MASTER'S PROGRAM

1) Admissions Requirements

An undergraduate degree with a cumulative GPA of 3.0 or higher, submission of transcripts from all Colleges and/or Universities attended, three letters of recommendation, acceptable interview evaluations and a substantial interest in the field of Health Informatics.

Applicants whose native language or whose academic instruction is/was not English must achieve a passing score on the Test of English as a Foreign Language (TOEFL) requirements in one of the three formats below:

- Internet-Based Test (IBT) - minimum passing score 100
- Paper based Written Test - minimum passing score 600
- Computer based Test – minimum passing score 250

Alternatively, applicants may submit IELTS scores with a minimum overall BAND of 7.0.

a) Prerequisites
For individuals without a health care background, a basic knowledge of human diseases and conditions is required. The following UC Davis courses meet this requirement:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIS 10</td>
<td>General Biology</td>
<td>4</td>
</tr>
<tr>
<td>CHA 101,200</td>
<td>Anatomy</td>
<td>5</td>
</tr>
<tr>
<td>HPH 200</td>
<td>Human Physiology</td>
<td>6</td>
</tr>
</tbody>
</table>

For individuals without an information technology background, a basic knowledge of object oriented programming and relational databases is required. The following UC Davis courses meet this requirement:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECS 140 A, or B</td>
<td>Programming Languages</td>
<td>4</td>
</tr>
<tr>
<td>ECS 165 A, or B</td>
<td>Database Systems</td>
<td>4</td>
</tr>
</tbody>
</table>

Recommendations about courses or experiences required by applicants to meet these prerequisites will be made on an individual basis by the Admissions Committee.

b) Deficiencies.
Any course work deficiencies in the prerequisites should be made up by the end of the first academic quarter following initial enrollment by earning a letter grade of “B” or better. Pass or Satisfactory grades are also accepted.
2) **Master’s of Science in Health Informatics Plan**
   The Health Informatics program will follow **Plan I**, which requires a research-based thesis.

3) **Course Requirements - Core and Electives - 43 units**

   a) **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 MDI 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 208 4 units Health Informatics in Web-based Enterprise
   - MHI 207 4 units Medical Decision Support
   - MHI 207P 2 units Medical Decision Support practicum
   - MHI 289h 4 units Second Life applications in Informatics
   - MHI 289c 4 units Human diseases and conditions
   - MHI 215 4 units Programming in M (MUMPS)
   - 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 which may be found within the student handbook (attachment A).

   c) **MDI 299 “Research in Health Informatics”: 9 units**

   d) **Summary:**

   1) 15 Units Core requirements, 19 Units elective courses, 9 units of 299, yielding **a total of 43 quarter units**.

   2) 12 Units of elective work may be taken from either the Master’s in Health Informatics series or from courses offered within the Master’s in Public Health program, in order to allow students enrolled in either program to gain
educational credits in the alternate program and have a degree of cross training in these related areas.

4) Special requirements - none

5) Committees:
   a) **Committee on Admissions and Awards**
      Once the completed application, all supporting material, and the application fee have been received, the application will be submitted to the Committee on Admissions and Awards for review. The Admissions Committee will ensure that each application is reviewed by at least three graduate group faculty members. All applicants to the Program who meet the admission criteria will be interviewed in person or electronically. Based on a review of the entire application and interview, a recommendation is made to accept or decline an applicant’s request for admission. That recommendation is forwarded to the Dean of Graduate Studies for final approval of admission. Notification of admissions decisions will be sent by Graduate Studies. Applications for the Health Informatics program are accepted throughout the year although deadlines for each quarter exist and will be published on the Health Informatics website.

   b) **Committee on Educational Policy**
      Each graduate student is assigned a Graduate Adviser, who assists the student with the development and maintenance of a plan of study. The student and adviser develop and maintain a plan of study which will be reviewed by the Committee on Educational Policy of the Graduate Group

      Students must maintain either full-time status (12 units/quarter) or submit the appropriate forms for part-time status.

   c) **Thesis Committee**
      The graduate student, in consultation with his/her major professor and graduate adviser, nominate three (3) faculty members to serve on the Thesis Committee. These nominations are submitted to the Office of Graduate Studies for formal appointment in accordance with Graduate Council policy (DDB 80, Graduate Council B.1.). The Major Professor serves as Chair of the committee and the remaining two members of the committee are chosen by the submitting student with the approval of the Graduate Adviser.

6) **Advising Structure and Mentoring**
   The **Major Professor** is the faculty member who supervises the student’s research and thesis; this person serves as the Chair of the Thesis Committee.

