

## I310M: Introduction to Health Informatics

27905

Spring 2022

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**CLASS MEETS:** In person; 2:00-3:30PM every TUE and THU at Parlin Hall (PAR) 304

**Instructor:** Dr. John Robert Bautista (Robert/Dr. Bautista/Dr. B)

Office: UTA 5.548

Pronouns: he/him/his

Email: [jrbautista@utexas.edu](mailto:jrbautista@utexas.edu) (via Canvas)

Office hours: via Zoom by appointment

**TA:** Stephanie Tomasky

Pronouns: she/her/hers

Email: [stomasky@utexas.edu](mailto:stomasky@utexas.edu) (via Canvas)

Office hours: via Zoom by appointment

## Course Description

### COURSE DESCRIPTION

Introduction to Health Informatics (I310M) is designed for undergraduate students who are interested in health informatics – an interdisciplinary professional specialty and scientific discipline that aims to improve all aspects of health through information technology. This course is divided into three parts: (1) health informatics foundations, (2) health information technologies, and (3) using health informatics to improve health. Since health informatics is an interdisciplinary field, we will cover literature ranging from health sciences, information science, computer science, and social sciences. Students will learn core concepts of health informatics through lectures, discussions, quizzes, and a group project. The overall goal of this course is to help students become ethical and competent professionals who can leverage health informatics to enhance health delivery, management, and outcomes.

### PRE-REQUISITES FOR THE COURSE

Credit or registration for I301 (Introduction to Informatics).

## LEARNING OUTCOMES

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

1. Explain how health information is collected, stored, retrieved, communicated, and used to inform health decisions.
2. Describe and compare various health information technologies utilized at different levels of the health system (e.g., from primary care to tertiary care; from personalized health to public health).
3. Explain how health information technologies are used to improve health delivery, management, and outcomes.
4. Discuss major theoretical, technical, legal, and ethical issues related to the development, use, and management of health information and health information technologies.

## How Will You Learn?

### STATEMENT OF LEARNING SUCCESS

Your success in this class is important to me. We all learn differently, and everyone struggles sometimes. You are not, ever, the only one having difficulty! If there are aspects of this course that prevent you from learning or exclude you, please let me know as soon as possible. Together we will develop strategies to meet both your needs and the requirements of the course. I also encourage you to reach out to the student resources available through UT and I am happy to connect you with a person or Center if you would like.

### TEACHING MODALITY INFORMATION

We will have an in-person class for this course. Class hours is 2:00-3:30PM at PAR 304 every TUE and THU. It will be split between lecture (TUE) and discussion classes (THU). Discussion classes will be used to discuss assigned readings and for group work. The composition of individual class meetings will differ somewhat throughout the semester; hence, any changes in the timings and topics are normal.

### COMMUNICATION

The course Canvas site can be found at [utexas.instructure.com](https://utexas.instructure.com). Please email me through Canvas. You are responsible for ensuring that the primary email address you have recorded with the university is the one you will check for course communications because that is the email address that Canvas uses.

### ASKING FOR HELP

For any questions about the course, please refer to the syllabus first. Other than that, you can message me and the teaching assistant via Canvas. You can also set-up an appointment with us via Zoom if you need consultation.

### DIVERSITY, EQUITY AND INCLUSION

It is my intent that students from all diverse backgrounds and perspectives be well served by this course, that students' learning needs be addressed, and that the diversity that students bring to this class can be comfortably expressed and be viewed as a resource, strength, and benefit to all students. Please come to me at any time with any concerns.

### SERVICES FOR STUDENTS WITH DISABILITIES (SSD)

The university is committed to creating an accessible and inclusive learning environment consistent with university policy and federal and state law. Please let me know if you experience any barriers to learning so I can work with you to ensure you have an equal opportunity to participate fully in this course. If you are a student with a disability, or think you may have a disability, and need accommodations please contact Services for Students with Disabilities (SSD). Please refer to SSD's website for contact and more information: <http://diversity.utexas.edu/disability/>. If you are already registered with SSD, please deliver your Accommodation Letter to me as early as possible in the semester so we can discuss your approved accommodations and needs in this course.

## Course Requirements and Grading

### REQUIRED MATERIALS

The primary textbook for this course is [Health Informatics: An Interprofessional Approach 2nd ed \(Nelson & Stagers, 2016\)](#). This book is available online at UT Libraries (downloadable per chapter; max of 70 pages per day). Discussion materials can be accessed in Canvas.

