HEALTH INFORMATICS

Graduate Student Guide



UCDAVIS

SCHOOL OF MEDICINE

2012-2013

Acknowledgements

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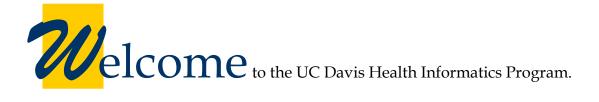
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Congratulations on becoming a part of our academic community! I would like to personally welcome you and thank you for your interest in health informatics and for your commitment to your studies and to UC Davis, a truly world class University.

I urge you to use this comprehensive student guide in beginning your studies and in particular, to follow up on the many relevant links suggested within it. Life as a graduate student can be complicated, and understanding the way that graduate programs work is of great importance to you as you plan your way through to successful graduation. Throughout your career in our Health Informatics Program do take every opportunity you can to develop strong relationships with your peers, your major professor and adviser and the rest of the faculty and staff in our graduate program. You will find your studies will be more rewarding, fun and useful.

If I have not already met you, then I look forward to sitting down with you soon and getting to know you personally. I would like to thank you most sincerely for choosing our program at UC Davis, and I wish you all the very best as you begin this next phase of your educational career.

Peter Yellowlees, M.B.B.S., M.D.

Professor and Chair, UC Davis Health Informatics Program

Principles of Community

University of California, Davis:

The University of California, Davis, is first and foremost an institution of learning and teaching, committed to serving the needs of society. Our campus community reflects and is a part of a society comprising all races, creeds and social circumstances. The successful conduct of the university's affairs requires that every member of the university community acknowledge and practice the following basic principles:

We affirm the inherent dignity in all of us, and we strive to maintain a climate of justice marked by respect for each other. We acknowledge that our society carries within it historical and deep-rooted misunderstandings and biases, and therefore we will endeavor to foster mutual understanding among the many parts of our whole. We affirm the right of freedom of expression within our community and also affirm our commitment to the highest standards of civility and decency towards all. We recognize the right of every individual to think and speak as dictated by personal belief, to express any idea, and to disagree with or counter another's point of view, limited only by university regulations governing time, place and manner. We promote open expression of our individuality and our diversity within the bounds of courtesy, sensitivity and respect.

We confront and reject all manifestations of discrimination, including those based on race, ethnicity, gender, age, disability, sexual orientation, religious or political beliefs, status within or outside the university, or any of the other differences among people which have been excuses for misunderstanding, dissension or hatred. We recognize and cherish the richness contributed to our lives by our diversity. We take pride in our various achievements, and we celebrate our differences.

We recognize that each of us has an obligation to the community of which we have chosen to be a part. We will strive to build a true community of spirit and purpose based on mutual respect and caring.

-April 20, 1990; reaffirmed 1996, 2001 http://principles.ucdavis.edu/

How to use the UC Davis Health Informatics Student Handbook

This handbook is intended to serve as a supplement to the University of California, Davis <u>Graduate Student Guide</u>. The information found in this guide is specific to the Health Informatics Program and is intended as a resource for new and existing students in our graduate program. Please take advantage of the hyperlinks provided throughout in the electronic version of this handbook. All hyperlinks are indicated by both an underline and blue font.

It should be noted that campus policies change frequently, and that maintaining the links to campus resources found on the last page of this guide will be a continual process. Please contact Jennifer Bannister (jennifer.bannister@ucdmc.ucdavis.edu) with suggestions for additional content or to update links.

PART 1: HEALTH INFORMATICS PROGRAM

Program Overview

History

With the wide expanse of medical and biological information, innovative advances in storing, retrieving, and interpreting information have become essential for health professionals and scientists. Physicians can no longer expect to comprehensively master all of the information within their areas of expertise. Instead, they must increasingly rely upon problem solving strategies and the ability to systematically access the information required for thoughtful patient care. In 1999, UC Davis began educating health professionals in the Medical Informatics Masters degree program, which produced graduates who now have successful careers in industry, academia, public health, and other related fields. Capitalizing on the success of this early Medical Informatics training program, the newly designed Health Informatics Program now offers a unique and comprehensive graduate training program in Health Informatics.

Mission Statement

Researching and teaching the transformative power of information technology in healthcare.

Program at a Glance

The Health Informatics Masters Degree program has been designed to efficiently combine generalized training in Health Informatics with a more specialized focus area. The program delivers advanced training in informatics to professionals redirecting their careers to become health informatics researchers, as well as those who are interested in integrating health informatics expertise in their current professional roles.

The Masters Degree requirements include a mandatory research project and thesis, with a goal of producing work that may be published in peer-reviewed journals. Possibilities for projects will include research in areas such as disease management and the Internet, decision support, the human-computer interaction and interfaces, the electronic medical record, HIPAA, telemedicine, standardized medical terminology and messaging systems, security of health care systems, and the privacy of patient data.

