

INFO B582 Health Information Exchange

Department of BioHealth Informatics

Indiana University School of Informatics and Computing, Indianapolis

Credit Hours: 3

Prerequisites: None

Course Description

This course offers an in-depth review of health information exchange (HIE), the electronic exchange of administrative and clinical information between disparate health care organizations. Students will examine the strategic, organizational, legal, technical, and socio-political aspects of HIE initiatives. Students will further review the evidence on the impact of HIE services on health care quality, safety, efficiency, and cost.

Readings

Required and optional readings will be defined for each session and can be found in the class schedule. The readings consist of journal articles and slides. Additional independent readings may be recommended.

Required Text

[Health Information Exchange: Navigating and Managing a Network of Health Information Systems.](#)

Brian E. Dixon MPA, PhD, FHIMSS. ISBN: 978-0-12-803135-3

Also available at IUPUI bookstore, Amazon, and in eBook at various price points.

(2) Articles: Articles are provided by the instructor. Required readings will be made available in Canvas.

(3) Slides: Each week the slides will be posted online. It is highly recommended that students read any required articles or book chapters before reviewing the slides.

Course Outcomes:

Upon the successful completion of the course, the student should be able to:

- Outline and describe common HIE services and architectures
- Dissect the growth and expansion of HIE initiatives and infrastructures
- Discuss the drivers and barriers to HIE adoption and usage
- Develop a strategic and business plan for an HIE initiative
- Analyze, evaluate and critique the impact of HIE services on health care outcomes, processes, and costs

Course Content and Lecture Schedule (Preliminary-may change)

Readings

- Week 1 Introduction to Health Information Exchange Chapter 1
- Week 2 HIE Services Defined Chapter 2, case study #1 (pages 267-279)
- Week 3 The Five Stages of the HIE Organizational Life Cycle Chapter 3, 4
- Week 4 Strategic and Business Plans to Create Sustainable HIE Models Chapter 5
- Week 5 Privacy, Security, Confidentiality, and Transparency Chapter 6
- Week 6 Infrastructure, Architecture and Data Types Chapter 7
- Week 7 Standards and Interoperability Chapter 8
- Week 8 Standardizing Healthcare Data Chapter 9
- Week 9 Using HIE to Improve Population Health Chapter 10, case study #2(pages 281-294) & #4 (pages 313-332)
- Week 10 No class: Spring break
- Week 11 Identity and Location Resolution: Core Technologies for HIE Chapter 11, 12, 13
- Week 12 Measuring the Value of Health Information Exchange Chapter 14, 15
- Week 13 Engaging Consumers Using HIE reading material
- Week 14 Future Directions for HIE Chapter 16
- Week 15 No class-working session for final projects
- Week 16 Final Project presentations

(FINALS WEEK) Students will present their final projects in class. Remote students will pre-record their presentation and upload it to Canvas for playback during class with time for Q&A.

Teaching Strategies/Methods

The course is offered in-person with remote attendance allowed as follows. Students who live more than 50 miles from Indianapolis will be granted permission to attend online only. Other requests will be considered but must receive permission from the instructor. Attendance is mandatory for all sessions minus two. All of the materials (slides and readings) will be posted online and students should review the slides and readings on a weekly basis.

Class materials such as slides, readings, assignments and quizzes are posted on a weekly basis and may not be posted all at the beginning of the semester.

This course includes a class project, which will require students to work together in teams. Students are expected to be professional and responsible in their collaborations.

Evaluation and Assessment

Grades will be based on a weighted scale distributed as follow:

#	Assessment Method	Percent
1	Assignments	60
2	Project	30
3	Participation	10
	Total	100

- **Assignments:** There will be periodic assignments given to students throughout the course. Students will generally have two (2) weeks to complete each assignment. The assignments and their due dates will be given to students in class and posted on Canvas.

Assignments are due on the date and time listed in Canvas. There is no credit for late assignments or failing to submit an assignment.

