

**STATE UNIVERSITY OF NEW YORK
HEALTH SCIENCE CENTER AT BROOKLYN
COLLEGE OF HEALTH RELATED PROFESSIONS
MEDICAL INFORMATICS PROGRAM**

PROGRAM STUDENT HANDBOOK

2017-2018

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STATEMENT OF UNDERSTANDING

I _____ have read and completely understand the policies and procedures of the **Medical Informatics Program** as set forth in this Student Handbook.

I am aware of the additional policies, procedures, rules, and regulations of the College of Health Related Professions, State University of New York - Downstate Medical Center as published in the SUNY Downstate Medical Center Student Handbook.

I also understand that I must comply with these policies in every way. I further understand that failure to comply at any time may result in disciplinary actions.

Student's signature: _____

Date: _____

***After reviewing this handbook, endorse and submit this page to the MI Program Administrator by September 29th, 2017. This document will be filed in your student record and retained by the Program.**

WELCOME TO THE MEDICAL INFORMATICS PROGRAM

Congratulations and welcome to the SUNY Downstate Medical Center Medical Informatics Program. The Medical Informatics Program admitted its first class in September 2003. The faculty is dedicated to educating the finest health care professionals. Our efforts are directed toward providing a caring and supportive learning environment, while ensuring that each student possesses entry-level competency appropriate for the professional Medical Informatics practice upon graduation from the Program. We believe that an effective system of communication is an essential component of student success. This handbook has been developed to provide general program information as well as to familiarize you with the professional principles, policies and procedures that govern our Program within the College of Health Related Professions. You are expected to become familiar with, and abide by the policies and procedures described in this text, as well as the academic regulations and professional requirements published in SUNY Downstate Medical Center Student Handbook.

This handbook is intended to provide general program information as well as to familiarize students with the professional principles, policies and procedures which govern our Program within the College of Health Related Professions

We welcome your questions and suggestions. We also look forward to developing a rewarding partnership with you and facilitating your academic and professional development. If you have any questions after reviewing the Medical Informatics Handbook, you can contact your faculty advisor or course instructor.

Finally, all incoming students are required to sign the attestation statement on the second page of this handbook and return it to the MI Program, on the published date on the attestation page.

Welcome and I wish you all the best in this endeavor!

Dr. Isaac Topor
Chair, Medical Informatics Program

SUNY Downstate and the Medical Informatics Program reserve the right to alter the existing rules and regulations, and the Medical Informatics program of study as deemed necessary by the institution, college or program. SUNY Downstate expressly reserves the right, whenever deemed advisable to: 1) change or modify its schedule of tuition and fees; 2) withdraw, cancel, reschedule or modify any course, program of study, degree, or any requirement or policy in connection with foregoing; and 3) change or modify any academic or other policy. Written notification will be provided to all students regarding any change.

Essential changes in information in this Medical Informatics Program Manual and other University publications concerning new academic regulations, policies or programs will be published in emails, memos, newsletters, Prime or other university publications. It is the responsibility of each student to ascertain current information that pertains to the individual's program, particularly regarding satisfaction of degree requirements by consultation with the student's advisor, the student's program, Office of the Dean of the College of Health Related Profession, the Office of Student Affairs, the Office of the Registrar, and other offices as appropriate.

Updated copies of all regulation, course offerings and specific program policies are available for review in the respective program office, CHRP Dean's Office and in the Office of Student Affairs.

Message from the Student Medical Informatics Association (SMIA) class President:

Dear Incoming Class of 2017-2018,

Welcome and congratulations on your acceptance to the Medical Informatics Program at SUNY Downstate Medical Center. As part of the incoming class, you should feel proud of your accomplishments and excited for what lies ahead of you. Over the course of this program, you will undoubtedly be met with many challenges. However, the faculty and students will be here to offer both motivation and support during your time here. There are a plethora of resources and opportunities available to you at Downstate and we hope that you will use them to gain the most out of your time here.

SMIA is here to offer resources for all MI students to help guide your academic pursuits and career. More importantly, you are now part of an academic and secular family that will contribute to your own personal growth. The faculty in this program are experts in the field and will work tirelessly to make sure that you are complete success. Again, welcome to Downstate and we look forward to meeting you.

Sincerely,
Elaine Wang
President of the SMIA

Your Current SMIA Student Organization Officers:

President: Elaine Wang elain.wng@downstate.edu

Vice President: Daphney Mathieu daphney.mathieu@downstate.edu

Secretary: Ray Harlequin ray.harlequin@downstate.edu

Treasurer: Jonathan West; jonathan.west@downstate.edu

II. GENERAL INFORMATION

Program Location

The Medical Informatics Program is located in the Health Science Education Building (HSEB), 7th floor, room 7-056. The Medical Informatics computer laboratory is also located in the HSEB on the 8th floor, room 8-027.

Program Telephone Number: 718-270-7770

Program Website: <http://www.downstate.edu/CHRP/informatics/index.html>

BLACKBOARD Online Course Management

BLACKBOARD is SUNY Downstate course management software used for posting course material. Students will receive instructions in logging on and using BLACKBOARD during Orientation.

Medical Informatics Program Directory

Name	Room #	Phone	Email
Isaac Topor, <i>EdD, RHIA</i> Chairman	7-058	718-270-7782	isaac.topor@downstate.edu
Mohammad Faysel, <i>PhD</i> Assistant Professor	7-055	718-270-7693	mohammad.faysel@downstate.edu
Shaneka John Program Administrator	7-056	718-270-7770	shaneka.john @downstate.edu

III. MISSION

State University of New York (SUNY) and Downstate Medical Center

The mission of the State University of New York is proudly expressed in its motto: “To Learn – To Search – To Serve.” The mission of the state university system is to provide the people of New York educational services of the highest quality, with the broadest possible access, fully representative of all segments of the population in a complete range of academic, professional and vocational post-secondary programs. The educational activities offered through a geographically distributed system of diverse campuses, which have differentiated missions, are designed to provide comprehensive programs of higher education, to meet the needs of both traditional and non-traditional students and to address local, regional, and state needs and goals. The State University of New York Downstate Medical Center at Brooklyn is an academic health center committed to teaching, biomedical research and the delivery of health services, especially to urban communities.