The Health Informatics faculty are members of UC Davis' highly regarded, School of Medicine, School of Veterinary Medicine, College of Engineering, Betty Irene Moore School of Nursing, Library Sciences and our state-of-the-art Genome Center, creating a rich, multidisciplinary environment that parallels the diversity found within this exciting field of study.

The program provides excellent opportunities for research projects within the university and throughout its affiliated partners including the UC Davis Center for Virtual Care, UC Davis Center for Comparative Medicine, and the UC Davis Health System's Center for Health and Technology, with its internationally recognized telemedicine program, among others.

Learning Objectives

The UCD Health Informatics Graduate Program has detailed learning objectives for each course as they cumulatively add to the entire program. The program has adopted learning objectives defined by the American Medical Informatics Association (AMIA) (www.amia.org). Below are the Health Informatics Core Competencies as listed on the AMIA website:

- 1) Data, Information and Knowledge: Representation and Structure Data, Information and Knowledge: Analysis and Manipulation Health Care Systems
 - a) Healthcare Applications Systems
 - b) Intelligent Health Systems
- 2) Information Technology
 - a) System Architectures
 - b) Health Communications Systems and the Health Technologic Infrastructure
 - c) System Customization/Development Topics
- 3) Health Education Systems
- 4) Health Research Systems
- 5) User and Use of Health Information Systems
 - a) The Health User Interface and Interactive Systems
 - b) Human/Social Aspects of Health Information and Communications Systems
- 6) Management and Operations of Health Information Systems
 - a) Technology Management Topics
 - b) Procurement and Implementation Topics
 - c) Vendor/Service Provider Topics
 - d) Project Management Topics
 - e) Systems Maintenance and Support Topics
 - f) Security Management Topics
 - g) General Technical Topics for IT Professionals
 - h) General Business and Management Topics
 - i) Team and Human Resource Management Topics
- 7) Design and Evaluation of Health Information Systems
 - a) Assessment of the Effects, Value, and Cost of IT
 - b) Re-engineering and Management of Change Topics

- c) User and Process Observation and Assessment Topics
- 8) Professional Skills

Course Calendar

Courses	Fall Quarter 1	Winter Quarter 2	Spring Quarter 3	Summer Quarter 4
MHI 202: Computer-Based Patient Records			X	
MHI 207: Medical Decision Support Systems		X		
MHI 208: Health Informatics Web- Based Enterprise Computing			X	
MHI 209: Clinical Data Acquisition and Analysis	X			
MHI 210: Introduction to Health Informatics	X			
MHI 211: Telemedicine (online only)				X
MHI 212: Computer Security in Health Informatics	X			
MHI 289A: Special Topics: Advanced Clinical Data Acquisition and Analysis		X	X	
MHI 289H: Virtual Reality, Simulation and Robotics		Х		
MHI 289F: Clinical Databases and Knowledge Management		Х		
MHI 290: Seminar in Health Informatics	Х	Х	Х	
MHI* 299: Research in Health Informatics	Х	Х	Х	Х

Note: Courses are anticipated to be offered as listed above. **As course offerings are subject to change** please keep in close contact with the program coordinator and program advisers.

PART 2: PROGRAM POLICY AND REQUIREMENTS

Ethics and Integrity

Academic Honesty

The Health Informatics Program insists on a strict policy of academic honesty for all students. All students are required to attend instruction about academic honesty during orientation, or alternatively, view a video about academic honesty that was created for the Health Informatics Program. The video will be made available to students through Sakai.

Students who are suspected of academic dishonesty will be referred to the Office of Student Judicial Affairs (SJA)*. SJA officers will meet with students to determine if a problem exists, and if appropriate, will provide the necessary action to prevent a future incident up to and including dismissal form the university. Instructors retain the right to determine how incidents of academic dishonesty are reflected in student grades.

Ethics in Authorship

With respect to professional ethics, integrity, and fairness, the authorship of any scholarly work implies the following:

- 1. That each author has made a substantial intellectual contribution to the work. "Substantial intellectual contribution" is interpreted by the Graduate Council to mean input beyond that of: (a) only providing instruction, (b) granting use of laboratory space or equipment, (c) provision of financial support, or (d) dissertation guidance by a faculty member. It means a considerable degree of involvement with the development of the work, the generation and interpretation of data, the drawing of conclusions, and/or the actual writing of the manuscript.
- 2. That each author accepts responsibility for the contribution to the collaborative effort. Responsibility involves each author understanding the methodology involved, the relationship to other research of a similar nature, and the significance and implications of that contribution to the publication. All authors must also have the ability to defend their individual contributions.
- 3. That each author accepts responsibility for the scholarly conclusions appearing in the publication. Authorship should not be undertaken if these aspects of the work are not

understood, or a potential author is unwilling to accept responsibility for them, or do not agree with the conclusions made.

