannot be seen in the HSO.

The Belknap HSO is located on the main Campus, 2207 South Brook Street, in the Student Health & Counseling Building, between the Student Activities Center and the Post Office. The Health Sciences Center HSO is located at 550 South Jackson Street, Ambulatory Care Building (ACB) 1st Floor.

For more information and appointments, please call the Belknap Office at (502) 852-6479 or the HSC Office at (502) 852-6446. The Insurance Advocate can be reached at (502) 852-6519.

DIVISION OF STUDENT AFFAIRS

The mission of the division of Student Affairs is to provide students with effective services and developmental opportunities that augment their academic experience and enhance the quality of their lives while enrolled at the University of Louisville. The Vice President for Student Affairs, located at 203 Grawemeyer Hall, administers and oversees non-academic services and programming for students.

The Division of Student Affairs includes:

Student Services

Student Services Administration, Admissions, Orientation, Testing Services, Financial Aid, Registrar, Enrollment Systems, Commencement, Residency, and Student-Athlete Certification.

Student Life

Housing and Residence Life, Intramural and Recreational Sports, Student Activities, Greek Life, Recognized Student Organizations, Student Government Association, ACCESS (Adult Services), Service Learning, Swain Student Activities Center Administration, Student Disciplinary Services, Counseling Center, Career Development Center, and International Service Learning Program.

DISABILITY RESOURCE CENTER

The Disability Resource Center coordinates services and programs for students and prospective students with disabilities. Accommodations and support services are individualized, depending on the needs of each student. Services and programs are designed to assure access for qualified students with disabilities to all programs and activities of the university. Students are strongly encouraged to make contact with the Disability Resource Center upon program acceptance to assure adequate time to implement support services.

UNIVERSITY (U OF L) GRADUATE STUDENT POLICIES

ACADEMIC POLICIES, PROCEDURES AND REQUIREMENTS

The general policies, procedures and requirements are outlined in the U of L Graduate School Catalog. These requirements must be consulted, so that the graduate student may be fully apprised of the conditions he/she must meet in order to receive the MSc degree.

The policies and regulations described in this handbook and the Graduate School catalogue cannot be superseded or invalidated by either oral or written agreement with faculty, staff, or administrators, unless such agreement is confirmed in writing by the Dean of the Graduate School.

SPECIAL NOTE: Students are **STRONGLY** encouraged to read and familiarize themselves with the Graduate Catalog. The catalog can be found at <http://graduate.louisville.edu/catalog>.

UNIVERSITY RULES AFFECTING STUDENTS.

Rules and Policies affecting students are published in the Student Handbook at: <http://campuslife.louisville.edu/cloffice/handbook/>. Included in the Student Handbook are the following: Academic Grievance Procedure, Code of Student Conduct, Code of Student Rights and Responsibilities, Policy on Consumption of Alcoholic Beverages for Recognized Student Organizations, Hazing and Initiation Activities Policy, Non-academic Grievance Policy and the Sexual Harassment Policy. Several items will be covered in detail during New Student Orientation.

STUDENT RESPONSIBILITY/HONOR CODE

Enrollment in the various graduate programs constitutes a commitment to abide by the practices and regulations of U of L as stated in catalogs or other published material. Enrollment also constitutes acceptance of the responsibility to know all academic requirements and a commitment to abide by the Honor Code as published in the U of L Student Handbook.

APPEALS AND GRIEVANCE

The CREST Program follows the procedures for academic grievance as published in The Redbook, Chapter 6, and Article 8. Any student considering filing such a grievance is advised to consult with the Graduate School Student Advocate for advice and information. Information about the student grievance policies can be found at <http://www.louisville.edu/provost/redbook/contents.htm>

The Graduate School Academic Grievance Committee has the power to hear all grievances of graduate students involving academic matters other than substantive grade appeals. "Academic matters are defined as those concerning instructional activities, research activities, activities

closely related to either of these functions, or decisions involving instruction or affecting academic freedom" (The Redbook, Section 6.8.3). All grievances should be pursued through the Graduate School Academic Grievance Committee. See the Graduate Student catalog for more information.

Student Grievance Officer. The Student Grievance Officer is the person to whom one may bring a problem, grievance or complaint in order to receive an objective hearing. The Student Grievance Officer addresses matters of both academic and non-academic concerns. One of the major goals of the Student Grievance Officer is establishing understanding among students, faculty, staff and administrators. This service is available to all students. Voice mail is available 24-hours a day at 852-6102, but email (joe.steffen@louisville.edu) is the preferred method of contact.

GRADES AND GRADING POLICIES

The graduate school utilizes a plus/minus grading system. It is at the discretion of the instructor to determine the use of plus/minus grading. The following is the grading scale:

Grade Quality Points

A+	4.0
A	4.0
A-	3.7
B+	3.3
B	3.0
B-	2.7
C+	2.3
C	2.0
C-	1.7
D+	1.3
D	1.0
D-	0.7
F	0.0

C Grades.