College of Health Related Professions

The mission of the College of Health Related Professions is to educate health care professionals in the delivery of excellent health care service by developing their scientific competence and fostering their humane spirit. The College seeks to accomplish this by providing a challenging and supportive atmosphere for learning that offers opportunities for structured experiences as well as independent inquiry. The faculty contributes to knowledge in allied health through advancements in clinical practice, scholarly activities, basic and applied research. Collaboration is emphasized among students, faculty, clinicians and professionals in health care and related disciplines. Students are prepared for professional leadership roles through course work, professional and campus activities. The College fosters ongoing professional growth by sponsoring continuing education opportunities in all disciplines. The College strives to serve the urban community in which it is located by providing health services and education to the population.

Medical Informatics Program

In keeping with the mission of the College of Health Related Professions, the Medical Informatics Program at Downstate Medical Center is designed to provide comprehensive theoretical and technical skills in the practice of medical informatics. To foster the development of the attitudes, values and behavior appropriate for professional health care providers, and to prepare students to participate in the team approach to patient care. The curriculum integrates computer science, medical informatics, health science, and research to provide a comprehensive introduction to the practice of medical informatics. The five semester didactic phase consists of lectures, computer laboratory, practical and simulation experiences designed to provide medical informatics students with the knowledge necessary to work in the field of medical informatics. The curriculum, which consists of five semesters, is designed to fulfill the program and the institutions mission the objectives, learning experiences, and evaluation methods of each academic and clinical course provide the opportunity for the students to gain the knowledge, attitudes and skills necessary to attain the curriculum goals. Learning is sequenced to be progressive and influenced by previously attained knowledge and skills.

Program Educational Philosophy

The mission of the Medical informatics Program is to provide a high quality education to students studying in the field of medical informatics who will be prepared to be employed in an urban environment. This will be accomplished by:

1. Providing students with the knowledge, theories, and skill required in the field of Medical Informatics
2. Providing students with a challenging and supportive learning environment
3. Providing students opportunities to collaborate with faculty from College of Medicine, College of Nursing, and the College of Health Related Professions
4. Providing extensive clinical experience, which will prepare the students to practice in different health care facilities and in urban communities
5. Creating a sense of professionalism

The SUNY Downstate Medical Center Medical Informatics Program is a member of International Medical Informatics Association and Academic Forum Member of American Medical Informatics Association. Accreditation process on a national basis is being planned in the future.

American Medical Informatics Association (AMIA) is the main national organization that represents medical informatics professionals. Its offers student membership and various helpful resources for students.

MI students are introduced to the role and responsibilities of the professional association and are encouraged to be student members of AMIA. There are various other local and national associations that are related to medical informatics profession that host events and activities for students as well. We view membership and active participation in the activities of professional associations, as an opportunity to impact the direction and future of the medical informatics profession.

Please visit www.AMIA.org for student membership cost and detail.

FACULTY

Isaac Topor, Ed. D., RHIA, joined the college of Health Related Professions as Chair of the Health Information Management Program in 1980. Dr. Topor received his B. S. in Medical Record Administration and M.S. in Environmental Health Science from Hunter College. Dr. Topor also received A Masters in Public Administration (MPA) from New York University. A Doctorate in Education (Ed. D.) was completed at Teachers College, Columbia University. Dr. Topor has more than 30 years of experience in health information systems and management. Dr. Topor has been active in the local, state, and national health information association. He received the distinguished member award from the Health Information Management Association of New York City of which he is a member and past president.

Dr. Topor's research and scholarly activities focus on the electronic medical record, Coding and nomenclature (ICD-9-CM and CPT), health administration. Current research focuses on evolution of the electronic medical record and its effect on clinical care, research and professional role ambiguity. Previous publication focused on Hypertext as a teaching tool and confidentiality and security issues regarding health information systems.

Mohammad Faysel, PhD is an Assistant Professor in the Medical Informatics department at SUNY Downstate Medical Center. Prior to joining Downstate, Dr. Faysel held a fulltime faculty position as Assistant Professor of Health Informatics and Program Coordinator where he developed a health informatics program and taught various health informatics courses. He was also a Predoctoral Fellow and Co-instructor of various graduate level biomedical informatics courses at University of Medicine and Dentistry of New Jersey (UMDNJ) while he was completing his doctoral studies. He was involved in several grant funded informatics research projects at UMDNJ.

Dr. Faysel's research interests include cyber security for healthcare information systems, bio surveillance in public health, Mobile Health (mHealth) applications in improving healthcare delivery, reducing health disparity using mHealth, and healthcare outcome measurement using electronic health record.

Dr. Faysel holds a PhD in Biomedical Informatics from University of Medicine and Dentistry of New Jersey, both BS and MA in Computer Science from Queens College of the CUNY.

ADJUNCT FACULTY

Adjunct faculty participates in the teaching in the Medical Informatics curriculum. The faculty are from the College of Medicine, Academic Computing, Scientific Computing, and Medical Library and from external community. They are all experts in computer science, medical informatics, and health care.

STUDENT SUPPORT SERVICES

Services for Students with Disabilities

Students with disabilities who wish to request accommodation from their academic program are required to complete the appropriate disability information form prior to matriculation. The Office of Student Affairs coordinates arrangements for students with disabilities. Students who wish to request accommodations after they are matriculated into the college are required to complete the appropriate form from the office of student affairs. Students should also refer to the Student Handbook for description of the procedures for requesting accommodations. The Office of Student Affairs is located in the Basic Science Building, room 01-114, telephone number **718-270-2187**.

Academic Support Services

Students who experience academic difficulties can contact *Ms. Lotus Jones*, office of Academic Development at **718-270-7536**.

Student Counseling Service

Confidential counseling services are available by contacting *Dr. Christine Saunders-Fields* Director of Student Counseling at **718-270-1408**. A full description of student counseling services is available in the SUNY Downstate Medical Center Student Handbook.

Student Health Services

A full description of the student health services can be found in the SUNY Downstate Student Handbook and on the SUNY Downstate student counseling webpage at http://sls.downstate.edu/student_health/

Financial Aid Information

Current information about financial aid and scholarship are made available to students by the Financial Aid Office located in room 01-114 of the Basic Science Building.

Registration for Continuing Students

Information about registration for continuing students will be forwarded to the students by the registrar using email and Banner. During the pre-registration period, students will meet with their assigned faculty advisor for selection of courses. Subsequently, students will register online using the Banner portal.

E-mail

Students are given an individual email account by the college at the time of orientation. Faculty notices to students are often sent via e-mail. Students are also encouraged to contact faculty and staff through e-mail or by phone. Students are expected to check their Downstate e-mail on a daily basis.

Faculty Advisor

Each student is assigned a faculty advisor. The faculty advisor should be consulted prior to course selection and registration. Each student should make an appointment to meet his/her advisor at least once each semester.