Academic Misconduct/ Plagiarism

"Cheating, including receiving or providing unpermitted help on an exam; copying or sharing test answers; engaging in unauthorized communication about or during an exam; giving test questions to one who hasn't taken the exam, using unauthorized material during an exam, submitting an altered exam for re-grading, taking a test for another, continuing to work on an exam when time is up, stealing others' work

Fabrication, including fabricating or falsifying data, results, or references, e.g., in reports or papers submitted for class or in a thesis or dissertation.

Providing False Information, including giving forged excuses to postpone or avoid assignments or to add or drop classes; or signing another's name or having another sign in to a class.

Unauthorized Collaboration or assistance, including working with others on graded work without the instructor's permission (e.g., on in class or take-home tests, papers, labs, or assignments).

Re-Using Work without Permission, e.g., submitting the same work in more than one course or re-using work submitted in another course or for a different purpose, without the current instructor's permission.

Plagiarism, including using others' work (e.g., words, ideas, pictures, or data) from any source without giving credit. Others' words must be put in quotation marks and cited, and others' ideas must be cited even if paraphrased in the student's own words. The plagiarism guidelines for the University can be found at the <u>University Writing Program</u> and tips for students to avoid plagiarism can be found in the <u>Student Judicial Affairs: Avoiding Plagiarism Mastering the Art of Scholarship guide.</u>

Source: University California, Davis Student Judicial Affairs

Integrity and Safety in Research

"Quality research requires adherence to the highest standards of integrity in proposing, conducting and reporting research. Misconduct in research is a serious ethical and legal issue. To safeguard the public trust in University research, UC Davis has established a policy and process for promptly investigating allegations of research misconduct. The UC Davis

policy on <u>Integrity in Research</u>, <u>PPM 220-05http://manuals.ucdavis.edu/PPM/240/240-01.htm</u> complies with federal law and applies to all allegations of research misconduct, regardless of funding source. The Research Compliance and Integrity unit is responsible for evaluating and investigating all allegations of misconduct related to research at UC Davis. "

Source: <u>UC Davis Office of Research, Research Compliance and Integrity</u>

For further information about the research integrity policy and procedures, contact the Research Compliance and Integrity Office.

Academic Performance and Evaluation

Academic Performance

Each student in the program must maintain a 3.0 GPA or higher throughout his or her course of study. If academic issues arise students should contact their graduate program adviser.

Academic Probation

Students whose academic performance is less than satisfactory or who are not meeting program requirements are placed on academic probation and given a timeline for removing their deficiencies and returning to good standing. Students on academic probation are subject to disqualification. The term "disqualification" should NOT be confused with "dismissal." Dismissal is removal from graduate study based on behavior or conduct.

<u>Unsatisfactory Progress/ Probation/Disqualification</u>

A student whose progress is judged unsatisfactory is regarded as a student on probation. This includes the student whose annual evaluation indicates unsatisfactory progress or the student who receives written notice from the Advisory/Guidance Committee or Graduate Adviser that progress is unsatisfactory. If the student fails to meet the requirements specified in the notices sent by the Dean of Graduate Studies or by the Advisory/Guidance Committee, the student will be subject to disqualification from further graduate study in the graduate program. For a full explanation of disqualification, go to

http://gradstudies.ucdavis.edu/facstaff/policies/disqual_appeal.pdf

Appeals

A student who is subject to disqualification, or who has been disqualified, may submit an appeal within 30 days for reconsideration for cause to the Administrative Committee of the Graduate Council. For appeal procedures, contact the Office of Graduate Studies.

New Degree Requirements

Students are responsible for fulfilling the requirements of their degree program provided at the time of entry into the program. Changes in program requirements typically should not affect students already in the program.

Student Evaluation of Faculty and Courses

Student evaluation of courses and instructors will take place at the end of each academic quarter. Standard evaluation forms will be provided unless the instructor has developed a

customized evaluation for his or her course. The instructor should make arrangements for the evaluation process with the Graduate Group Coordinator, Jennifer Bannister.

The graduate group coordinator (or an approved, independent evaluator) will administer and collect completed evaluations during the final course period as arranged. Anonymous copies of the evaluations will be given back to each instructor. Course evaluations will be reviewed by the Chair, Director, and members of the graduate group who serve as members of the Committee on Educational Policy. Instructor evaluations will be reviewed only by the Chair of the Program. Confidentiality of evaluations will be strictly observed by the program, and only those individuals mentioned in this section will have access to the evaluations.

PART 3: CURRICULUM AND ADVISING

Curriculum

Requirements for the Master of Science Degree

Master's of Science in Health Informatics Plan

The Health Informatics program will follow Plan I, which requires a research-based thesis.