The student's academic department may approve six hours of coursework in which a grade of "C+, C, or C-" was received to count toward the completion of degree requirements. Approval of the Graduate Dean must be secured in order to count additional hours with any grade of C in any course required in the degree program. In no case may more than nine hours of "C" be used to fulfill graduate degree requirements. **The CREST Program adheres to this policy.**

Other Grades

- **"W"** - means Withdrew and carries no quality points. **No student may withdraw from any course after the published drop date.** In exceptional cases, the dean may grant a student's request to withdraw from courses because of illness or conditions beyond the student's control. Poor performance is not a valid reason to grant an exception.
- **"I"** - means Work in Course Incomplete. **If the work is not completed by the end of the next term, regardless of whether the student is enrolled, the "I" automatically becomes an "F".**
- **"X"** - means course work has not been finished because of the nature of the research or study involved, e.g., thesis work. This grade is reserved for courses that by their nature extend beyond one semester. This grade may not be used for coursework that is confined to a semester but not completed by the student.

Academic Course Loads:

- **Full-and Part-Time Study.** Full-time study is defined as being 9 hours of credit during a regular semester or 6 hours during the summer term or in candidacy status. To be considered in full-time residency for one year, a student must be registered for 9 hours in each of two consecutive semesters.
- **Course Loads.** The maximum number of hours that may be taken in a regular semester is 12; or 15 hours if 3 or more hours are research credit. The maximum number of hours that may be taken in the summer session (both terms) is 12, including research hours.
- **Overloads.** Any student who wishes to enroll in more than the maximum number of hours ***must obtain the permission from the Director of the CREST Program who will then submit the request to the Dean of the Graduate School who has final approval.*** Permission to enroll for excess hours is rarely granted.
- **Satisfactory Progress.** All graduate students are expected to make steady and satisfactory progress toward the completion of degrees. Students who fail to enroll for a period of more than 12 months will be considered to have withdrawn from the program. Students who seek to return after such a period of time are required to apply to their departments or programs for readmission. Based on the request of the department or program, the Dean of the Graduate School will consider the student for readmission.

Transfer of Credit

Earned graduate credit may be transferred from accredited institutions that offer advanced degrees. Students may transfer a maximum of 6 credit hours provided that these additional hours are not credit earned by extension, thesis or practicum and provided also that the residency requirement of 24 semester hours is maintained by the addition of University of Louisville credits to the total program.

The course work being considered for transfer must have been taken while the student was enrolled in an accredited graduate or professional school and must be evaluated by the Director of the CREST Program. To request transfer credit students must provide course syllabi and official transcripts for each course. Only courses in which the student earned grades of "B" or

better will be considered for transfer. Hours and quality points earned at other institutions are not included in the calculation of a student's GPA.

Credit earned more than five years prior to the student's application to the Graduate School of the University of Louisville will not be considered for transfer.

Courses in which grades of "P" were earned must have the approval of the Graduate Dean in order to be transferred. In case of question regarding the transferability of course work, the Graduate Council is empowered to decide.

Transfers of credit from constituent schools and colleges of the University of Louisville are not subject to the above limitations on transfers but require the recommendation of the student's department and the approval of the Dean of the Graduate School.

WITHDRAWAL FROM COURSES

No student may withdraw from any course after the published drop date. In exceptional cases, the dean may grant a student's request to withdraw from courses because of illness or conditions beyond the student's control. Poor performance is not a valid reason to grant an exception.

WITHDRAWAL FROM PROGRAM

Students may withdraw from the CREST Program at any time and receive a proportionate refund for courses being taken during the term of withdrawal based on the *UOFL Student Withdrawal Refund Policy*. At the time of withdrawal, a student must notify the program office of the decision to withdraw. The withdrawal process will be facilitated by the program office and Student Services. Other items may be required for the completion of the withdrawal process.

READMISSION

When a student has been dismissed from the program for failing to meet the academic requirements, readmission will be considered only with a recommendation from the admissions committee and program director. The student's petition for readmission should be supported by a statement from the faculty/program director that justifies a readmission decision. The statement should clearly set forth conditions that the student must meet in order to establish good standing. Students dismissed from the program for honor code violations will not be considered for readmission.

STUDENT LEAVE OF ABSENCE

A student who has been accepted into a graduate program is expected to remain in continuous enrollment, either full-time or part-time, throughout his/her matriculation. Students who fail to enroll for a period of more than 12 months will be considered to have withdrawn from the program (see above). However, if circumstances arise that may cause an interruption in graduate study, a student may apply for a leave of absence by requesting such a leave from the Dean of the Graduate School. The letter of request must indicate the dates on which the requested leave is

expected to start and end. The student's request must be accompanied by a letter of support from the graduate program director or coordinator or from the department chair. A requested leave cannot exceed one year; however, under extreme circumstances, a second, subsequent request may be granted by the Dean of the Graduate School.