Students of Medical Informatics Association (SMIA)

The Students of Medical Informatics Association is an organization formed and run by students in the program. The Association has in the past invited speakers, worked with the local Informatics associations, made presentations at national conferences, and organized social events.

Health Insurance

SUNY Downstate Medical Center requires health insurance for all matriculated students. Information on health related services and health insurance is published in the Student Handbook.

Weather Emergencies/ Natural or Man Made Disasters

If SUNY Downstate were to be closed due to a weather emergency or other emergencies, you would hear the notification on your local radio or you can call 718-270-1000. You should also check the SUNY Downstate website for information. You may also call the Medical Informatics office (718-270-7770) for up-to-date information on class cancellation due to weather emergency, natural or man-made disasters.

ACADEMIC POLICIES SPECIFIC TO THE MEDICAL INFORMATICS PROGRAM

Grading Scale: Letter grades are based on actual numeric values and assigned by the course instructor upon completion of each course. The grading policy of the Medical Informatics program is as follows:

<u>Alphabetical Grade</u>	<u>Grade Point Value</u>	<u>Score</u>
A	4.00	93 and above
A-	3.67	90-92
B+	3.33	87-89
B	3.00	83-86
B-	2.67	80-82
F	0.00	< 80

WF (withdrew failing) carries a numerical value of zero (0.00), and is calculated in the grade point average, (GPA)

I -- Incomplete due to unforeseen circumstances i.e. illness

IP -- Clinical Course in progress

R- Borderline failure (re-exam pending)

Withdrawal from a Course

A withdrawal grade of “W” is recorded when a student withdraws from a course after the add/drop period and prior to completing one third of the course. There is no point value attached to the grade of W.

A withdrawal passing grade of “WP” is recorded when a student withdraws from a course, while performing at a passing level, after completing one-third of the course but prior to completing two-thirds of the course. There is no point value attached to the grade of “WP”.

A withdrawal failing grade of “WF” is recorded when a student withdraws from a course, while performing at a failing level and after completing one-third of the course but prior to completing two-thirds of the course. A grade of “WF” represents an academic deficiency and is calculated into the grade point average as 0.00. Withdrawal at failing level after completing 1/3 but prior to completing 2/3 of the course. A WF is an academic deficiency and counts as an “F” for the purposes of academic standing.

A student may withdraw from a course during the WP/WF period, upon written request and approval by the Program Chairperson. Withdrawal from a course during the WP/WF period is permitted only in conjunction with medical emergency, leaves of absence or withdrawal from the academic program. In the case of medical emergency, a note from the student’s health care provider is required.

A student withdrawing from a course on the day of an examination receives an “F” grade for that exam and the exam grade is averaged with the other grades earned during the course.

If a course in which the student has earned an "F" or "WF" is successfully repeated the "F" or "WF" will appear on the transcript, but will not be counted in the GPA of the semester in which the course was repeated as well as in subsequent semesters. The original "F" grade will continue to affect the GPA previous to the successful repeat.

A student withdrawing from a course on the day of an examination receives an "F" grade for that exam and the exam grade is averaged with the other grades earned during the course.

To withdraw from a course, the student must:

Obtain an Add/Drop form from the Office of the Registrar. The completed form must be approved and signed by the program chairperson and delivered to the Office of the Registrar.

A student may withdraw from a course during the WP/WF period, upon written request and approval by the Program Chairperson. Withdrawal from a course during the WP/WF period is permitted only in conjunction with medical emergency, leaves of absence or withdrawal from the academic program. In the case of medical emergency, a note from the student's health care provider is required.

The date upon which the form is approved, not the date of the last class attended, is considered the official date of withdrawal. Nonattendance or notification of the instructor of the intent to withdraw does not constitute formal withdrawal.

A student may not officially withdraw from a course after the last official day for withdrawal (after 2/3 of the course is completed). After this date, the grade "F" will be recorded and computed in the grade point average.

The grade of "F" will be assigned for all unofficial withdrawals regardless of when they occur during the semester.

Examinations

Students are required to take all scheduled examinations. Unapproved lateness for more than 20 minutes to a scheduled examination will result in a reduction of one letter grade. In extenuating circumstances (family crisis, or medical emergency), the student must call the program Chair and the course instructor, before the scheduled examination begins, to notify them of the reason for absence. With valid reasons, alternate examinations may be administered but documentation of the cause of absence, such as funeral notice, medical note etc. must be presented to the course instructor. Failure to notify the program Chair and the course instructor about an absence from a scheduled examination will result in a zero score for that examination.

Please consult the Student Handbook, page 53, for additional information on guidelines for students during classroom examinations.

Exam Grade Appeal Procedures

The student must contact the course instructor for an appointment to review the paper or test in question within two weeks of receipt of the grade to appeal an individual exam or paper grade. It is up to the course instructor to change his/her decision at this stage. If the student is not satisfied with the instructor's decision, he/she may at this stage submit an appeal in writing to the Program Chairperson. The written appeal should contain adequate background information about the course and the reasons the student believes the grade is incorrect or should be changed. The Chair and MI faculty, not the course instructor, will review the student appeal and a decision will be made and conveyed in writing to the student by the Chairperson.

Grade Reappraisal

Course grade reappraisal may be requested by the student within (3) business days following posting of course grades. The procedure is outlined in the SUNY Downstate Student Handbook under (Grade Reappraisal)

Below are the acceptable bases for student appeal for grade reappraisal

1. An error in the calculation of the exam or course grade.
2. The assignment of this grade to the student was more exacting or demanded standards that were not applied to other students in the same section of the same course, in the same semester, with the same instructor.
3. The assignment of this grade to you was on some basis other than performance in the course.
4. The assignment of this grade to you was by a substantial departure from the instructor's previously announced standards for that section of that course.
5. The assignment of this grade was based on a substantial departure from the written program approved standards or published grading rubric for this course.

Academic Regulations

- a) A minimum cumulative grade point average of 3.0 is required and must be maintained to be in good academic standing.
- b) If a student fails a course (grade below B-), the student must repeat the course the next time that course is offered. If a student fails the same course a second time, the faculty will present the student to the Admission and Academic Standing Committee for dismissal from the program.
- c) Due to the sequential structure, pre- and co-requisite requirements, the didactic courses are taught once during the academic year. Course repetition can only occur annually.
- d) A student is placed on academic probation at the end of any semester in which his/her grade point average, cumulative or for that semester, is below 3.0.

- e) Students are not permitted to continue in the program if they fail more than one course in the curriculum. If a student fails more than one course, the Medical Informatics faculty will recommend to the Admission and Academic Standing Committee that the student be dismissed from the program.
- f) Opportunities are provided to ensure that student rights are protected and that students are afforded due process. The procedure for grade appeal is described below. The procedures for appeal of academic standing decisions are outlined in the University Student Handbook and Bulletin.