Course Requirements - Core and Electives - 43 units

Core Courses: 15 units

The requirements for a Master of Science Degree in Health Informatics are completion of 43 units of credit, consisting of a minimum of 34 units of approved coursework (15 units of which are core courses) and an additional minimum of 9 units of credit taken as MHI 299 "Research in Health Informatics." The 43 units does not include remedial work. Required core courses are:

MHI 210	4 units Introduction to Health Informatics
MHI 202	4 units Computer Based Patient Records
MHI 209	4 units Clinical Data Acquisition and Analysis
MHI 290	1 unit Fall Seminar in Health Informatics
MHI 290	1 unit Winter Seminar in Health Informatics
MHI 290	1 unit Spring Seminar in Health Informatics

b) Elective Courses: 19 units minimum required, of which a minimum of 12 Units must be selected from the following courses:

MHI 289f	4 units Database and Knowledge Management
MHI 211	4 units Telemedicine
MHI 212	4 units Computer Security in Health Informatics
MHI 208	4 units Health Informatics in Web-based Enterprise
MHI 207	4 units Medical Decision Support
MHI 289A	1-5 units Special Topics: Advanced Clinical Data Acquisition
MHI 289h	4 units Virtual Reality, Simulation, and Robotics

EPI 223	4 units Spatial Epidemiology
EPI X 425	3 units Introduction to Public Health
EPI 205A	3 units Principles of Epidemiology
SPH 273	3 units Health Systems and Administration
SPH 262	3 units Principles of Environmental Health

Seven (7) other elective units may be taken from this group of courses or from the list of additional electives below.

Course Descriptions

MHI 202 — Computer-Based Patient Records

This course will provide a comprehensive overview of computer-based clinical record systems. Topics include data modeling, health system standards and terminologies; security, privacy and confidentiality; workflow modeling; data visualization; legal; decision support; public health; and evidence-based practice. (4 units)

MHI 209 – Clinical Data Acquisition and Analysis

The course examines the nature, acquisition, and analysis of medical data. Such data ranges from signals of electrical potentials, sounds, text, images (still and motion), and data from nucleic acid and protein expression and sequencing instruments. (4 units)

MHI 210 - Introduction to Health Informatics

This course provides an in-depth survey of the diverse field of informatics with emphasis on Health Informatics. Including an overview of informatics sub-specialties, roles/ employment outlook, and a primer on a range of informatics-specific topics such as data, information management, the personal health record, health policy, telemedicine and e-health, programming and databases, common terminologies, clinical decision support, data tools, and HIPAA and ethics related to the use of clinical data. (4 units)

MHI 290 – Seminar in Health Informatics

Monthly seminars covering research and evaluation methods, core concepts in health informatics, and classic and current informatics literature are reviewed. Includes seminars featuring the latest informatics research by local, national, and international informatics professionals. (1 unit; a total of 3 units is required for the degree)

MHI 299 — Research in Health Informatics

This course designates time for meeting with the major professor and thesis committee, conducting research, topic selection and preliminary planning for tentative research material. This should be done as early as possible so that the Health Informatics student is able to make a timely and informed decision about his or her thesis material. (1 -12 units-variable)

Elective Courses

Elective coursework may be chosen from the approved list below to fulfill the 19 unit minimum requirement.

Health Informatics

MHI 207 - Medical Decision Support Systems

This course will explore decision support systems for medical applications. Topics include medical decision making, uncertainty, review of existing decision support systems, knowledge engineering, data mining, and knowledge-based systems. (4 units)

MHI 208 — Health Informatics Web-Based Enterprise Computing (Medical Informatics Web-Based Enterprise Computing) The purpose of the course is to introduce the student to the decision making processes and technologies that are involved in developing web based distributed enterprise applications in medicine. (4 units)

MHI 211 – Telemedicine (online only)

This course is designed to address necessary issues for the development and maintenance of a successful telemedicine program with focus on strategic planning, clinical applications, project management, risk management and legal issues; reimbursement and contracting; human resources and program sustainability. (4 units)

MHI 212 — Computer Security in Health Informatics

Critical thinking about basic concepts in computer security and privacy. How the computer security and privacy impact health informatics, ranging from electronic health records to telemedicine to remote, virtual surgery. (4 units)

MHI 289A — Special Topics: Advanced Clinical Data Acquisition Special topics in clinical data acquisition. (1 - 5 units)

MHI 289F — Clinical Databases and Knowledge Management

This course introduces the student to the relational database concepts of normalization, SQL queries and interface design. Students start with basic text field requirements and go through the process of sequential development of a logical data model followed by normalization to a 3rd normal form and implementation of a physical data model. (4 units)

MHI 289H — Virtual Reality, Simulation, & Robotics

This course is designed to create awareness of how modern computer graphics have led to VR-Sim-Rob applications, and how they are modifying the teaching of medicine and in some cases the diagnosis and treatment of patients. The course also tries to raise interest in students to think on possible applications of this techniques and to have some of them working in research projects. The course is designed to be a solid introduction to VR-Sim-Rob on top of which other courses can be developed in the future.