If a leave is granted, the student may NOT enroll in any classes, including independent study, seminars, distance learning, thesis research, or dissertation research. A student on official leave of absence is not required to pay tuition, fees, or a candidacy status fee; but is not entitled to any services from the university during the leave, including mentorship from faculty.

No degree will be granted to a student on official leave of absence. The student must re-enroll in the next term following the conclusion of the leave and be enrolled in the term in which a degree is granted. A leave of absence does not relieve a student from adherence to policies regarding residency and candidacy (except that the time limit for candidacy may be extended, as indicate in the previous paragraph).

CREST PROGRAM SERVICES

PROGRAM OFFICE HOURS

The Program Office is located on the 4th floor of the K-building, Room 4048. The staff of the CREST Program is typically available M-F 8a to 4p for any student concerns. Please call 852-3289 to reach the Program Office. Appointments are *strongly* encouraged and preferred.

FACULTY OFFICE HOURS

During the semester in which faculty members are teaching courses in the CREST Program, he or she will have regular office hours and will inform students of these hours in the course syllabus.

ADVISING

The Program Coordinator will advise students each semester. Students that have special circumstances may be required to meet with the Program Director.

MENTORING

Each student is required to have a mentor by the end of their first semester. A mentor is generally someone who can assist you in your professional development and may have similar research interests. A more detailed description is available in the CREST Student Handbook. The mentors name must be submitted to the Program Coordinator. Anyone who has not submitted a mentor will have a hold placed on their record and registration for the subsequent semester will not be permitted.

CAREER COUNSELING

A university-wide career development center is available to all students. This center is located on the Belknap campus. <http://campuslife.louisville.edu/career/students/>. U of L also provides assistance in preparing resumes. Appointments can be made at: <http://coldfusion.louisville.edu/webs/a-s/writingcenter/>

FORMS OF COMMUNICATION: GROUPWISE AND BLACKBOARD

The primary vehicle for announcements will be the GroupWise email system. Prior to or during New Student Orientation students will have GroupWise accounts created for them by U of L Information Technology. Students are strongly encouraged to become familiar with and use these email accounts, as alternative emails **WILL NOT** be used for any programmatic communications.

For courses, the Blackboard course system will be the primary vehicle for communication. All courses within the CREST Program will utilize Blackboard to some degree. The extent of that utilization will be determined by the individual course director.

STUDENT ACTIVITIES

There are growing activities for students in the CREST Program to engage in. The SPHIS Student Association, the governing student body organization, and the Student Chapter of the Kentucky Public Health Association are open to student participation. There is faculty input for each, with participation possibly involving some type of membership fee. See the Program Coordinator for more details.

CREST PROGRAM POLICIES

SPECIAL NOTE: For any information not presented or discussed in this section, the Graduate Catalog will serve as the primary policy document. Additionally, the SPHIS Student Catalog contains all items pertaining to course offerings within the program. For course offering questions, please consult the SPHIS Student Catalog.

STUDENT RESPONSIBILITIES

It is the responsibility of the student to become familiar with and observe all policies and requirements of the Graduate School http://graduate.louisville.edu/prog_pubs/catalog_index.html and of the CREST Program. Policies, procedures, and requirements are subject to change, and it is the responsibility of the graduate student to keep her/himself apprised of current regulations. All students must respond to official notices issued by administrative offices and instructors, whether these notices are posted on official bulletin boards, are sent through postal, or e-mail. A student's status is not dependent upon a written notification but is a consequence of circumstances in the admission process and the student's academic performance. Written notification is simply a verification of status.

CREST PROGRAM ACADEMIC POLICIES

Academic Advisor

The Program Coordinator will advise students each semester. Students that have special circumstances may be required to meet with the Program Director.

Academic Reviews

The CREST Program Coordinator will provide an academic review to the student annually prior to December 15. The purpose of the review is to map out subsequent semesters course requirements, discuss any problems and answer any questions the student may have.

Mentor

Each student is required to have a mentor by the end of their first semester. A mentor is generally someone who can assist you in your professional development and may have similar research interests. A more detailed description is available in the CREST Student Handbook. The mentors name must be submitted to the Program Coordinator. Anyone who has not submitted a mentor will have a hold placed on their record and registration for the subsequent semester will not be permitted.

Tips for choosing a mentor:

1. The goal of the mentoring relationship should be to assist the junior individual in developing an independent professional/academic identity.
2. Choosing a mentor or a mentoring team is an important and serious endeavor. Your mentors will have an important role in your academic progress. Therefore, it is critical that you understand the role of a mentor, choose a mentor carefully and make sure your mentor and you share the same expectations of your relationship.