Clinical Competence and Professionalism

The College recognizes the necessity of students demonstrating superior clinical competence as well as academic excellence. Therefore, each student will be evaluated on his or her capacity to demonstrate high levels of professional performance during periods of clinical practice. The criteria for evaluation of professional performance will include:

- Demonstrates professional knowledge and skill,
- Works competently and in a timely way,
- Adheres to recognized safety procedures and protocols,
- Demonstrates initiative (e.g., arrives well prepared, offers assistance, and seeks learning opportunities),
- Exhibits punctuality, excellent attendance and dependability,
- Demonstrates integrity in all interactions, including adherence to professional codes of ethics,
- Maintains patient privacy and confidentiality (including de-identification of any and all patient information used in clinical case presentations, team meetings, in-services, research, etc.),
- Exhibits sensitivity, compassion, empathy and respect for all patients, caregivers, families, and members of the health care community,
- Wears attire consistent with expectations of the practice setting and maintains a professional appearance,
- Accepts feedback without defensiveness and manages conflict in a constructive way,
- Documents accurately and in an ethical manner, and
- Completes and complies with assignments that are provided by clinical instructors in a timely and competent way.

In addition, student use of cell phones, smart phones and other devices, along with texting in the clinical setting is considered unprofessional behavior, unless approved by the clinician or supervisor for patient care or in the case of personal emergency. Habitual use of personal cell phone or smart phone devices while on site is a violation of this policy.

Professional Etiquette

Students are expected to actively maintain a classroom environment conducive to learning. Engaging in activities or demonstrating behaviors that either distract or disrupt the learning environment will not be tolerated. This includes but is not limited to: loud ring tones/calls, using electronic devices without instructor's permission, walking into or out of class after it has started, destroying school property, interrupting students and instructors, monopolizing the class time during instruction, and sleeping during class. Students who fail to respond to advisement by the program may be asked to withdraw or be dismissed.

Food/Drinks: Eating meals is prohibited in the classrooms. Light snacks, water and other beverages are permissible in the classroom but must be in a closable container.

Breaks: Students should take advantage of formal breaks offered during lengthy classes. Only in rare instances, should it be necessary for a student to leave and return to the classroom.

Punctuality: Students should be on time to class and stay the entire session. If the student is going to be late or needs to leave early, arrangements should be made with the instructor prior to class.

Visitors: The program has a no guest policy. This is in keeping with the SUNY policy on students who are not enrolled in a course, not being eligible to audit or attend classes.

Conversations: If students have questions, they should ask them at appropriate times, and should avoid talking and participating in other conversations during classes.

Penalty for Violation

MI Program and instructional faculty have the right and authority to counsel any student who is deemed to be in violation of the above standards. Any such student may be asked to leave the class if his or her appearance and behavior does not meet above set professional standards. Sessions and exercises missed by the student as a result of enforcing the standards of dressing will be marked as an unexcused absence. Any attendance penalty will be in addition to the dress code penalty.

Advisement

Each student is assigned a faculty advisor who is available for academic advisement as well as for special individual concerns over the duration of the student's enrolment. An advisement session between each student and their faculty advisor is required at least once each semester during course registration. The intent of the student/faculty advisement sessions is to provide regular individual communications with each student, assist in the supervision of their progress in the program, identify strengths and weaknesses of the student, and assist the program in appropriate course registration.

Student Advisor office hours are posted on their office doors. Students are advised to make an appointment and meet with their advisors, at least twice every semester and more frequently if they are having academic problems or to address any issues that may impact academic performance.

An advisement document is completed during each session and placed in the student's file. Subsequent conferences will be documented in the same format.

Attendance & Punctuality

Attendance at classroom lectures, laboratories, and clinical internship is mandatory.

- Punctuality is required in all classroom/clinical internship and laboratory activities.
- If you are ill and cannot attend a class, it is the students' responsibility to call the course instructor, before the scheduled class.
- If you are unable to attend the clinical internship, it is the students' responsibility to call the clinical coordinator and the clinical preceptor, before the scheduled session.
- Active participation is encouraged in all classes.
- Disruptive behavior during class is not acceptable. See Classroom Discipline section in Appendix III of the Student Handbook for further information
- Cell phones/pagers must be silenced while in the classroom
- Classroom behavior should adhere to AHIMA's Code of Ethics (see Appendix C)
- If more than 20% unexcused absences are recorded in lecture classes or clinical internship the students will be deemed to have failed the course.
- If more than 25% of excused absences are recorded in lecture classes or clinical internship it may result in failure of the course at the discretion of the instructor.
- Absences may only be excused through notification and approval of the Program Director or course instructor.

Clinical Internship

The Clinical Coordinator will assign each student to the optimal site available during the final Spring semester. It is the responsibility of the student to arrange transportation to his or her assigned clinical site. Requests for assignment to specific clinical sites are accepted in the Fall semester prior to the clinical internship. Requests must be submitted in writing at least two months prior to the start of that semester. Assignment to a requested site is not assured; however, all requests will be carefully considered and granted if they meet the needs of the student and the Medical Informatics program.

Students evaluate healthcare information and their integration in the clinical facility. Students will review the types, use, integration, and clinical value of healthcare information systems in assigned clinical facilities. As a team, students assigned to a clinical site will devise evaluation criteria and tools, interview stakeholders, evaluate system interfaces, and analyze the integration of the systems in the overall patient care effort of the clinical facility.

Students are required to submit deliverables (i.e. attendance sheets, preceptor evaluations, evaluations of the clinical site for the three components during the Medical Informatics Clinical Internship) to the coordinator at the end of the Internship assignment.

Grading Criteria: **PASS/FAIL**

College Wide Activities

The activities implemented during the Ethics Day are in line with the mission of the College of Health Related Professions (CHRP) to promote cultural and professional interaction amongst the culturally diverse students and faculty. The date of the events will be announced prior to each semester and will be reflected on the class schedule.

Attendance of College-wide educational (Ethics Day, Primary Care Day) activities is optional for medical informatics Students

Computer Access

Didactic and Clinical coursework are frequently posted on the Prime Electronic Web page. Regular access to a computer is required. Computers are available at a variety of locations on campus.

Counseling and Academic Support Services

Psychological & Educational support services are available to all students while enrolled in the program. Students may access these services directly or be referred by the program faculty. For psychological services contact Dr. Christine Saunders-Fields via e-mail or phone - (christine.saunders-fields@downstate.edu) or at (718) 270-1408 for an appointment.

