

Rochester INSTITUTE OF TECHNOLOGY

Minor Program proposal form

GOLISANO college OF COMPUTING AND INFORMATION SCIENCES

**Information Sciences and Technologies Department**

**Name of Minor:** Health Information Technology

**Brief description of the minor to be used in university publications**

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| The Health IT minor provides students with the knowledge and skills to develop software applications and database systems for the healthcare field. |

**1.0 Minor Program Approvals**

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| --- | --- | --- |
|  | Approval request date: | Approval granted date: |
| Academic Unit Curriculum Committee | April, 2013 | April, 2013 |
| College Curriculum Committee |  |  |
| Inter-College Curriculum Committee |  |  |

**2.0 Rationale:**

A minor at RIT is a related set of academic courses consisting of no fewer than 15 semester credit hours leading to a formal designation on a student's baccalaureate transcript

How is this set of academic courses related?

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| The department previously offered a BS in Medical Informatics for incoming students and a minor in Medical Informatics for current non-computing majors. We are discontinuing both of these and instead will offer this minor in Health IT for computing students. This approach is consistent with successful programs at our competitor schools and is inline with goals of the GCCIS College and the University to embrace the growing field of health informatics.  The courses making up the minor build on the prerequisite database and programming skills and cover the language and nuances of software development and implementation in the healthcare field. |

**3.0 Multidisciplinary involvement:**

If this is a multidisciplinary minor spanning two or more academic units, list the units and their role in offering and managing this minor.

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| --- |
| N/A |

**4.0 Students ineligible to pursue this minor:**

The purpose of the minor is both to broaden a student's college education and deepen it in an area outside the student’s major program. A minor may be related to and complement a student’s major, or it may be in a completely different academic/professional area.   It is the responsibility of the academic unit proposing a minor and the unit’s curriculum committee to indicate any home programs for which the minor is not a broadening experience.

Please list below any home programs whose students will not be allowed to pursue this minor, provide the reasoning, and indicate if this exclusion has been discussed with the affected programs:

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| --- |
| N/A |

**5.0 Minor Program Structure, Sequence and Course Offering Schedule:**

Describe the structure of the proposed minor and list all courses, their anticipated offering schedule, and any prerequisites.

* All minors must contain at least fifteen semester credit hours;
* Minors may be discipline-based or interdisciplinary;
* In most cases, minors shall consist of a minimum of two upper division courses (300 or above) to provide reasonable breadth and depth within the minor;
* As per New York State requirements, courses within the minor must be offered with sufficient frequency to allow students to complete the minor within the same time frame allowed for the completion of the baccalaureate degree;
* Provide a program mask showing how students will complete the minor.

Narrative of Minor Program Structure:

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| The purpose of the minor is to teach students who have a computing background how to develop and maintain software systems in the healthcare field. One year of Object Oriented Programming and an introductory database course are required as background knowledge. The sequence begins with 2 courses that may be taken in parallel or in sequence: ISTE-330 teaches skills for writing code to access a database while MEDI-130 introduces the students to the language of healthcare and the broad need for applications. Students then take MEDI 320 where they learn about healthcare specific Database Management Systems, data warehousing, and data mining as applied in the healthcare field. This is followed by MEDI-330, an in-depth examination of the electronic health record covering both the implementation issues and the privacy and policy issues. Finally, in MEDI-430 students learn about enterprise architectures (e.g., Web services, message oriented middleware) and their use in healthcare systems. |

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| --- | --- | --- | --- | --- | --- | --- | --- |
| Course Number & Title | SCH | Required | Optional | Fall | Spring | Annual/Biennial | Prerequisites |
| ISTE 330 Database Connectivity and Access | 3 | X |  | X | X |  | ISTE-230 or equivalents |
| MEDI 130 Computers in Medicine | 3 | X |  | X |  |  | None |
| MEDI 320 Medical Database Architectures | 3 | X |  |  | X |  | MEDI-130 and ISTE-230 or equivalents |
| MEDI 330 The Electronic Health Record | 3 | X |  | X |  |  | MEDI-130 and ISTE-121 and ISTE-230 or equivalents |
| MEDI 430 Medical Application Integration | 3 | X |  |  | X |  | MEDI-130 and ISTE-121 and ISTE-230 or equivalents |

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| --- | --- |
| Total credit hours: 15 |  |

Please include below course descriptions for all courses in the proposed minor.

**6.0 Course Descriptions as they appear in the course catalog:**

**Course - ISTE-330: Database Connectivity and Access**

In this course, students will build applications that interact with databases. Through programming exercises, students will work with multiple databases and programmatically invoke the advanced database processing operations that are integral to contemporary computing applications. Topics include the database drivers, the data layer, connectivity operations, security and integrity, and controlling database access. (ISTE-230)

**Lecture 3, Credit 3 (F, Sp)**

**Course - MEDI 130 Computers in Medicine**

This course begins with a historical perspective on computing in medicine. It reviews software and hardware from supercomputers to mobile devices, and surveys their use in medical practice, research, and education. Next it studies the nature of medical data, its collection, organization and use. This sets the stage for the major part of the course which studies important applications of computing to medicine, including Hospital Information Systems (HIS), medical imaging, surgery, telemedicine, and pharmacy. **Lecture 3, Credit 3 (F)**