3. The characteristics of a mentor are outlined in Table 1 below. Many times, no one individual can fulfill all the roles of a mentor. This may be especially true if your research interests span several academic disciplines. In this case you may choose to have a mentoring team composed of individuals with complimentary strengths. It is still useful to identify a primary mentor, however, to whom you can go for general professional advice.
4. The mentorship relationship is a gradual interactive process that builds on interpersonal relationship. For this reason, it is important that you feel positively about the person you choose to be more mentor. Most individuals identifying a mentor will have to interview with several faculty members before finding the optimal mentor.
5. Once you have identified someone you would like to be your mentor, ask the individual if they would be willing to fulfill that role. If they agree, you should make sure that they and you are clear about expectations regarding the mentorship relationship. Your role as mentee is outlined in Table 3.
6. When your proposed mentor has accepted the role of serving as your mentor, please notify the CREST Program Coordinator. The Coordinator will keep a record of all mentors and notify mentors regarding CREST mentorship meetings and training programs. All internal mentors will be required to attend annual/bi-annual mentorship meetings.

Characteristics of Mentors¹	
Coach, counselor and teacher	The mentor teaches cognitive knowledge and skills, inculcates professional values and ethical preparedness, provides advice, encouragement, and criticism, facilitates learning appropriate risk-taking behavior, and strengthens communication, professional and institutional skills.
Advocate and guide	Fosters involvement in research and scholarly activity, facilitates entry into and advancement within careers, and provides links to scientific and scholarly societies.
Available, generous, not exploitative	Accessible, in terms of time and emotion, a contributor to the literature, self-confident, patient, mature; neither overprotective, controlling, harshly critical nor manipulative

Table 2. Benefits of Mentorship²

- More likely to have been rewarded a research grant
- More likely to experience career satisfaction

Table 3. Characteristics of a Mentee

Eagerness to learn and a respect and desire to learn from the person selected as the mentor;

- Seriousness in the relationship;
- Take the initiative in the relationship, especially in the beginning - be politely insistent about your desire for a mentor;
- Flexibility and an understanding of this senior professional's demanding schedule (you'll be there one day);
- Promptness for all appointments;
- Feedback, even if nothing is requested;
- Interest: your mentor will ask questions about your personal and professional life in an effort to get to know you as a whole person - do the same with your mentor. He or she also has a life outside of the institution and knowing something about it can help you communicate better;
- Your mentor is there to help you in your career by pointing out the stepping stones, not being one; never forget the time and effort this person is taking to offer you a smoother path on the way to success.

A mentor is a unique individual to you: neither friend, nor colleague, but something of a combination of these and more. Because the relationship differs from those you have with others in your department, you may feel more relaxed and less constrained by professional protocol. This is acceptable to a point, but make certain that you respect the relationship. Unless otherwise told, consider that the information your mentor shares with you as between the two of you.

1. Collins J, Meyer R and Dawson J. Getting residents involved in research: a challenge in the era managed care. *Academic Medicine* 1999;74:1155-1157.
2. Gray J. Mentoring the clinician-scientist. *Clin Invest Med* 1998;21:279-282.

Student Responsibilities: It is the responsibility of the student, together with their academic advisor, to monitor progress toward the requirements of the program, the learning objectives of the program and the individual educational goals of the student.

Academic Review Process:

The Program Coordinator will maintain steady contact with students and program faculty to assess student performance and progress.

- At the mid-point of each semester, the CREST Program Director will request that each course director identify any students that are at risk of failing their course.
- At the end of each semester, the CREST Program Director will review each student's grades to determine if any student is to be placed on academic probation.
- For those students identified at academic risk, the Program Director, in consultation with the Program Coordinator and specific Course Director will discuss their academic performance and, if necessary, develop a remediation plan.

Remediation Plan. The remediation plan may require any of the following: 1). additional course work; 2) special studies or projects focused on addressing the areas of academic or non-academic skills; or 3) other activities or actions deemed necessary to enable the student to perform at an acceptable level. Remediation for specific courses must be approved by the

instructor for each course. The Program Director will place a copy of the remediation plan in the students file.

Remediation must be accompanied by the student's active participation in the educational program as demonstrated by regular attendance, individual initiative, and utilization of resources available. Decisions regarding remediation will be made on an individual basis after considering all pertinent circumstances, review of the academic record, and consultation with the student's academic mentor, course director, and the CREST Program Director.

Academic Standing

- **Good Standing** An MSc graduate student is in good standing when his/her graduate grade point average is 3.0 or higher. Graduate grade point average includes all coursework listed on a graduate transcript. A student must be in good standing in order to receive their degree.
- **Academic Probation** An MSc student who has a graduate GPA which falls below a minimum level of academic quality (3.0 on a 4-point scale) will be placed on academic probation until the student regains a 3.0 average or is dismissed. **Students are ordinarily not permitted to continue on academic probation for more than one semester.** Upon request of the student's academic department, the Graduate Dean may approve continuation beyond a single semester.