Services are private and confidential. The MI Program faculty is *not* notified of the purpose or attendance for these services. All information revealed to the counselor is strictly confidential.

The Counseling Service is not a part of the administration of the University. The Student Counseling Service is part of the Student Health Services and provides counseling and psychological services for students of all SUNY Downstate colleges

Academic support

Academic support is available from assigned program faculty and the university counseling services. Students are strongly encouraged to seek support early. Utilization of academic support has proven to be a valuable service addressing, test taking skills, study skills, and paper/write-up preparation.

Contact Dr. Sol Magzamen or Ms. Lotus Jones with Academic Support their offices are located in room 620 in the Health Science Education Building or call (718) 270-7536.

CLASSROOM BEHAVIOR/ELECTRONIC USE POLICY

E-mail & Electronic Bulletin Boards: Faculty notices to students are often sent via e-mail and electronic bulletin boards in PRIME. Students are also encouraged to contact faculty and staff through e-mail or secondarily by phone. Students are expected to check their Downstate e-mail & electronic bulletin boards on a regular basis, at least daily. Lotus notes e-mail is considered to be an official means to communicate with students.

Electronic devices: The classroom environment can be enhanced by the utilization of laptops and recordable devices. However, the use of laptops, voice recording and picture taking devices must be done with respect for the educational environment and protection of intellectual property rights.

If the grievance is with the medical informatics Program Director, or if they have not been able to resolve a conflict at that level, they should contact the Dean of the College of Health Related Professions

Faculty/Student Relations

Academic challenges tend not to diminish with time, but rather to multiply if left unattended. Any academic problem should be addressed as soon as possible according to the following sequence:

- Instructor
- Course Director
- Faculty Advisor
- Program Chairperson

Appointments with the Program Chairperson are to be scheduled through the program administrator. In addition, students are invited to forward their suggestions to the Program Chairperson directly.

GRIEVANCE PROCEDURE

The procedure for addressing and filing grievances arising out of 'equal opportunity, sexual harassment or academic issues', is clearly enumerated in the SUNY Downstate Medical Center Student Handbook.

Specific issues involving specific faculty members, specific students, or individual student grades should be addressed in individual sessions as outlined below:

- Grievances with a specific faculty member should initially be addressed directly with the faculty member unless the nature of the complaint is such that the student feels uncomfortable doing this
- Complaints should be expressed using a diplomatic, reasoned approach with the goal of quick amicable conflict resolution, if possible.
- If the student feels uncomfortable approaching the involved faculty member for whatever reason, or if they have not been successful at resolution of the conflict with the faculty member, they should register the grievance with the Academic Coordinator, or Medical Informatics Program Director.

If the grievance is with the medical informatics Program Director, or if they have not been able to resolve a conflict at that level, they should contact the Dean of the College of Health Related Professions.

HOUSEKEEPING – CLASSROOM

Students are required to maintain a clean classroom environment. Students are expected to put away their waste materials in the garbage containers in the classrooms. Day to day arrangement of the classroom chairs, tables and equipment is the responsibility of each student.

New Students

A mandatory, college-wide orientation is traditionally held at the start of the program. At orientation, new students are required to present documentation of University health clearance and satisfactory completion of all prerequisite course work, i.e., transcripts. Students are afforded an opportunity to meet their professors and the University administrative leadership.

Prior to entry to the medical informatics program, students are required to:

- Obtain health clearance and present documentation to the Program
- Document current university HIPAA

Orientation and Registration – Continuing Students

Information concerning registration for continuing students shall be posted on the program bulletin board or disseminated during faculty-student meetings. During the pre-registration period, students shall meet with their assigned faculty advisor for guidance, completion of web- registration. Registration materials shall be reviewed by the Program Chairperson and then forwarded to the Office of the Registrar for processing. Confirmation of registration and billing information is forwarded to the student address indicated on the registration form

Orientation and Registration – New Students

The procedure for addressing and filing grievances arising out of 'equal opportunity, sexual

During orientation, new students are also introduced to the supportive services available in the University and provided with additional information concerning the medical informatics Program. Registration is completed by the day of orientation. In addition, new students participate in an orientation to the Library and computer network system.

The Students of the Medical Informatics Association (SMIA)

The Students of the Medical Informatics Association (SMIA) at SUNY Downstate is entirely student based and incorporates student-chosen activities, funded in part by student fees. Officers are elected annually. Each class is encouraged to elect their officers during the first fall semester.

President:

Vice President:

Treasurer:

Secretary:

Class Office Organization

Class President

1. Develops agenda for class meetings
2. Monthly meetings with faculty member(s) if needed
3. Class organization/evaluation meetings
 - a) Organize fund raising projects
 - b) Set objectives for the year (Class dues, educational meetings)
4. Periodic meetings with classmates
 - a) Class presidents develop agenda
5. Represents the class to the program faculty when the need arises on the College of Health Related Professions Student Council

Class Vice-President

1. Represents the class *in* the absence of the President.
2. Monitors and evaluates student support systems.
3. Works with the President in implementing class programs.

Class Secretary

1. Records and makes available minutes of class meetings.
2. Responsible for class correspondence as directed by the President or Program Director.

Class Treasurer

1. Responsible for all class-monies.
 - a) Manage the class funds in coordination with the CHRP council student account
 - b) Give period financial report on class funds during class meetings and with the other class officers.
 - c) Managed all funds raised and Receive and maintains an accounting of social funds
 - d) Arrange for payment of all approved indebtedness of the class.
2. Assists in fund raising efforts
 - a) Works with secretary in communicating with fund-raising organizations.
 - b) Works with the class to organize fund-raising efforts.

The class may elect students to serve on ad hoc committees for any class events such as but not limited to volunteer activities or social events.

The Program has the discretion to appoint faculty to supervise the election of class officers.

Photocopying

Decision for student placement at specific clinical sites and dates rests with the Senior Clinical Coordinator and the SUNY Downstate Medical Center medical informatics Program. The Program arranges general clinical site assignments annually. The Senior Clinical Coordinator advises students on the exact clinical assignment prior to each rotation. Students cannot refuse clinical placements.

