



# School of Information Sciences

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**Course Profile:** Introduction to Health Informatics and E-Science

**Course Number:** INF 7620

**Credits:** 3

**MLIS Prerequisite(s):** INF 6010 and INF 6080

**MSIM Co-requisite(s):** INF 6000

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## **Rationale for Inclusion in Curriculum:**

This course provides an overview of the emerging health informatics and e-science fields and how the use of various health information technologies can play a critical role in enhancing the quality of healthcare. Students will learn health informatics and e-science concepts, theories, legal and ethical implications, and applications within the increasing data-driven healthcare environment. This course provides students with the opportunity to analyze, practice, and build the skills unique to the health informatics, e-science, and health/scientific data management fields.

Topics include:

- Historical, current, and emerging information systems in health care
- Models for the delivery of health information
- Access to patient information, security and privacy issues
- Trends in consumer health and public health informatics
- Health system standards and terminologies
- Decision support and evidence-based practice
- Data driven health care initiatives (*i.e.* e-Science, data-intensive science, and data curation)

## **Learning Outcomes:**

By the end of the course, students will be able to:

1. Compare and evaluate available health information technologies.
2. Examine the impact of technology-based information on healthcare decision-making, patient self-management, and information management.
3. Analyze the changing relationships between healthcare consumers, patients and healthcare professionals as a result of health information technologies.
4. Analyze the social and ethical issues related to health information technologies and care delivery.
5. Describe health informatics, e-science, and scientific data management concepts and theories from an interdisciplinary perspective.

6. Examine the implications and outcomes of various policy decisions at local, regional and national levels.
7. Describe the issues and challenges of an increasing data-driven healthcare environment, such as e-Science, data-intensive science, and data curation.

**Course Methodology:**

Lectures, readings, class discussions, presentations, guest speaker(s).

**Bases for Evaluation of Student Performance:**

Evaluation may consist of the following:

- Research papers
- Examinations
- Presentations
- Participation/discussion

**Text:** To Be Determined

**Approved:** 3/12

**Updated:** 8/13