**Course - MEDI 320 Medical Database Architectures**

This course, designed for BS students with a major or concentration in Medical Informatics, will provide an in-depth exposure to the design, development, and use of medical databases. Topics may include existing medical databases, flat-file and relational databases, medical data formats, database design and implementation, both relational and object-relational databases, database applications, JDBC, ODBC, SQL, ad hoc queries, desktop and web-based user interfaces, and database administration topics. (MEDI-130, ISTE-230). **Lecture 3, Credit 3 (S)**

**Course - MEDI 330 The Electronic Health Record**

This course provides an introduction and hands-on practice in both the use and development of electronic health records. Students address issues related to the acquisition, storage, and use of information in computer-based health records including the various types of information used in clinical care: text, structured data, images, audio, video, etc. Other topics covered include: clinical vocabularies (existing schemes and their limitations); how clinical information is generated and utilized; methods of information storage and retrieval; and the legal, social and regulatory problems associated with electronic health records such as security and confidentiality. Programming assignments will be required. (MEDI-130, ISTE-121, ISTE-230) **Lecture 3, Credit 3 (F)**

**Course - MEDI 430 Medical Application Integration**

This course will provide students with an understanding of application integration in healthcare. Java programming assignments will be required. Students will also learn medical business processes and how they impact data integration within a hospital. Middleware message brokers will be examined along with the use of the HL7 messaging standard. Web services and other forms of data integration will be studied. (MEDI-130, ISTE-121, ISTE-230) **Lecture 3, Credit 3 (S)**

**Minor Course Conversion Table: Quarter Calendar and Semester Calendar Comparison**

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| **Directions: The tables on this page will be used by the registrar’s office to aid student’s transitioning from the quarter calendar to the semester calendar.**  **If this minor existed in the quarter calendar and is being converted to the semester calendar please complete the following tables.**  **If this is a new minor that did not exist under the quarter calendar do not complete the following tables.**  Use the following tables to show minor course comparison in quarter and semester calendar formats. Use courses in the (2011-12) minor mask for this table. Display all required and elective minor courses. If necessary clarify how course sequences in the quarter calendar convert to semesters by either bracketing or using some other notation. |

|  |  |
| --- | --- |
| Name of Minor in Semester Calendar: |  |
| Name of Minor in Quarter Calendar: |  |
| Name of Certifying Academic Unit: |  |

| **QUARTER: Current Minor Courses** | | | **SEMESTER: Converted Minor Courses** | | |  |
| --- | --- | --- | --- | --- | --- | --- |
| Course # | Course Title | QCH | Course # | Course Title | SCH | **Comments** |
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Policy Name: **D1.1 MINORS POLICY**

 1. Definition

A minor at RIT is a related set of academic courses consisting of no fewer than 15 semester credit hours leading to a formal designation on a student's baccalaureate transcript.

The purpose of the minor is both to broaden a student's college education and deepen it in an area outside the student’s major program. A minor may be related to and complement a student’s major, or it may be in a completely different academic/professional area.   It is the responsibility of the academic unit proposing a minor and the unit’s curriculum committee to indicate any home programs for which the minor is not a broadening experience.

In most cases, minors shall consist of a minimum of two upper division courses to provide reasonable breadth and depth within the minor.

2. Institutional parameters

1. Minors may be discipline-based or interdisciplinary;
2. Only matriculated students may enroll in a minor;
3. At least nine semester credit hours of the minor must consist of courses not required by the student's home program;
4. Students may pursue multiple minors.  A minimum of nine semester credit hours must be designated towards each minor; these courses may not be counted towards other minors;
5. The residency requirement for a minor is a minimum of nine semester credit hours consisting of RIT courses (excluding "X" graded courses);
6. Posting of the minor on the student's academic transcript requires a minimum GPA of 2.0 in each of the minor courses;
7. Minors may not be added to the student's academic record after the granting of the bachelor's degree.

3. Development/approval/administration processes

* 1. Minors may be developed by faculty at the departmental, inter-departmental, college, or inter-college level. As part of the minor development process:
     1. students ineligible for the proposed minor will be identified;
     2. prerequisites, if any, will be identified;
  2. Minor proposals must be approved by the appropriate academic unit(s) curriculum committee, and college curriculum committee(s), before being sent to the Inter-College Curriculum Committee (ICC) for final consideration and approval.
  3. The academic unit offering the minor (in the case of interdisciplinary minors, the designated college/department) is responsible for the following:
     1. enrolling students in the minor (as space permits);
     2. monitoring students progress toward completion of the minor;
     3. authorizing the recording of the minor's completion on student's academic records;
     4. granting of transfer credit, credit by exam, credit by experience, course substitutions, and advanced placement;
     5. responding to student requests for removal from the minor.
  4. As per New York State requirements, courses within the minor must be offered with sufficient frequency to allow students to complete the minor within the same time frame allowed for the completion of the baccalaureate degree.

4. Procedures for Minor revision

It is the duty of the college curriculum committee(s) involved with a minor to maintain the program’s structure and coherence.  Once a minor is approved by the ICC, changes to the minor that do not have a significant effect on its focus may be completed with the approval of the involved academic unit(s) and the college curriculum committee(s).  Significant changes in the focus of the minor must be approved by the appropriate academic unit(s) curriculum committee(s), the college curriculum committee(s) and be resubmitted to the ICC for final consideration and approval.