Scheduling and Communication

A record of all faculty, didactic and clinical scheduling is maintained by the PA program administrator. Messages and completed assignments should be uploaded to PRIME as per the faculty's directions. *Program and College-wide information is posted on the Program bulletin board,*

E-Mails

All students are reminded to check their SUNY Downstate e-mails on a daily basis, and the bulletin board regularly in addition to contacting their clinical coordinator weekly, in order to remain abreast of sudden scheduling modifications. Additionally, students should be aware that faculty may utilize e-mail to advise students of class assignments. All official e-mail communication to SUNY Downstate Medical Center MI students is sent to their e-mail address provided by SUNY Downstate or to their Prime electronic board accounts. This includes communication and important information from faculty members. Students are also advised to communicate any concerns or questions with faculty and other students through their Downstate email account. Students will be held responsible stemming from not checking and responding to email instructions.

Current professional association announcements as well as employment opportunities are sent to students and alumni via the CHRP-MI mailing list. All incoming students are placed on the list by the program administrator.

Scheduling the Clinical Internships

The Program arranges student's clinical schedule to ensure the best possible clinical educational experience with the sites currently available.

1. Preparation for the Clinical Year

During the first, each student will have the opportunity to consider topics and placements for their internship and master's essay. Program faculty clinical coordinator determines the adequacy of clinical sites and establishes clinical site affiliations. Students may submit information on potential individual sites that can be utilized for clinical training. The Program faculty may investigate the possibility of accessing these sites. Students are not authorized to make direct arrangements with clinical sites but can initiate expressions of interest and then convey the contact information of the site personnel to the coordinator for official follow-up.

2. Clinical Site Placement

Each student is responsible for arranging personal transportation to and from clinical assignments and accommodations and appropriate scheduling to meet the needs of student and site.

Student Health and Safety

1. *Medical Emergency Alert on Campus*

The Student Health Services provides primary care for acute conditions, illnesses and injuries for students and employees while on campus. It also provides routine health clearances, immunization and tuberculin testing as needed. Health care services provided to students off campus or during clinical affiliation are covered under the student's individual insurance plan.

The following procedures should be followed in the case of a medical emergency:

- If an individual suddenly becomes ill and cannot be taken to Student/Employee Health Services, or if the Student Health Service is closed, telephone the Department of Public Safety (extension 2626) to arrange for assistance.
- If you are in the vicinity of Downstate Medical Center and the Student Health Service is closed, and you have an urgent medical situation, you may visit the University Hospital of Brooklyn Emergency Department.
- For life threatening emergencies, you should go to the Emergency Room at Kings County Hospital Center and inform the physician that you are a student at Downstate. Transportation to an emergency room may be obtained by calling 911.
- All visits to the emergency room should be subsequently reported to the Student Health Service.
- If an injury occurs during the evenings, nights, weekends or holidays, students should go the **University Hospital Emergency Department**.
- If students are at another hospital, they should report to the supervisor and to the emergency room. Students should identify themselves as SUNY Downstate Medical Center students.

For any other hospital, please contact your immediate supervisor and follow their procedures. **You should contact the Medical Informatics Program and advise your Course Instructor/Clinical Coordinator immediately.**

2. *Health Insurance and Clearance*

The State University of New York/Downstate Medical Center requires health insurance for all matriculated students. Information about the health insurance plan currently available to all students can be obtained from the Office of Student Affairs, (BSB Room 114). A Health Insurance Form is included in the admission package sent to all new students admitted to the university. The information provided on the Health Insurance is screened by the Student Health Services to determine the health insurance status of each student. Proof of recent health clearance from the Student Health Service, or from a private physician is required upon enrollment and before starting the clinical clerkships. Students must submit a photocopy of their Health Clearance Form to the Program.

All records, evaluation instruments and examinations (paper and electronic) are the property of the Medical Informatics Program and reprinting or copying of any kind is prohibited.

Student Records

The Program maintains student departmental and clinical performance records. These files are available for review, upon written request to the Chairperson. Written assignments (i.e. position papers, clinical case write-ups) are returned to students once performance has been assessed and

recorded. Student performance on examinations and quizzes are recorded and distributed by the program administrator. Completed exams are available for review by students by appointment with the course director, under the supervision of the instructor or course director and then retained by the program.

The Committee on Admissions and Academic Standing will not discriminate against qualified individuals with disabilities. Students must be able to perform the essential functions of the program in order to meet certain minimum academic and technical standards. In carrying out their functions, the Committee will be guided by the technical standards

Weather Emergencies/Natural or Man-Mad Disasters

Students are advised to call the institutions emergency class cancellation line **(718) 270 7703 OR 718-270-1000** and follow prompts to get to the CHRP message for updated information on class cancellation due to weather emergency, natural or man-made disasters. You may also call (718)270-2324 for updates. All students are encouraged to enroll in the campus emergency alert response system (EARS) www.downstate.edu/ears/signup.html

Disabilities

Any student with a diagnosed disability or who may require special accommodation by the medical informatics Program, are required to inform the Program Director of such, prior to the start of the first year, or as soon as knowledge or diagnosis of conditions such as may qualify for a disability is known.

The Office of Student Affairs coordinates arrangements for students with disabilities. Students who wish to request accommodation(s) *after* they have matriculated into the college are required to complete the appropriate form available from the Office of Student Affairs. Please note that accommodations may require time to process and put in place. (College Student Handbook)

Technical Standards for Entry, Continuation and Graduation

INTRODUCTION

Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act require that no qualified individual with a disability shall, by reason of such disability, be excluded from participation in or denied the benefits of SUNY Downstate services, programs or activities or be subjected to discrimination by SUNY Downstate.

The term "qualified individual with a disability" means an individual with a disability who, with or without reasonable modifications to rules, policies, or practices, the removal of architectural, communication or transportation barriers, or the provision of auxiliary aids and services, meets the essential eligibility requirements for the receipt of services or for participation in programs or activities. Standards set forth in this proposal as standards necessary for admissions, continuance and successful completion of the program.

Technical Standards

The candidate for the MS Degree in Medical Informatics must have the knowledge and skills to function in a broad variety of clinical situations and to render a wide spectrum of patient care. In order to carry out the activities described below, candidates for the MS Degree in Medical Informatics must be able to consistently, quickly, and accurately learn, integrate, analyze, and synthesize data.

The candidate for the BS Degree must have abilities, attributes, and skills in five major areas:

- Observation.
- Communication
- Intellectual, including conceptual, integrative, and quantitative abilities, and
- Sensory and Motor Coordination
- Behavioral and Social

Performing in a reasonably independent manner is an essential function of the program and the profession.

Observation and Sensation

Students must have sufficient visual, auditory and tactile sensation to be able to observe and participate in lectures, demonstrations, experiments, and laboratory exercises in the MI curriculum. Students must be able to speak, hear, and use senses of touch in the performance of in appropriately manipulating computer or related equipment during such interactions.