- **Project:** Students will be asked to form teams of 2-3 individuals to work on a project related to material taught in the course. The project must involve research or development relevant to HIE. Some examples include but are not limited to the following: a thorough literature review on privacy laws relevant to HIE; analysis of data captured by or transmitted within an HIE; an algorithm designed to enhance patient matching. A one-page summary of the proposed topic will be used to outline what the student teams seek to do. Instructor approval of the proposed project must be obtained before teams should begin work on their chosen topic. Students will submit a written report (3-5 pages) to the instructor at the end of the semester, summarizing their project. Student teams will further present to their peers during a class session, and members of student teams will complete evaluation forms of their peers to obtain full credit for the assignment. Students taking the course from a distance (e.g., out-of-state) can request an alternative assignment or post a video of their final presentation if they cannot be physically present in the classroom.

Note: International students are **strongly encouraged** to have their paper reviewed prior to submission by the IUPUI Writing Center. Graduate students can receive up to three (3) 1-hour sessions each week with a mentor at the Writing Center throughout the semester to address writing skills. Students are encouraged to contact the Writing Center early in the semester to schedule time before time slots at the end of the semester are filled. English writing skills are very important to success in any career. Improper use of the English language will result in a loss of points in this course.

- **Participation:** Participation in class activities, including online posts in between class sessions, is required to achieve full credit. Please pay attention in class. Laptops used for other than class-related work, Smart Phones, tablets, etc., can be distracting to the instructor and other students. A student who appears distracted by unrelated use of gadgets may be asked to leave the class, with negative impact on participation and class attendance.

Grading Scale

The final grade will be a weighed composite of many smaller grades. This should create a fair result.

The conversion table from numerical format to letter grades is followed:

Grade	Percentage
A+	97-100
A	93-96
A-	90-92
B+	87-89
B	83-86
B-	80-82
C+	77-79
C	73-76
C-	70-72
D	60-69
F	0-59

Grading Principles and Policies

Students should review all grading forms that will be used by the instructor to grade projects, presentations, papers, and other assignments. If students want to see their grades at any time during the semester, they should contact the instructor by phone or email.

Criteria to evaluate written assignments:

Exceptional quality (not quantity): (90-100 %)

- Evident that individual has completed all requirements
- Demonstrates applied level of understanding through personal reflections
- Answer is well-developed and logically reasoned
- Provides original insights or responses; extends comments of others
- Supports and leads others in discussion; respects others and their ideas

Superior quality (not quantity): (80-89%)

- Evident that individual has completed all requirements

- Demonstrates applied level of understanding through personal reflections
- Answer is provided; logic may not be clear
- Provides original insights or responses
- Makes connections to what others say; respects others and their ideas

Satisfactory quality and quantity: (60-79 %)

- Evident that individual has completed all requirements
- Primarily consists of summary or paraphrasing of readings
- Answer is not fully developed; logic is not clear
- Contribution is primarily a response to others; minimal originality
- Is respectful of others and their ideas

Does not meet expectations: (< 60%)

- Not clear that individual has completed all requirements
- Only consists of summary or paraphrasing of readings
- Minimal effort put into answer
- Is not respectful of others and their ideas

Requirements not completed (0)

Late work

Assignments are due by the date and time posted in Canvas. Severe weather rarely results in cancellation of classes or changes in due dates/times of assignments. As such, previously assigned work will still be due as posted in Canvas. Please clarify with the instructor regarding due dates of future assignments.

Extensions

Extensions may be granted in the case of exceptional circumstances. You must discuss these circumstances with your instructor at least 24 hours before the assignment is due. (Note: Discussing the situation is not the same as merely informing your instructor.)

Plagiarism^[1] ([Links to an external site.](#))

Plagiarism is defined as presenting someone else's work, including the work of other students, as one's own. Any ideas or materials taken from another source for either written or oral use must be fully acknowledged, unless the information is common knowledge. What is considered "common knowledge" may differ from course to course.