### REQUIRED DEVICES

You will need a computer capable of accessing the Internet, opening PDF files, and creating documents and presentation slides.

### CLASSROOM EXPECTATIONS

**Class attendance** Ideally, you will be able to attend class every week. However, I understand that there are circumstances that can go out of hand. Therefore, you are allowed two missed classes without deductions to your attendance and class participation grade. For example, you can miss a lecture and discussion class in a particular week or two different lectures throughout the semester.

**Class participation** Active participation in the lecture and discussion classes is strongly encouraged. Attendance and participation go hand in hand since it is not enough to just be physically (or virtually) present. Before the class, I hope that you have read and thought about the materials for the week and how they relate to your own personal experience and the previous topics covered in class.

**Behavior expectations** The University of Texas at Austin is committed to the formation and development of an academic community guided fundamentally by the University's core values: Learning, Discovery, Freedom, Leadership, Individual Opportunity, and Responsibility.

These core values are central to the University's expectations for student conduct, and community members shall uphold these values through Integrity, Honesty, Trust, Fairness, and Respect toward our Longhorn community. As a member of The University of Texas at Austin community, students accept not only the rights and privileges of membership, but also the responsibility to uphold a long and steadfast tradition of excellence.

In abiding by the core values of the University and adhering to the tenets of academic integrity, students choose to uphold an Honor Code reflective of a scholarly community devoted to academic and personal success.

The conduct of our student body shall be governed by the University Code of Conduct to promote safety, academic success, and citizenship, with the Student Honor Code reinforcing the aspirational standards of the community as a whole. Read more [here](#) about student discipline and conduct.

## EVALUATION

The course is designed to have a wide range of performance indicators to provide students with many opportunities to demonstrate their knowledge and abilities. The following table represents how you will demonstrate your learning and how we will assess the degree to which you have done so.

Component	%
1. Attendance and class participation	10
2. Discussion questions	20
3. Weekly quiz	20
4. Group project	
4.1. Proposal – due before 11:59pm of March 10	5
4.2. Draft 1 – due before 11:59pm of March 31	5
4.3. Draft 2 – due before 11:59pm of April 21	10
4.4. Presentation – slides due before 2pm of April 28	10
4.5. Final report – due before 11:59pm of May 5	10
4.6. Peer evaluation – due before 11:59pm of May 5	10
<b>TOTAL</b>	<b>100</b>

**Attendance and class participation (10%)** Active participation in the lecture and discussion classes is strongly encouraged. Attendance and participation go hand in hand since it is not enough to just be physically (or virtually) present. Before the class, I hope that you have read and thought about the materials for the week and how they relate to your own personal experience and the previous topics covered in class.

You are allowed two missed classes without deductions to your attendance and class participation grade. For example, you can miss a lecture and discussion class in a particular week or two different lectures throughout the semester. For guidance, it would be best to inform me if you will not be able to attend class. If this is not possible, let me know about it as soon as it is possible just to make sure that you are alright. If you miss more than two classes, your participation grade will drop by 1 point for each missed class. For example, 3 missed classes (unexcused) on top of the allowed 2 missed classes will result to a deduction of 3 points.

If you need to miss more than two classes for medical reasons, a doctor's note should be presented. Moreover, if you will need to be absent due to religious holy day observance, please let me know. Also, you should definitely get in touch with me to talk about how we might limit the impact of absences on your grade.

**Discussion questions (20%)** Each week, students will prepare and submit to Canvas a discussion question about the assigned material for that week (e.g., a journal article, news article, video). Discussion questions are due in Canvas before the beginning of the Tuesday lecture class at 2:00 PM. Late discussion questions will not be accepted. The discussion question should be focused on the required material, at least 100 words long, and should make it clear that you have both read and thought about the assigned material.

I will select a few of the questions to guide the Thursday class discussion. Discussion questions are an opportunity for you to bring your own point of view and interests to the materials we cover in class, and students are encouraged to connect the materials to current events and prior learning both in this class and other courses you may have taken.