Communication

Students should be able to communicate, understand and observe healthcare situations in order to elicit information, and perceive nonverbal communications. They must be able to communicate effectively and sensitively with stakeholders including patients and members of the health care team and be able to convey appropriate information. Communication includes not only speech but also reading and writing. They must also be able to communicate effectively and efficiently in oral and written form with all members of the health care team including support staff and IT staff.

Motor Coordination and Strength

Students should be sufficiently mobile to execute movements required to provide appropriate intellectual services including the manipulation and understanding of IT equipment.

Intellectual: Conceptual, Integrative and Quantitative Abilities

These abilities include measurement, memorization, calculation, reasoning, analysis, and synthesis. Problem solving, the critical skill demanded of medical informaticians requires all of these intellectual abilities. At appropriate times, students must be able to understand, accept and communicate the limits of their knowledge to others, including patients, peers and supervising Preceptors, clinicians or administrators.

Behavioral and Social Attributes

Students must be able to fully utilize their intellectual abilities, exercise good judgment, promptly complete all responsibilities attendant to informatics work. Students must also be able to adapt to changing environments, display flexibility and learn to function in the face of uncertainties inherent in the field. Students must be able to demonstrate compassion, integrity, concern for others from all levels of society, and ethnic backgrounds. These and the students' interpersonal skills, interest and motivation are all personal qualities that are assessed during the admissions and educational process. Utilize all resources available through the University; Initiate academic support.

Conclusion

The SUNY Downstate Medical Center medical informatics Program and its sponsoring institution will attempt to develop creative ways of opening the Program to competitive, qualified individuals with disabilities. In doing so however, the Program and sponsoring institution must maintain the integrity of the curriculum and preserve those elements deemed essential to the education of an informatician. The Program and sponsoring institution cannot compromise the health and safety of patients. An applicant or student who is unable to meet the minimum academic and technical standards is not qualified for the practice of the profession.

Student Responsibilities

It is the responsibility of each student to be familiar with the contents of the College Academic Regulations, Professional Requirements and the Academic Integrity Policy. These documents can be found in the College Bulletin and the University Student Handbook.

In addition to the "*Responsibilities of Incoming Students*" as outlined in the CHRP Bulletin, it is the student's responsibility to:

- Realistically assess personal development and recognize problems which demand intervention.
- Communicate academic, clinical or individual needs which may require Physician Assistant Education Program faculty intervention.
- Utilize all resources available through the University; Initiate academic support.
- Abide by the Code of Ethics of the College of Health Related Professions, Medical Center and informatics profession.
- Inform the program Administrator of any changes in their correspondence address, telephone/pager and cell phone number.
- Follow the assigned class and internship schedules and learning experiences as outlined by the program faculty.
- Maintain professional behavior and decorum.

Student Performance Evaluation

The provision of safe, professional services by informaticians relies not only on factual knowledge, but also on non-cognitive, personal factors including the ability to relate to stakeholders, the ability to integrate information and the ability to apply theory to practice. The faculty is charged with the responsibility of evaluating student performance objectively, utilizing methods such as written examinations, observation in laboratories and discussion groups and observation of practical performance.

Methods of evaluation and length of examination are at the discretion of the course instructor and are described in the course syllabi. The medical informatics courses are competency based and as such, appraise the individual's performance according to a given standard (competency).

Examinations

The following are the prevailing policies and procedures for exam administration:

- Students are expected to be present and sit for all examinations at the scheduled dates and times.
- Each student is responsible for properly marking the answers on the computer and/or on the scantron answer sheet if applicable, and submitting the exam as appropriate.

- Students cannot challenge a low grade resulting from failure to mark answers on the computer and/or answer sheet.
- During examinations students are only allowed their pencils and those resources specified by the instructor for that exam, and a beverage in a closed container. Cellphones, food, recording devices, and written materials of any kind, laptop computers or any other electronic device are strictly may be prohibited by the instructor.
- For an in-class closed book exam, if a student needs a bathroom break; he or she must inform and obtain permission from the faculty or exam proctor prior to exiting the exam hall. To avoid distractions to the rest of the class, students are highly advised to take care of their personal needs, before the start of the exam.
- If a student completes their exam before the end of the exam period, they may turn in all students' papers/submit the exam and leave the room quietly, so as not to disturb other students still completing the examination. After exiting the room, students are not to gather outside the door of the examination room, re-enter the examination room for any reason.
- All students are required to demonstrate competency in both the theoretical as well as practical components of each course/internship. **Comprehensive re-examinations** are only offered at the discretion of the course director and as outlined in the course syllabus.
- Students discovered cheating or violating any testing policy will be expelled from the exam room and will receive a score of "0" for the exam or activity. In addition, they will be brought up for academic dishonesty with the Program Director/faculty committee.
- In the event of an illness or other emergencies leading to an absence from an exam (family crisis, or medical emergency), the student must inform the program Chairperson and the course instructor, before the scheduled examination begins, or within 24hours after the scheduled exam to notify them of the reason for absence.
- A student's failure to notify faculty about an absence from a scheduled exam within 24 hours will result in a zero (0) grade for that examination.
- Examinations will not be re-scheduled for individual students except when extraordinary circumstances demand such.
- Exams will not be rescheduled for any student reasons such as the following: 0.

On **rare** occasions and with written request representing consensus of the class, an exam may

- Be re-scheduled for the entire class or for one or a group of students. The class president may then present a written request, which represents the consensus of the class and the reasons for the request, to the course director. The course director will consider the request and reach a decision. The Program Administrator will communicate a response to the scheduling request.
- With valid reasons, an equivalent examination may be administered after the Medical Informatics Program is satisfied with the documented cause of an absence; such documents such as a funeral notice, medical note etc. must be presented to the Course Director.
- Administration of all make-up exams will occur at the date and time set by the course coordinator.
- Following a prolonged absence due to illness, a medical clearance (from the student's physician or the Student Health Service) will be required in order to return to classes or take a scheduled examination. All outstanding examinations will be rescheduled at the earliest opportunity possible and at discretion of the course director.

Reviewing an Exam

When the opportunity exists, major course exams may be reviewed by the course director with the entire class at a scheduled exam review session.

Policy on Academic Integrity

Students in the College of Health Related Professions are expected to demonstrate ethical and professional behavior, be mature and responsible individuals of good moral character, and be accountable for their behavior while in the College. It is expected that students' academic work will be their own. Students will actively uphold these standards and report any misconduct to the Program Chairperson. Academic dishonesty (i.e. cheating on exams, passing off someone else's work as your own) is grounds for dismissal. (See College of Health Related Professions Policy on Academic Integrity.) Acceptance of these academic regulations is assumed with registration (CHRP Bulletin)

Promotion and Graduation

Upon completion of each semester, the Chairperson reviews student performance. Promotion to the next semester is contingent upon successful completion of all required course.