GRADING AND GRADING POLICIES

The CREST Program uses the same grading scale as the graduate school. Refer to the University policies section.

- **Pass/Fail Grading Option.** Each department/program has the discretion of extending a Pass/Fail option to any or all of its graduate students and graduate courses. When using the Pass/Fail option for graduate students enrolled in graduate courses, A+ through C- will be passing grades and D+ through F will be failing grades.
- **Changes of Grades.** No changes in grades can be made without a request and explanation on the part of the faculty member giving the grade and the approval of the Director of the CREST Program and the Dean of the Graduate School.
- **Incomplete or Missing Grades.** All incomplete (I) or missing grades will be changed to failing grades one semester after the course was taken.
- **Repetition of Courses for any grade of C.** A student who has received the grade of less than B- may repeat that course upon the approval of the Director of the CREST Program and the Graduate Dean. When a student repeats a course, the grade point average will be calculated on the basis of the last grade earned, although all previous grades will remain on the transcript.
- **Repetition of Courses for grades of D or F.** CREST students making a grade below C- or a grade of fail in a 'Pass-Fail' course must withdraw from the CREST Program until that course (or courses) is offered again. Students may then enroll in that course (or courses) and on successful completion of the course (or courses) continue in the CREST Program. When a student repeats a course, the grade point average will be calculated on

the basis of the last grade earned, although all previous grades will remain on the transcript.

Plagiarism and Cheating - It is expected that a student in the CREST Program will refrain from plagiarism and cheating. Plagiarism and cheating are serious breaches of academic conduct and may result in permanent dismissal. Each student is advised to become familiar with the various forms of academic dishonesty as explained in the Code of Student Rights and Responsibilities in the Student Handbook <http://campuslife.louisville.edu/cloffice/handbook/> . A plea of ignorance is not acceptable as a defense against the charge or academic dishonesty.

Policy on Student Leave of Absence - A student who has been accepted into the CREST Program is expected to remain in continuous enrollment, either full-time or part-time, throughout his/her matriculation. Students who fail to enroll for a period of more than 12 months will be considered to have withdrawn from the program.

However if circumstances arise that may cause an interruption in graduate study, a student may apply for a leave of absence by requesting such a leave from the Director of the CREST Program. The letter of request must indicate the dates on which the requested leave is expected to start and end. The student's request will be accompanied by a letter of support from the Director of the CREST Program and submitted to the Dean of the Graduate School for final approval. A requested leave cannot exceed one year; however, under extreme circumstances, a second, subsequent request may be granted by the Dean of the Graduate School.

No degree will be granted to a student on official leave of absence. The student must enroll in the next term following the conclusion of the leave and be enrolled in the term in which a degree is granted.

COMPLETION OF DEGREE REQUIREMENTS: Candidates for the MSc degree must complete all required academic coursework with a minimum overall Grade Point Average of 3.0 and receive any grade of C in no more than 6 credit hours. A student may repeat up to two courses in which they have received a grade of C+, C or C-. The replacement grade will be used to calculate the overall GPA; however, the original designation of C+, C, or C- will remain on the student's transcript.

ADDITIONAL COURSE/CREDIT HOUR REQUEST

In compliance with graduate school policy, the maximum number of graduate credit hours a student may carry is 12. Students wishing to take more than 12 credit hours must have approval of BOTH the Program Director and Dean of the Graduate School.

Approval of additional credit hours will be considered only after completion of the first semester of the CREST Program. For consideration students must be in good academic standing (GPA >3.0) and not have received a grade below B in any class. In no case will more than 3 additional credit hours be approved for a given semester. Request to take additional credit hours must be at the beginning of the registration period for the semester in which the desired class is offered.

CLASS ATTENDANCE

Though a class roll is not typically taken in courses, students are expected to participate by attending every class possible and by taking responsibility for course material when attendance is impossible. The final class attendance policy is at the discretion of the individual course director and should be specified in the course syllabus.

CLASSROOM ETIQUETTE

To create and maintain an optimal learning environment in the CREST program, it is critical that distractions in the classroom be kept to a minimum. Students are not to be on call during class time, but if this is unavoidable, pagers should be set on "vibrate" prior to students' entrance into the classroom. Those who receive pages should make every effort to keep the distraction of their coming and going to a minimum. Finally, material missed due to absenteeism, lateness and/or responding to pagers is the responsibility of the student.

CITATION GUIDELINES FOR WRITTEN PAPERS

Cited information for all written assignments must be properly documented. Individual instructors may provide specific guidelines for their classes; however, if no guidelines are provided, the guidelines for citations given in **Appendix I** should be used.

COMMUNICATION SKILLS

It is strongly encouraged that students admitted to the CREST Program have knowledge and skills in technical communication, e.g. using computers for word processing, presentations, communications and information retrieval using the Internet. Additionally, written communication knowledge and skills are strongly encouraged. Students lacking such knowledge and skills are expected to obtain training in these subjects prior to or during matriculation in the program. Several university resources are available to students to remediate deficiencies. Contact the CREST Program Coordinator for more information.