Computer Science

ECS 145- Scripting Languages (4 units)

ECS 155- Computer Security, Non-majors (4 units)

ECS 156- Discrete-Event Simulation (4 units)

ECS 157- Computer Networks, Non-majors (4 units)

ECS 160- Introduction to Software Engineering (4 units)

ECS 163- Information Interfaces (4 units)

ECS 165- A/B Database Systems (4 units)

ECS 170- Artificial Intelligence (4 units)

ECS 175- Computer Graphics (4 units)

ECS 177- Introduction to Visualization (4 units)

ECS 189K- Scientific Computing (1-5 units)

ECS 272- Information Visualization (4 units

Electrical Engineering

EEC 160- Scripting Languages (4 units)

EEC 206- Digital Image Processing (4 units)

EEC 207- Pattern Recognition and Classification (3 units)

EEC 208- Image Analysis and Computer Vision (3 units)

EEC 209- Multimedia Compression Processing (4 units)

Biomedical Engineering

BIM 242- Introduction to Biomedical Imaging (4 units)

BIM 246- Magnetic Resonance Technology (3 units)

Neurobiology, Physiology and Behavior

NPB 163- Information Processing in Neuroscience and Psychology (4 units)

Epidemiology and Preventative Medicine

EPI 222- Epidemiology Modeling (3 units)

EPP 223- Spatial Epidemiology (3 units)

Preventive Veterinary Medicine

MPM 402- Medical Statistics (4 units)

MPM 408A- Veterinary Research (2 units)

Biological and Agricultural Engineering

ABT 180- Introduction to Geographic Information Systems (4 units)

Graduate School of Management

MGT 206- Decision Making and Management Sciences (3 units)

MGT 207- Management Information Systems (3 units)

MGT 250- Technology Management (3 units)

MGT 251- Management of Innovations (3 units)

MGT 287- Database Systems (3 units)

Note: Courses are subject to change. Other electives may be considered at the discretion of the graduate adviser or education committee.

Advising

Graduate Adviser

Upon matriculation into the Health Informatics Graduate Program, students should meet with their Graduate Adviser. The Health Informatics Program assigns each student an Adviser, chosen from the Health Informatics faculty and approved by the Dean of Graduate Studies. Each student needs to schedule a meeting with his or her Adviser at least once per quarter. Additional appointments may also be scheduled as needed. Students who feel their assigned Adviser is not a good fit, may freely change Advisers at any time.

Students are expected to take the initiative in planning their program of study, but it is essential that students maintain close contact with their adviser while making the following important program decisions:

- Approval of any forms requiring the signature of a "Graduate Adviser"
- Major professor selection
- Thesis committee selection (these individuals may be changed later if it is found that other professors are more appropriate)
- Subject of thesis

Core and Elective Course Planning

By the end of the first quarter of full-time study or its equivalent (completion of 12 units), the major area of interest should be identified and a tentative course of study outlined. During the second quarter, the development of a detailed study program should be completed with the assistance of the Graduate Adviser. A copy of this study program must be given to the Graduate Adviser by the end of the second quarter.

Major Professor

The Major Professor is the faculty member who will:

- Assist in preparing a detailed study program
- Assist in conducting thesis research
- Chair the thesis committee and determine the degree of involvement of each committee member

PART 4: THESIS AND GRADUATION

Thesis and Project Preparation

Research Project and Thesis

The research project and resulting thesis are major components of the M.S. Degree Program. The thesis research supervised by the major professor, and must be approved by a three-member faculty committee. The thesis must demonstrate the student's proficiency in research/scientific analysis and is considered to be a contribution to the training of the candidate in addition to a contribution to knowledge.

Thesis Committee

Students are expected to take the initiative in identifying the courses to be included in their academic program, suggesting members for the thesis committee, and in selecting the subject of investigation for their thesis. The thesis committee consists of three faculty members who are selected once the area of research is chosen so they can assist with:

Planning a student's research program

- Giving advice during the course of the research
- Preparing a suitable manuscript
- Reviewing research after public presentation
- Signing the completed version of the student thesis

Students may contact appropriate academic personnel to serve on their thesis committee from the following departments:

- School of Medicine
- School of Veterinary Medicine
- College of Engineering
- Betty Irene Moore School of Nursing

Development of Study Program and Research Topic Selection

Students are encouraged to explore research topics as early as possible to facilitate a timely and informed decision in choosing the members of their thesis committee. The first quarter of research course time (MHI 299) may be used for literature review, topic selection and preliminary planning.

The program provides excellent opportunities for research projects within the university and throughout its affiliated partners. Example research environments include:

- UC Davis Health System's Center for Virtual Care
- UC Davis Center for Comparative Medicine
- UC Davis Genome Center
- UC Davis Health System's Center for Health and Technology, with its internationally recognized telemedicine program
- UC Davis Clinical and Translational Science Center

Program of study development and research topic selection must be done in conjunction with the major professor.

Advancement to Candidacy

Every student must file an official application for *Candidacy for the Degree of Master of Science* after completing one-half of their course requirements, at least one quarter before completing all degree requirements. The *Candidacy for the Master's Degree – Thesis Plan I* form can be found online at http://gradstudies.ucdavis.edu/forms Students will be required to submit a \$55 Candidacy Fee to the University Cashier's Office prior to submitting the candidacy form to Graduate Studies. This fee is non-refundable.