Course Repetition

Students are required to repeat a specific course for credit in which the grade of "B-" have been received.

Graduation

Requirements for graduation from the MI program:

- Successfully completion of all courses
- Meet all College and Program requirements as established in the Bulletin and Student Handbook of the University.

Students are eligible for the degree of Masters of Science. Degrees are awarded from the Office of Registrar on May 31st, August 31st, and December 31.

Awards offered by the Medical Informatics Program at College Convocation

Award for Excellence in Research

presented to a graduating student in recognition of excellence in student research work.

Award for Outstanding Service

presented to a graduating student for outstanding contributions to the Medical Informatics Program, profession, and the Downstate community.

Award for Outstanding Leadership

presented to a graduating student for demonstrating outstanding leadership qualities.

Award for Academic Excellence

presented to a graduating student for outstanding academic performance.

Award for Clinical Excellence

presented to a graduating student for outstanding clinical performance.

Professionalism

- Demonstrate an understanding of legal, HIPAA, and other regulatory requirements
- Demonstrate sensitivity and responsiveness to issues of patient's age, gender, disabilities, and culture.
- Show a commitment to accountability- to patients, society and the profession.
- Maintain a professional relationships with the health care team
- Commitment to excellence and ongoing professional development by continuing education, review the literature, and a commitment to lifelong learning.
- Demonstrate a commitment to the highest ethical and professional principles, including but not limited to issues of confidentiality and security of health information.

Appendix 'A'

CHRP ACADEMIC CALENDAR 2017-2018

http://sls.downstate.edu/registrar/calendars/chrp_nursing_2017-18.html

Appendix 'B'
PROGRAM OF STUDY

Medical Informatics Program is a 39-credit program designed for full-time or part-time study. The curriculum is designed to meet the needs of students with a wide range of backgrounds. The courses are sequenced to encompass an overview of the discipline of medical informatics and to develop competencies and skills required by the discipline.

The courses include, database systems, network architecture, medical imaging systems, internet integration, medical decision support systems, and clinical internship. Students will also be required to conduct an independent research study or clinical system evaluation of a Medical Informatics system.

MEDICAL INFORMATICS

Master of Science

Program of Study

Curriculum

First Year

Fall Semester		Credit
MIMS 5001	Computer Science for Medical Informatics*	3
	OR	
ADMN 5400	Health Care Delivery in the US** AND	1.5
MIMS 5103	Health Care Delivery Professional Seminar **	1.5
MIMS 5100	Introduction to Medical Informatics	3
MIMS 5101	Database System Applications in Biomedicine	3
	<u>Total Credits</u>	<u>9</u>

Spring Semester

MIMS 5002	Internet integration in Healthcare*	3
	OR	
MIMS 5102	Health Care across the Lifespan**	3
MIMS 5110	Healthcare Computer Network Architecture	4
MIMS 5111	Research Methods	3
	<u>Total Credits</u>	<u>10</u>

Summer Semester

MIMS 5201	Topics in Medical Informatics	2
MIMS 5202	User Interface in Medical Informatics	3
	<u>Total Credits</u>	<u>5</u>

Second Year

Fall Semester

MIMS 5112	Medical Decisions Support Systems	3
MIMS 5203	Information Retrieval & Digital Libraries	3
MIMS 5204	Medical Imaging Systems	3
MIMS 5206	Independent Study (Elective)	1-3
**MIMS 5208	Clinical Internship in Medical Informatics I	1.5
**MIMS 5209	Clinical Internship in Medical Informatics II	1.5
	<u>Total Credits</u>	<u>9-15</u>

Spring Semester

MIMS 5121	Master's Essay in Medical Informatics	3
MIMS 5205	Evaluation of Healthcare Information Systems (<i>ELECTIVE</i>)	3
**MIMS 5208	Clinical Internship in Medical Informatics I	1.5
**MIMS 5209	Clinical Internship in Medical Informatics II	1.5
	<u>Total Credits</u>	<u>6-9</u>

Total Credits required for graduation: 39

* To supplement computer background.
 ** To supplement health care background

Course Descriptions

Course Title	Course Description
Computer Science for Medical Informatics	An overview of computer science as a science of abstraction. The course will introduce computer Programming as the way of thinking. Students will create models and implement abstractions using data structures and algorithms. Intended for students with limited computer background.
Introduction to Medical Informatics	An overview of the Medical Informatics field, combining perspectives from medicine, computer science and social science. The course will cover the organization of Medical information, the effective management of Information using computer technology, and the impact of such technology on medical research, education, and Patient care
Database System Applications in Biomedicine	An introduction to the fundamentals of database system. The evolution of hardware and software for storing medical data is covered. Current database structures such as hierarchical, network, relational, and object-oriented are described and compared in terms of their Applications in the health field.
Internet Integration in Healthcare	An overview of the Internet and WWW integration into healthcare. Course covers legal, social, and ethical issues as well as various techniques for creating attractive And functional web documents.
Research Methods	Basics for participating in the development, Implementation, and evaluation of research studies in Medical Informatics.
Healthcare Computer Network Architecture	An introduction to computer networks and their use in medicine. An overview of topologies of computer networks. Network security as it applies to HIPAA regulations are explored.
Medical Decision Support System	An introduction to methods of medical decision making in the face of uncertainty. The course surveys a number of techniques for qualitative reasoning, including probabilistic reasoning, decision analysis, ROC analysis, and meta-analysis, as well as comparison of different Qualitative and quantitative methods.
Topics in Medical Informatics	Analysis and discussion of various topics in the medical informatics literature under the direction of a faculty advisor
User Interface in Medicine	An overview of theoretical, development, design and

	Assessment models and techniques in the field of intelligent user interfaces under an interdisciplinary Approach (computer Science, psychology, cognitive science and artificial intelligence).
Information Retrieval and Digital Libraries	An overview of information retrieval methods with an emphasis on library information systems.
Medical Imaging Systems	An introduction to computer graphics and medical imaging techniques. Methods of digital image processing are explored. 2-D and 3-D imaging modalities are reviewed and demonstrated through of on-site medical equipment.
Master's Essay in Medical Informatics	Students will be expected to develop a proposal for a research project in medical informatics to be carried out with the supervision of a faculty advisor, and conduct the research. A written report on the result of a research project in medical informatics must be presented.