MENTORED RESEARCH REQUIREMENTS

CERTIFICATE PROGRAM PAPER REQUIREMENT

The CREST Program requires students in the Certificate Program to prepare a one credit hour research paper. The research paper can be a literature review or a research project. Data collection is not required. If the student is going to continue in the MSc program this paper could serve as foundation work for the thesis or professional paper. The student is required to select a CREST faculty member (see Program Coordinator for list) to supervise and approve the research paper. The content of the paper is at the discretion of the faculty member. Papers should be completed and graded one month prior to commencement – July, November or April.

PROFESSIONAL PAPER REQUIREMENTS

Professional Paper Committee

A committee is required to review and assist you in the development of your professional paper. A minimum of 3 committee members are needed. A member of the SPHIS faculty must serve as the committee chair in order to ensure that professional paper requirements are met. Other members may include someone in the research area, your mentor, etc.

A committee member form requiring committee member signatures can be obtained from the CREST Program Coordinator. The CREST Program Director will then approve or disapprove the form. If the committee is not approved the Coordinator will contact the student.

Professional Paper Options

The CREST Program allows students the option of preparing a professional paper to satisfy the requirements for the MSc degree. The professional paper may be a 1) first authored journal length paper OR (**WITH PROGRAM DIRECTOR APPROVAL**) 2) an R01 type grant application prepared in accordance with NIH requirements. The work does not have to be funded or published in order to receive the degree. Six credit hours of mentored research are awarded upon satisfactory completion of the professional paper.

1. Journal length paper.

In recognition of the collaborative nature of most research projects, students do not have to be sole author of a journal-length paper if they choose this option, but they **MUST** be first author of the paper. The paper should be submitted to their committee chair/advisor at least 30 days prior to graduation. The format of this paper should follow JAMA format guidelines for original contributions, with the exception that there is not a maximum word limit. (http://jama.ama-assn.org/ifora_current.dtl) References are expected to be complete and up-to-date.

2. RO1 type grant application

Work conducted in satisfaction of this requirement should be submitted in printed form, with single-sided pages, 12-pitch type and with 1-inch margins, at least 30 days prior to graduation. This is typically a 25 page document, and a reasonable amount of attachments or exhibits may be included, e.g., to total less than 10 pages. The completed work should contain the PHS-398 cover page, the project summary and description of key personnel (form page 2), the budget justification, and the research plan. *It will not be necessary to complete a detailed budget, but a description of personnel and resources needed to complete the project ("budget justification") must be included. It is not necessary the following: biosketches of investigators and the checklist form. **The research plan narrative is the focal portion of the work.** References are expected to be complete and up-to-date, and may be counted as part of the narrative or an attachment. The forms and instructions are located at the following web address:*

Instructions: <http://grants.nih.gov/grants/funding/phs398/phs398.doc>

Forms: <http://grants.nih.gov/grants/funding/phs398/phs398.html>

MSc Oral Presentation

Students must submit the professional paper to their committee preferably at least thirty days in advance of graduation. Acceptance of the professional paper shall be at the discretion of the committee. The committee shall complete its review of the professional paper at least one week prior to the final oral presentation.

A final oral presentation shall be conducted by the committee and be an open and publicized session. The CREST Program Coordinator will schedule the room and make sure any AV equipment needed is provided. An Oral Presentation Scheduling Form must be obtained from the Program Coordinator. The presentation should be at least a 30 minute power-point presentation covering the content of the professional paper. Following the presentation 20 – 30 minutes should be left for questions from the committee and audience members. All committee members should be present.

The committee has the option of 1) accepting the paper as is with no revisions 2) accepting the paper with revisions and specify a revision date or 3) the paper being unacceptable. The student must give the committee a Professional Paper Outcome Form. The form and a copy of the final paper should be given to the Program Coordinator. The Program Coordinator will contact the Professional Paper Committee Chair to obtain the students grade for the 6 hours of mentored research.

Appendix I

Citation Guidelines

If not specified by an instructor for a specific class or by the CREST Program for final reports, students may use their choice of a standard, accepted citation guidelines. The American Journal of Public Health utilizes the American Medical Association/AMA Citation Style for references, as do other public health, medical, and health-related professions. The source publication is the *American Medical Association Manual of Style: A Guide for Authors and Editors*. 9th ed. Cheryl Iverson (Chair), [et al]. Baltimore: Williams & Wilkins; 1998.

Web sources for the American Medical Association/AMA Citation Style include:

<http://www.liu.edu/cwis/cwp/library/workshop/citama.htm>

<http://www.docstyles.com/amaguide.htm>

<http://healthlinks.washington.edu/hsl/styleguides/ama.html>

<http://www.lib.nus.edu.sg/lion/mlb/citeama.html>

<http://www2.evansville.edu/libweb/style/ama.html>

All web sources were accessed on January 25, 2006.