A completed form includes a list of courses the student will take to complete degree requirements. If changes must be made to the student's course plan after s/he has advanced to candidacy, the Graduate Adviser must recommend these changes to Graduate Studies. Students must have their Graduate Adviser and thesis committee Chair sign the candidacy form before it can be submitted to Graduate Studies. If the candidacy is approved, Graduate Studies will send a copy to: the Thesis Committee Chair, the appropriate graduate staff person, and the student. If Graduate Studies determines that a student is not eligible for advancement, the department and the student will be told the reasons for the application's deferral. Some reasons for deferring an application include: grade point average below 3.0,

outstanding "I" grades, a grade of "U" or "D+" or below in required courses, or insufficient units.

Public Presentation of Thesis

Students are responsible for submitting a draft of their thesis to the committee. In agreement with the committee, a public presentation of the research must be scheduled. Following the presentation the committee meets to review the research. Students then complete the final version of the thesis and obtain the signatures of the committee members. **Note: Published deadlines for turning in the thesis will be strictly observed; students who miss the deadline will be scheduled for a later graduation date.**

Filing the Thesis

Graduate Studies has prepared a helpful checklist in order to ensure that students submit everything required when filing their thesis

http://www.gradstudies.ucdavis.edu/forms/GS304_MastersChecklist.pdf.

Normative Time

The Health Informatics masters program is designed to require 1.5 to 2 full-time years of study. The average time for completion of the program is 3 part-time years.

Commencement

The School of Medicine hosts the graduate commencement in May at the Mondavi Center. Following the ceremony, a reception is held for degree recipients, candidates, faculty, family and friends. Students who receive their graduate degree in September, December, March or June are eligible and welcome to participate in the annual commencement ceremony. Students close to completion are also eligible to participate with the approval of their Graduate Adviser or Major Professor.

PART 5: RESOURCES FOR STUDENTS

Program Resources

Library Services

F. William Blaisdell, M.D., Medical Library, Sacramento

The F. William Blaisdell, M.D., Medical Library includes a student commons area, a lounge, study areas (reading areas and group study rooms), and traditional library stacks. Its media center features computer workstations with advanced graphics, statistical and multimedia presentation capabilities, and consultation rooms with videoconferencing and distance-learning technologies. The library is located at 45th and X Streets. For more information call (916) 734-3529.

Loren D. Carlson Health Science Library (HSL), Davis Campus

The HSL provides access to more than 11,000 full-text journals and over 100 textbooks, available in full-text. Additional resources such as the Clinical Resource Center (online

research databases, drug information, textbooks, guidelines, protocols etc, available only to health system faculty, students and staff), UC Davis Harvest Library Catalog, and other medical resources can be accessed through the Health Science library as well.

See: http://www.lib.ucdavis.edu/dept/hsl/

Parking and Transportation

Parking and Transportation Services provides information regarding parking and commuting needs at the health center including parking, shuttle and public transportation information as well as maps and directions. See http://www.ucdmc.ucdavis.edu/parking/

Sakai

Sakai is a set of software tools designed to help instructors, researchers, and students create websites for collaboration. This information management system has been implemented by the UC Davis campus as well as the School of Medicine. This system facilitates up to the minute communication between faculty and students and, helps us to display student course information in a more standardized format. A UC Davis campus kerberos account is needed to access the site. http://mycourses.ucdmc.ucdavis.edu/portal

Financial Aid

The UC Davis Health System financial aid office provides information and resources to help financially support our students' educational goals. If you are interested in receiving financial aid, please make an appointment with the staff at the UCD School of Medicine's Financial Aid Office.

Financial Aid Staff

Lauren E. Snow, director Charmaine Allen, financial aid officer Gwenner Gail Miller, financial aid officer Lynn Peters, financial aid officer

Sacramento Location

Education Building, 1st Floor, Suite 1202 4610 X Street, Sacramento CA 95817 Hours: Monday - Friday, 8 a.m. - 5 p.m. **Phone**: (916) 734-4120; **Fax**: (916) 734-4116; **Email:** medfinancialaid@ucdavis.edu

Title IV School Code: 001313

Advocacy Resources within the HI Graduate Program

Graduate Advisor

The Graduate Advisor is the first resource for students having an academic problem or an issue with another faculty member, if the issue or concern cannot be resolved with the course professor directly.

Health Informatics Program Chair

The Chair can be helpful if there is an issue with the major professor or if the student feels the major professor/ advisor may be biased on an issue.

Peter Yellowlees, M.B.B.S., M.D.

Chair; Professor of Psychiatry

Health Informatics Program Staff

Our program staff may have insight into issues that arise and can point students to other advocacy resources within and outside of the department.