(1) A student must not adopt or reproduce ideas, opinions, theories, formulas, graphics, or pictures of another person without acknowledgment.

(2) A student must give credit to the originality of others and acknowledge indebtedness whenever:

- Directly quoting another person's actual words, whether oral or written;
- Using another person's ideas, opinions, or theories;
- Paraphrasing the words, ideas, opinions, or theories of others, whether oral or written;
- Borrowing facts, statistics, or illustrative material; or
- Offering materials assembled or collected by others in the form of projects or collections without acknowledgment.

Please refer to the [IU Student Code of Rights, Responsibilities, and Conduct](#) for more information.

Technical Support

For Canvas questions please see the "Help" link at the top right of the page and check the [UITS Knowledge Base](#) for more information (type "Canvas" in the search box for a full list of Canvas-related topics).

If you have any other questions about or issues with any of the technology used in this course please contact the University Information Technology Services (UITS) support team. At IUPUI you can contact the support team by in the following ways:

- Call 317-274-4357
- Email ithelp@iu.edu
- Live Chat at <http://ithelplive.iu.edu/>
- Walk in at ICTC 126

Software used

Microsoft Office (at least Office 2016)

Assignments may require the use of additional software available from IU Ware and/or open source software web sites. Please refer to the class schedule for information on special software needed. You will be expected to download and install any necessary software prior to class on the weeks indicated in the class schedule.

University Policies

There are a number of campus-wide policies governing the conduct of courses at IUPUI. See [IUPUI Student Central](#) for more information.

Administrative Withdrawal Policy

A basic requirement of this course is that you will participate in all class meetings and conscientiously complete all required course activities and/or assignments. Keep in touch with me if you are unable to attend, participate, or complete an assignment on time. If you miss more than half of the required activities within the first 25% of the course without contacting me, you may be administratively withdrawn from this course.

Our course meets once per week; thus *if you miss more than two classes in the first four weeks, you may be withdrawn*. Administrative withdrawal may have academic, financial, and financial aid implications. Administrative withdrawal will take place after the full refund period, and if you are administratively withdrawn from the course you will not be eligible for a tuition refund. If you have questions about the administrative withdrawal policy at any point during the semester, please contact me.

Academic Dishonesty/Integrity and Plagiarism

Using another student's work on a project or assignment, cheating on a test, or any other form of dishonesty or plagiarism will result in a grade of zero on that assignment and possibly an "F" in the course, and will be referred to the Dean of Students. All students should aspire to high standards of academic honesty.

Values and Ethics

Profanity or derogatory comments about or towards the instructor or any members of the class will NOT be tolerated. Violating this rule will result in a warning and if the offence continues, administrative action will be taken.

Accommodations for Students with Disabilities

Every attempt will be made to accommodate qualified students with disabilities (e.g. mental health, learning, chronic health, physical, hearing, vision, neurological, etc.) You must have established your eligibility for support services through the appropriate office that services students with disabilities. Note that services are confidential, may take time to put into place, and are not retroactive. Captions and alternate media for print materials may take three or more weeks to get produced. Please contact [IUPUI Adaptive Educational Services](#) as soon as possible if accommodations are needed.

For accessibility information for persons using adaptive technology with Canvas, please visit [Canvas Product Accessibility](#)

CODE OF CONDUCT

All students should aspire to the highest standards of academic integrity. Using another student's work on an assignment, cheating on a test, failing to include citations for external references or any other form of dishonesty or plagiarism shall result in a grade of zero on the item, and the second time an F in the course. Incidences of academic misconduct shall be referred to the Department Chair, and repeated violations shall result in dismissal from the program.

All students are responsible for reading, understanding, and applying the Code of Student Rights, Responsibilities, and Conduct, particularly the section on academic misconduct. Refer to The Code > Responsibilities > Academic Misconduct at [Student code of conduct link](#). All students must also successfully complete the Indiana University Department of Education "[How to Recognize Plagiarism](#)" Tutorial and Test".