Students may also utilize other styles, such as that of the American Psychological Association (APA). The following is one of many web sources.

<http://www.lib.nus.edu.sg/lion/s/citeama.html>

Accessed on January 25, 2006.

APPENDIX II

CREST

COURSE DESCRIPTIONS

PHCI 501 From Bench to Bedside; 1 Credit Hour

Prerequisites: None

Designed to introduce students in health professions to the intellectual challenges and rewards of clinical research.

PHCI 601 Evaluating the Health Care Literature; 1 Credit Hour

Prerequisites: PHCI 621 or instructor permission

A review of formal methods for evaluating the medical literature including those of Horowitz and Feinstein; the University of Rochester Clinical Pharmacology Group; Haynes, Sackett and Tugwell; and the Evidence Based-Medicine Group. Meta-Analysis: sources of information, using medical informatics, selection of trials, pooling of data, analyzing pooled data and interpreting results, problems and limitations of meta analysis. Review and evaluation of Cochrane Collaboration Database, The American College of Physician Best Evidence Database and the National Guidelines Clearinghouse supported by the American Medical Association, The Association of American Health Plans and the Agency for Health Care Policy Research. Trainees will be required to participate in their Departmental and Divisional Journal Clubs and to present critical appraisals of current medical literature to other members of the class.

PHCI 602 Health Services and Outcomes Research; 2 Credit Hours

Prerequisites: PHCI 621 or instructor approval

Understanding the multiple dimensions of health status and conceptual basis for measuring health status and outcomes; review and evaluation of the strengths and weaknesses of common measures (i.e., MOS SF-36). Formalization of research questions and design of appropriate methodology including sample selection, measurement, data collection and statistical analysis. Review of recent health services and outcomes research and their public policy implications.

PHCI 605 Survey Research Methods; 2 Credit Hours

Prerequisites: None

This course would discuss alternative methodologies for the collection of health related data including record reviews, face-to-face and telephone interviews as well as the design of data collection instruments, scale construction, and data management.

PHCI 610 New Drug & Device Development; 2 Credit Hours

Prerequisites: None

This course introduces the rationale for, practical aspects of, and new issues in drug and device development as well as the relevant industry and government policies and regulations.

PHCI 611 Introduction to Epidemiology and Public Health; 2 Credit Hours

Prerequisites: None

A comprehensive introduction to public health with an emphasis on a population-based approaches to health issues. Both classical and clinical epidemiology will be presented,

including new definitions for epidemiology from the perspectives of medical care for individuals and the societal aspects of public health. The course will cover health status indicators, including morbidity, mortality, vital statistics and measures of quality of life. General categories of epidemiological measures will be introduced, including measures of frequency (i.e., incidence and prevalence), measures of association (i.e., odds ratio and relative risk), and measures of impact (i.e., population attributable risk). The course will review the global applications of epidemiology and international health through investigations of the leading causes of morbidity and mortality in developed, developing and under developed nations. Epidemiological concepts will be linked with computer exercises to re-enforce learning and practical applications.

PHCI 621 Fundamentals of Biostatistics; 2 Credit Hours

Prerequisites: None

An introduction to descriptive and inferential statistics including measurement theory; Bayesian Probability; sensitivity and specificity; positive and negative predictive value; the philosophy of science and the logic of hypothesis testing (alpha, beta and power); confidence intervals; the Normal, Student's t, Chi Square and F sampling distributions and their application will be covered. Computer assisted instruction and laboratory assignments including an introduction to SAS and SPSS.

PHCI 622 Design and Analysis of Case-Control Studies; 2 Credit Hours

Prerequisites: PHCI 621, equivalent or instructor approval

Advantages and disadvantages of case-control designs, population based controls, matching, sources and types of bias, confounding, statistical methods including Chi Square, log-linear methods, analysis of variance, logistic regression, and McNemar's Test using SPSS and/or SAS. Review and discussion of current representative studies.

PHCI 623 Design and Analysis of Cohort Studies; 2 Credit Hours

Prerequisites: PHCI 621, equivalent or instructor approval

Advantages and disadvantages of prospective and retrospective designs, sources of bias in cohort studies, quality of data in retrospective designs, registries, case loss, controlling for confounders, cross classification and procedural methods, multivariate statistical methods, and applications of the general linear model. Examples using SPSS and SAS. Review and evaluation of current representative studies.

PHCI 624 Clinical Trials I: Planning and Design; 2 Credit Hours

Prerequisites: PHCI 621, equivalent or instructor approval

Phases of trials, experimental designs, inclusion and exclusion criteria, randomization and blinding, the general linear model and mixed and fixed effects repeated measures analysis of variance, intention to treat methods, survival analysis. SAS and SPSS applications will be demonstrated. Review and evaluation of current representative studies.