Mark Carroll, MPH

Assistant Director (916)734-3963 mark.carroll@ucdmc.ucdavis.edu Krystal Cardenas-Raper

Administrative Specialist (916) 734-2366 krystal.cardenas@ucdmc.ucdavis.edu

Jennifer Bannister, Ed. M

Graduate Group Coordinator (916) 734-2639 jbannister@ucdavis.edu

UCD Campus Resources

Academic Resources

Office of Graduate Studies

The mission of the Office of Graduate Studies is to advocate on behalf of graduate students and postdoctoral scholars, to support the faculty and staff engaged in delivering graduate education. To administer academic and administrative policies affecting graduate students and postdoctoral scholars in ways that foster a culturally and intellectually diverse environment characterized by high academic standards. The Health Informatics Program has been assigned to new Student Affairs Officer Laura Young. Laura is able to assist students with any questions they may have related to Graduate Studies policies, forms, and processes. For questions please contact Laura Young at 530-752-2772 or email her at leyoung@ucdavis.edu.

SISWEB

SISWEB is available for course enrollment, schedule adjustment, class schedules, unofficial academic records, and contains personal information for university records such as student address, account, financial aid status, and more. Students can also apply for Graduate Studies thorough SISWEB. For more information see http://sisweb.ucdavis.edu

Internship and Career Center

The Internship and Career Center (ICC) provides career development services for all graduate students at UC Davis. Career coordinators provide career advising, guidance for academic and public or private sector careers, CV writing, career options, transferable skills, and applying and interviewing workshops. For more information see http://icc.ucdavis.edu. For an appointment contact the Graduate Student and Postdoctoral Career Services assistant at (530) 752-7841.

Health and Wellbeing Resources

Student Health Insurance Plan (SHIP)

The University of California requires that all registered students have health insurance. The Student Health Insurance Plan (SHIP) is designed specifically for UC Davis students, offering both Davis-area and worldwide coverage. The SHIP plan includes medical and dental benefits for undergraduate, graduate, and professional students. Registered students are automatically enrolled in SHIP. SHIP can be waived for students with existing coverage. Go to http://healthcenter.ucdavis.edu/insurance.

Cowell Student Health Center (CSHC)

The CSHC provides low student rates for primary healthcare services.

All registered students may use Cowell healthcare services whether or not they are enrolled in SHIP. SHIP members receive primary care services at CSHC and are covered by SHIP for referral care when referred by a CSHC provider. For more information call (530) 752-2300 or go to http://healthcenter.ucdavis.edu

Counseling & Psychological Services (CAPS)

CAPS offers short-term, confidential individual and group counseling, crisis intervention, psychological and psychiatric assessment and psychological testing for students with educational, career, personal, emotional, cross-cultural, and social concerns. CAPS also conducts psycho-educational programs and consults with faculty and staff on student needs, including students in crisis and disruptive students and assists in enhancing communication between individuals and groups. The office is located at 219 North Hall. For more information see http://caps.ucdavis.edu

Advocacy Resources

Student Judicial Affairs

Issues of academic and personal misconduct by undergraduate, graduate, and professional students are referred to Student Judicial Affairs (SJA). For more information, go to the SJA Web site at http://sja.ucdavis.edu. The SJA office can be contacted at (530) 752-1128 or sja@ucdavis.edu.

Cross-Cultural Center

The Cross-Cultural Center (CCC) encourages a multicultural community through education and advocacy. The CCC supports student success by offering academic, leadership, cultural and social resources, educational programs, student internships, funding opportunities and knowledgeable staff. For more information, go to http://ccc.ucdavis.edu.

Lesbian, Gay, Bisexual, Transgender Resource Center

The Lesbian, Gay, Bisexual, Transgender Resource Center (LGBTRC) on the main campus provides an open, safe, community that promotes education about all genders and sexualities and provides advocacy and support for all students. For more information, go to http://lgbtcenter.ucdavis.edu.

Student Disability Center

UC Davis is committed to ensuring equal educational opportunities for students with disabilities. The SDC is staffed by professional disability specialists with expertise in various areas of disability: learning, vision, hearing, medical, psychological, and mobility. See http://sdc.ucdavis.edu.

Veterans Affairs Office

The Veterans Affairs Office assists veterans, reservists or dependents of a disabled or deceased veteran. The office certifies course attendance to the Department of Veterans Affairs and processes Cal-Vet Fee Waivers. It also provides information about benefit eligibility and tutorial assistance, as well as advice about the GI Bill and educational benefits. The Veterans Affairs Office is located at 107 South Hall and can be reached at (530) 752-2020 or see http://advisingservices.ucdavis.edu/studentservices/veterans

Women's Resources and Research Center

The Women's Resources and Research Center (WRRC) offers graduate women academic and personal resources. The WRRC offers an extensive library, educational programs, advising and referrals, academic support, a welcoming space, and a caring, accessible staff. For more information on the WRRC's wide range of programs and services, call (530) 752-3372 or stop by 113 North Hall. Visit their Web site at http://wrrc.ucdavis.edu

Resources for International Students

Services for International Students & Scholars (SISS) represents the interests and concerns of approximately 2,300 international students, faculty, and researchers who come to UC Davis each year. SISS provides orientation, assistance, information, and referral to international students, faculty, and researchers regarding financial, personal, cultural, and academic concerns. SISS assists international students and scholars with maintaining their legal status while within the U.S. and can provide expert advice regarding U.S. immigration regulations and help with any problems that relate to visa status. For more information, go to http://siss.ucdavis.edu.