Discussion questions should be conversation starters. It might help for you to look for an idea or assertion in the material that you found interesting and would like to talk in class. If your question has a correct answer, it may not be a good discussion question. The top 9 (out of 11 total) scores you receive for the discussion questions will be counted toward your final grade in the course, the other scores will be dropped. This is how I will grade them:

Score	Description
5	The discussion translates to a well-developed discussion question(s). At least 100 words.
4	The discussion or question needs further development or reflection. At least 100 words.
3	At least one question was derived from the assigned material. Less than 100 words.
2	A relevant question is provided but a discussion is missing (vice-versa).
1	The question or discussion is not relevant to the assigned material.
0	No submission

**Weekly quiz (20%)** A weekly online quiz via Canvas will be available after each lecture class starting in Week 2 (every Tuesdays at 3:30pm). You are given 3 hours to complete the quiz and is due before the start of next week's lecture class (the following Tuesday at 2:00pm). The quiz covers the material from the current week and is designed to give you an opportunity of applying that knowledge and give you feedback on any gaps in your knowledge. The quiz is open notes, but I request that you take it on your own and not in collaboration with your classmate(s). Feedback on quizzes will be given each week, and the questions, answers & explanations will also be discussed the following Tuesday. The top 9 (out of 11 total) scores you receive on these quizzes will be counted toward your final grade in the course, the other scores will be dropped.

**Group project (50%)** I will ask the class to answer a survey to rank your preferred health information technologies for the group project. Based on the results of the survey, I will form groups composed of three students. In this project, your goal is to propose a health information technology that can address a health issue(s) of a specific setting/area/location. Note that this does not involve creating the health information

technology, but you are expected to present a low-fidelity mock-up (e.g., screenshots of a mHealth app, a public dashboard for a disease, an electronic health record, etc.). Your group needs to provide a report ( $\geq 2,000$  words) to introduce and describe the technology, including design and deployment recommendations based on the area/location you choose (e.g., a rural clinic, a hospital in a developing country, a large metropolitan hospital.). Furthermore, you will do a 10-minute presentation that summarizes your report. Listed below are the components of the group project:

*Proposal (5%).* Due before 11:59pm of March 10 (in PDF format). Provide an overview of your proposal by completing these sections (using at least 500 words):

- A title page that shows your group number, group members, and initial project name.
- The body of the proposal that includes a brief description of:
  - Description of the technology (1%).
  - Practical issues and/or challenges that you want to address (2%)
  - Description of the setting/area/location where you want to deploy it (2%)

*Draft 1 (5%).* Due before 11:59pm of March 31 (in PDF format). In at least 750 words, provide the following sections:

- Title page (page 1)
- Introduction (2%)
  - Background of the health issue
  - Briefly describe the proposed technology
  - Location or setting where you plan to implement the technology
- Significance of the work (1%)
  - Discuss how it addresses the health issue
  - Describe how people would benefit from the technology
- The technology (the heading can be the name of your technology) (1%)
  - List of features and functions
  - Draft of mockups, graphics, or visualizations
- Design and deployment considerations (1%)
  - Identify a relevant health informatics theory/model
  - List legal/ethical considerations
- References (excluded from word count)

*Draft 2 (10%).* Due before 11:59pm of April 21 (in PDF format). In 1,000-1,500 words, provide a draft of your report. Please take note if a section is still incomplete or to be completed. The draft would likely include most of the following sections:

- Title page (page 1)
- Executive summary that is between 150-200 words (page 2)
- Introduction
  - Background of the health issue
  - Briefly describe the proposed technology
  - Location or setting where you plan to implement the technology
- Significance of the work
  - Discuss how it addresses the health issue

- Describe how people would benefit from the technology
- The technology (the heading can be the name of your technology)
  - Discuss features and functions
  - Include low-fidelity mockups, graphics, or visualizations
- Design and deployment considerations
  - Discuss a relevant health informatics theory/model
  - Discuss legal/ethical considerations
- Conclusion
  - Present key insights as summary
  - Identify challenges
  - Provide examples of future work
- References (excluded from word count)

This rubric will be used to grade draft 2 ([source](#)):