PHCI 625 Clinical Trials II: Conducting and Evaluating Clinical Trials; 2 Credit Hours

Prerequisites: PHCI 624 or instructor approval

Protocol development; patient recruitment and retention; safety and efficacy; benefit to risk assessment; monitoring and auditing trials; terminating or extending clinical trials; and, regulatory, patent and legal considerations.

PHCI 628 Fundamentals of Biostatistics Computing Laboratory; 1 Credit Hour

Prerequisites: Must be enrolled in PHCI 621 or instructor approval

This course provides students with an opportunity to learn the biostatistical computing techniques and computing programs required in PHCI 621 Fundamentals of Biostatistics. These techniques include graphic presentation of data; paired and unpaired t-tests, analysis of variance, chi square, linear and logistic regression, and various procedures for handling survival data. The computer programs that will be covered will be based upon those in use in the PHCI 621 course (e.g., SPSS, NCSS, SAS, Stata, Stat Exact, etc.).

PHCI 629 Special Topics in Epidemiologic Research Methodology; 1-6 Credit Hours; may be repeated

Prerequisites: None

This course provides an opportunity for students to address specific methodological issues such as bias or confounding or specific statistical problems in clinical research. Topics covered depend upon student interest and faculty availability.

PHCI 631 Social and Behavioral Science in Health Care; 2 Credit Hours

Prerequisites: None

This course introduces public health students to social science perspectives and research on selected topics in health and health care. The course is organized into the following units: the sociology of knowledge and health behavior modeling; the social distribution of health, disease and utilization by social variables (e.g., race/ethnicity, gender, social class, and age); social problems (e.g., violence and substance abuse) as public health concerns; health care industry and policy health behavior and the psychology of illness; international health and health care systems; and, genetics and public health.

PHCI 632 Ethical Conduct of Health Care Research; 2 Credit Hours

Prerequisites: None

An introduction to the ethical principles and topics of medical research and data collection and evaluation. The basic ethical principles to be covered include autonomy, beneficence, rights and justice. Specific topics include: the ethics of treatment of patients versus research on human subjects; informed consent including proxy consent; subject confidentiality in research and publication; honesty and integrity in research design and reporting; the economics and ethics of research incentives; conflicts of interest; justice in selection of research subjects; and, the special problems of pediatric research.

PHCI 650 Introduction to Medical Decision Analysis; 2 Credit Hours

Prerequisites: None

Introduction to decision analysis in health care. Students will learn the principals and application of decision analysis and to use decision analysis software. Topics will include: identification of problems suitable for decision analysis, utility theory and measurement, importance and estimation of probability, creation/analysis of decision trees, including sensitivity analysis, advanced methods of decision modeling, and illustration and presentation of results.

PHCI 651 Introduction to Environmental Health Science; 2 Credit Hours

Prerequisites: None

The course will lay a foundation for students to build upon their medical and scientific background in applying clinical skills in the resolution of real, in-the-field, community based problems. It will utilize problem-based training exercises involving both classroom (laboratory) and in-field epidemiological studies to active community-based environmental issues. The course will cover: Environmental molecular epidemiology; Environmental toxicology principles and practices; Exposure assessment in environmental sciences; Fundamentals of residential health surveillance; Fundamentals of occupational health surveillance; Basic principles, structure and use of computerized ,environmental databases; Chemical carcinogens; Non-carcinogenic environmental disease risks; Air monitoring for toxic substances; principles and practices; Hazardous waste management; Fundamentals of health risk assessment; Fundamentals of industrial hygiene; Evaluation systems for occupational health and safety including vision, hearing, respiratory, ergonomic hazards; and, Interaction of confounding public health issues.

PHCI 661 Introduction to Public Health Informatics; 1 Credit Hour

Prerequisites: None

Training in informatics, a combination of training in information management and in the use, procurement and deployment of associated information technology, is essential to the effective practice of public health. Students in this course will: learn the fundamentals of HTNE- the use of MEDLINE, Ovid, PubMed, and Grateful Med; become familiar with the appropriate roles and domains for computer scientists, epidemiologists, policy makers and programmers in information system development; be able to think in terms of information systems and underlying technologic infrastructure rather than in terms of individual computer applications; have a basic understanding of computer networking; understand the basics of database management systems and current database technology; understand the respective roles of policy and security in protecting privacy and confidentiality; and be able to use the Internet and the World Wide Web effectively, for communications, information acquisition, and information dissemination.

PHCI 699 Mentored Research; 6 Credit Hours

Prerequisites: None

The candidate will choose a faculty member as his/her Mentor and at least two other faculty as his/her advisory committee. Members of the committee must be recognized experts in the candidates area of research and need not be faculty at the UofL Working with the faculty mentor the candidate will develop either a research proposal conforming to the NIH R01 requirements or a completed research paper as sole or senior author suitable for publication. The research proposal or the research paper must be publicly defended before the faculty.