The University of California, in accordance with applicable federal and state law and university policy, does not discriminate on the basis of race, color, national origin, religion, sex, disability, age, medical condition (cancer-related), ancestry, marital status, citizenship, sexual orientation, status as a Vietnam-era veteran or special disabled veteran. The university also prohibits sexual harassment. This nondiscrimination policy covers admission, access, and treatment in university programs and activities. Inquiries regarding the university's student-related nondiscrimination policies may be directed to Margaret Heisel, (510) 987-9572.

Faculty Roster

Administration and Leadership Peter Yellowlees, M.B.B.S., M.D.,

Chair; Professor, Psychiatry

Mark Carroll, MPH Assistant Director, HIP; Public Health Informaticist healthinformatics@ucdavis.edu

Jennifer Banister, Ed. M Graduate Group Coordinator HIP <u>jbannister@ucdavis.edu</u>

School of Medicine

<u>Peter Yellowlees, M.B.B.S., M.D.</u>, Chair; Professor, Psychiatry

April Armstrong, M.D., M.P.H. Assistant Clinical Professor, Department of Dermatology Director of Teledermatology Program, Co-Director of Clinical Research Unit

Aaron Bair, M.D.

Associate Professor, Department of Emergency Medicine Director, Emergency Medicine and Simulation and Disaster Management

Robert Cardiff, M.D., Ph.D.

Professor, Center for Comparative Medicine; Department of Pathology and Laboratory Medicine Este Geraghty, M.D., M.S., M.P.H. Assistant Professor, Division of General Medicine, Department of Internal Medicine

Glenna Gobar, D.V.M., M.P.V.M., M.S. Adjunct Assistant Professor, Department of Anesthesiology and Pain Management

Fred Gorin, M.D., Ph.D.

Professor, Department of Neurology

Donald Hilty, M.D.

Director, Rural Program in Medical Education, School of Medicine Co-Director, Hilty/Gandour-Edwards College of Advising, School of Medicine Professor and Vice-Chair of Faculty Development, Department of Psychiatry and Behavioral Sciences

Calvin Hirsch, M.D., F.A.C.P.

Professor of Clinical Medicine, Departments of Internal Medicine and Public Health Sciences

Michael Hogarth, M.D.

Associate Professor, Department of Pathology and Laboratory Medicine Director, Electronic Death Registry Systems Project

Christine Hotz, D.V.M., M.S. Assistant Adjunct Professor, Department of Anesthesiology and Pain Management Anthony Jerant, M.D. Associate Professor, Department of Family and Community Medicine Professor, Department of Pathology, Microbiology and Immunology

James Marcin, M.D., M.P.H.

Associate Professor, Department of Pediatrics

Tom Nesbitt, M.D., M.P.H.

Professor, Department of Family and Community Medicine, Executive Associate Dean for Administration and Clinical Outreach Director, Center for Health and Technology

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Assistant Professor, Division of Infectious Diseases, Co-Director; Biomedical Informatics Core, CTSC; Medical Director, Electronic Medical Records

Jason Roof, M.D.,

Professor of Psychiatry

J. Anthony Siebert, Ph.D. Professor, Department of Radiology

Hendry Ton, M.D., M.S. Associate Clinical Professor, Department of Psychiatry and Behavioral Sciences

Xiaowei Yang, Ph.D. Assistant Professor, Division of Biostatistics

School of Veterinary Medicine
Mary Christopher, D.V.M., Ph.D.,
Diplomate ACVP

Department of Computer Science

Matt Bishop, Ph.D.

Professor and Co-Director; Computer Security Laboratory, Department of Computer Science

Bernd Hamann, Ph.D.

Professor, Department of Computer Science Associate Vice Chancellor for Research, Office of Research

Patrice Koehl, Ph.D.

Associate Professor, Department of Computer Science and Genome Center

Sean Peisert, Ph.D.

Assistant Adjunct Professor, Department of Computer Science

Dick Walters, Ph.D.

Professor Emeritus, Department of Computer Science; Department of Mechanical and Aeronautical Engineering

Department of Mechanical and Aeronautical Engineering

Cristina Davis, Ph.D.

Assistant Professor, Department of Mechanical and Aeronautical Engineering

Betty Irene Moore School of Nursing

Alberto M. Odor, M.D. Associate Professor, School of Nursing

Heather M. Young, PhD, RN, FAAN Associate Vice Chancellor for Nursing Betty Irene Moore School of Nursing