Criteria	Unacceptable (1)	Acceptable (2)	Target (3)	Exemplary (4)
Logic and organization	Does not develop ideas cogently, uneven, and ineffective overall organization, unclear introduction, or conclusion.	Develops and organizes ideas in paragraphs that are not necessarily connected. Some overall organization, but some ideas seem illogical and/or unrelated, unfocused introduction or conclusions.	Develops unified and coherent ideas within paragraphs with generally adequate transitions; clear overall organization relating most ideas together, good introduction and conclusion.	Develops ideas cogently, organizes them logically with paragraphs and connects them with effective transitions. Clear and specific introduction and conclusion.
Language	Employs words that are unclear, sentence structures inadequate for clarity, errors are seriously distracting.	Word forms and sentence structures are adequate to convey basic meaning. Errors cause noticeable distraction.	Word forms are correct, sentence structure is effective. Presence of a few errors is not distracting.	Employs words with fluency, develops concise standard English sentences, balances a variety of sentence structures effectively.
Spelling and grammar	Writing contains numerous errors in spelling and grammar which interfere with comprehension.	Frequent errors in spelling and grammar distract the reader.	While there may be minor errors, the writing follows normal conventions of spelling and grammar throughout and has been carefully proofread.	The writing is essentially error-free in terms of spelling and grammar.
Development of ideas	Most ideas unsupported, confusion between personal and external evidence, reasoning flawed.	Presents ideas in general terms, support for ideas is inconsistent, some distinctions need clarification, reasoning unclear.	Supports most ideas with effective examples, references, and details, makes key distinctions.	Explores ideas vigorously, supports points fully using a balance of subjective and objective evidence, reasons effectively making useful distinctions.
Purpose	The purpose and focus of the writing are not clear to the reader.	The decisions about focus, organization, style, and content sometimes interfere with the purpose of the writing.	Made good decisions about focus, organization, style, and content to achieve the purpose of the writing.	The decision about focus, organization, style, and content fully elucidates the purpose and keeps the purpose at the center of the piece.

**Presentation (10%).** Slides due before 2pm of April 28 (before presentation). You will have 10 minutes to present your work. You can opt to have one member do the presentation, or each member can cover a section of the presentation. This rubric will be used ([source](#)):

Criteria	Unacceptable (1)	Acceptable (2)	Target (3)	Exemplary (4)
Completeness	Presentation does not provide adequate depth; key details are omitted or undeveloped; presentation is too short or too long	Additional depth needed in places; Important information omitted or not fully developed; presentation is too short or too long	Presentation provides adequate depth; few needed details are omitted; major ideas adequately developed; presentation is within specified length	Presentation provides good depth and detail; ideas well developed; facts have adequate background; presentation is within specified length
Organization/ Clarity	Ideas are not presented in proper order; transition are lacking between major ideas; several parts of presentation are wordy or unclear	Some ideas not presented in proper order; transitions are needed between some ideas; some parts of presentation may be wordy or unclear	Most ideas are in logical order with adequate transitions between most major ideas; presentation is generally clear and understandable	Ideas are presented in logical order with effective transitions between major ideas; presentation is clear and concise
Grammar /Mechanics	Presentation contains several major grammar/ usage errors; sentences are long, incomplete or contain excessive jargon	Presentation may contain some grammar or sentence errors; sentences may contain jargon or are too long or hard to follow	Presentation has no serious grammar errors; sentences are mostly jargon-free, complete, and understandable	Presentation contains no grammar errors; sentences are free of jargon, complete and easy to understand
Documentation	Little or no message support provided for major ideas; visual aids are missing or inadequate; little or no sourcing provided	Some message support provided by facts and visual aids; sourcing may be outdated, or thin, visual aids need work	Adequate message support provided for key concepts by facts and visual aids; sourcing is generally adequate and current	Effective message support provided in the form of facts and visual aids; sourcing is current and supports major ideas
Delivery	Low volume or energy; pace too slow or fast; poor diction; distracting gestures or posture; unprofessional appearance; visual aids poorly used	More volume/ energy needed at times; pace too slow or fast; some distracting gestures or posture; adequate appearance; visual aids could be improved	Adequate volume and energy; generally good pace and diction; few or no distracting gestures; professional appearance; visual aids used adequately	Good volume and energy; proper pace and diction; avoidance of distracting gestures; professional appearance; visual aids used effectively

**Peer evaluation (10%).** Due before 11:59pm of May 5. Please answer the survey (will be posted in Canvas) about your peers' performance for the group assignment. Your grade for this component will be based on your peers' evaluations. The following questions will appear in the survey:

- Your estimate of each peer's contribution, including your own (i.e., you, peer 1, and peer 2):  
**1 = poor 2 = fair 3 = good 4 = very good 5 = excellent**
- Any members who were particularly strong, helpful, or enjoyable to work with?
- Any members who were less productive, disruptive, or difficult to work with?
- Any comments, ideas, or advice on how to improve the group project?