   The **Graduate Advisor**, who is assigned by the Chair of the program, is a resource for information on academic requirements, policies and procedures, and registration information.

   The **Mentoring Guidelines**, which detail expectations of both mentor and mentee, can be obtained through the Graduate programs administration.
7) **Advancement to Candidacy**

Graduate Studies policy is that: “Every student must file an official application for Candidacy for the Degree of Master of Science in Health Informatics after completing one-half of their course requirements and at least one quarter before completing all degree requirements. The Candidacy for the Degree of Master form can be found online at: [http://www.gradstudies.ucdavis.edu/forms/](http://www.gradstudies.ucdavis.edu/forms/). 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, the Office of Graduate Studies will send a copy to: the Thesis Committee Chair, the appropriate graduate staff person, and the student. If the Office of Graduate Studies determines that a student is not eligible for advancement, the program 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 in required courses, or insufficient units.”

8) **Thesis Requirements**

a) **Thesis Requirements (Plan I)**

There are no specific requirements. Any requirements are developed by the student’s major professor.

After the Graduate Adviser approves the thesis topic, the Graduate Adviser will nominate a thesis reading committee. The Dean of Graduate Studies will appoint the committee. The student will then write his/her thesis and submit it to the committee for review and approval.

All committee members must sign the thesis title page to certify their satisfaction with the thesis. In case the committee members cannot reach a unanimous decision to accept the thesis, but a majority is favorable, the majority and minority should report their separate opinions of the thesis’ merit to the Dean of Graduate Studies. The Dean will refer this information to the Administrative Committee of the Graduate Council for a final decision.

If the quality of the thesis is unacceptable, the committee should give the student a clearly specified period of time to improve the thesis, usually one quarter or more. If, after that period of time, the thesis is still unacceptable to a majority of the committee, the majority may recommend to the Dean that the student be disqualified from further graduate study.

**Filing the Thesis**

The student is responsible for observing the filing dates and preparing the thesis according to the proper format. Candidates may choose to submit the thesis electronically. Instructions for electronic submission can be located on the Graduate Studies Web site at: [http://www.gradstudies.ucdavis.edu/students/degree_candidates.html](http://www.gradstudies.ucdavis.edu/students/degree_candidates.html)

**Dates**

For a schedule of filing dates and instructions on thesis preparation, go online to:
For a general calendar of deadline dates applicable to master’s students, go online to:

http://www.gradstudies.ucdavis.edu/students/calendar.html

These dates are also available in the *UC Davis General Catalog*.

**Forms**

The following two documents must accompany the thesis and can be found online:

- *University Library Release Form*,
  http://www.gradstudies.ucdavis.edu/forms
- *Graduate Program Exit Information Form*,
  http://www.gradstudies.ucdavis.edu/students/degree_candidates.html

9) **Normative Time to Degree**

Normative time to degree within the Health Informatics program is 18 months to two years on a full-time basis. As part-time enrollments are allowed, this sequence may be extended beyond two (2) calendar years and the typical part-time student is expected to take about three (3) years.

10) **Typical Time Line and Sequence of Coursework for full time students**

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<thead>
<tr>
<th>Year 1:</th>
<th>Fall</th>
<th>Winter</th>
<th>Spring</th>
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<tbody>
<tr>
<td></td>
<td>MHI 210</td>
<td>MHI 207</td>
<td>MHI 202</td>
</tr>
<tr>
<td>MHI 290</td>
<td>MHI 207P</td>
<td>MHI 289F</td>
<td></td>
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<tr>
<td>MHI 299</td>
<td>MHI 208</td>
<td>EPI 233</td>
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<td>MHI 290</td>
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<table>
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<tr>
<th>Year 2:</th>
<th>Fall</th>
<th>Winter</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MHI 209</td>
<td>MHI 211</td>
<td>Thesis due</td>
</tr>
<tr>
<td>MHI 299</td>
<td>MHI 299</td>
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</tr>
</tbody>
</table>

*Advancement to Candidacy*

11) **Sources of Funding**

Core administrative funding support is provided by both Graduate Studies and the School of Medicine. The Major Professor is not responsible for funding students.

12) **PELP and Filing Fee Status.**

Information about PELP (Planned Educational Leave) and Filing Fee status can be found in the Graduate Student Handbook:

http://www.gradstudies.ucdavis.edu/publications/
ATTACHMENT A: ELECTIVES

**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 (4 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 (4 units)
- 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 Business Data and Information Management (3 units)