*Final report (10%).* Due before 11:59pm of May 5 (in PDF format). The final report includes all sections mentioned in “Draft 2.” It will be at least 2,000 words, excluding references, tables, figures, footnotes, and appendices. This rubric will be used ([source](#)):

Criteria	Unacceptable (1)	Acceptable (2)	Target (3)	Exemplary (4)
Logic and organization	Does not develop ideas cogently, uneven, and ineffective overall organization, unclear introduction, or conclusion.	Develops and organizes ideas in paragraphs that are not necessarily connected. Some overall organization, but some ideas seem illogical and/or unrelated, unfocused introduction or conclusions.	Develops unified and coherent ideas within paragraphs with generally adequate transitions; clear overall organization relating most ideas together, good introduction and conclusion.	Develops ideas cogently, organizes them logically with paragraphs and connects them with effective transitions. Clear and specific introduction and conclusion.
Language	Employs words that are unclear, sentence structures inadequate for clarity, errors are seriously distracting.	Word forms and sentence structures are adequate to convey basic meaning. Errors cause noticeable distraction.	Word forms are correct, sentence structure is effective. Presence of a few errors is not distracting.	Employs words with fluency, develops concise standard English sentences, balances a variety of sentence structures effectively.
Spelling and grammar	Writing contains numerous errors in spelling and grammar which interfere with comprehension.	Frequent errors in spelling and grammar distract the reader.	While there may be minor errors, the writing follows normal conventions of spelling and grammar throughout and has been carefully proofread.	The writing is essential error-free in terms of spelling and grammar.
Development of ideas	Most ideas unsupported, confusion between personal and external evidence, reasoning flawed.	Presents ideas in general terms, support for ideas is inconsistent, some distinctions need clarification, reasoning unclear.	Supports most ideas with effective examples, references, and details, makes key distinctions.	Explores ideas vigorously, supports points fully using a balance of subjective and objective evidence, reasons effectively making useful distinctions.
Purpose	The purpose and focus of the writing are not clear to the reader.	The decisions about focus, organization, style, and content sometimes interfere with the purpose of the writing.	Made good decisions about focus, organization, style, and content to achieve the purpose of the writing.	The decision about focus, organization, style, and content fully elucidates the purpose and keep the purpose at the center of the piece.

All sources must be cited in text with complete citation information at the references section. Using others' materials or ideas without proper citation and referencing constitutes plagiarism and can lead to academic consequences. Please use APA 7<sup>th</sup> edition style in your citations and references. You can use the [Purdue University OWL](#) guide for guidance in formatting your paper. Additional help can be obtained from [UT's University Writing Center](#).

I will use Turnitin to check your assignment for plagiarism. Do note that this is just one method to determine whether something is plagiarized. I will seek further clarification from you if needed.

*General requirements for the group project*

- Format the paper using APA 7<sup>th</sup> ed. style, in letter size paper, 1" on all sides, Times New Roman, 12 font size, 1.5 spacing, and page number on top right (no page number on title page).
- All files should be in PDF
- Use Canvas to submit your assignment. Sending via email will not be considered.
- I will deduct 1% for each day that the assignment is late (grade is 15% out of 20% but submitted 2 days late, so 13%).
- I will not accept assignments that are submitted more than 7 days after the due date.
- Deadlines may be adjusted for groups with members that have documented disabilities, health issues, or family emergencies. Please inform me about your situation ASAP.

## GRADING POLICY

This class uses the traditional UT Austin undergraduate grading scale:

Grade	Range
A	94-100%
A-	90-93%
B+	87-89%
B	83-86%
B-	80-82%
C+	77-79%
C	73-76%
C-	70-72%
D+	67-69%
D	63-66%
D-	60-62% (minimum for pass/fail students to pass)
F	<60%

Note: Final grading does not happen just by computer calculation. I consider many factors, and so your "Canvas points/%" is only a rough indication of the final grade. Ask when in doubt.

## Course Outline

All instructions, assignments, readings, rubrics, and essential information will be on the Canvas website at [utexas.instructure.com](https://utexas.instructure.com). Check Canvas regularly. Changes to the schedule may be made at my discretion if circumstances require. I will announce any such changes in class and will also communicate them via a Canvas announcement. It is your responsibility to note these changes when announced, and I will do my best to ensure that you are notified of changes with as much advance notice as possible. [Link to Nelson & Staggers \(2016\)](#).

Week	Topic		Due and Reminders
<b>Part 1: Health informatics foundations</b>			
1	1/18	Course orientation	
	1/20	Overview of health informatics	
Week 1 materials <ul style="list-style-type: none"> <li>Nelson &amp; Staggers (2016): chapters 1 and 35</li> </ul>			
2	1/25	Theory in health informatics	<ul style="list-style-type: none"> <li>Week 2 discussion questions (due 1/25 before 2pm)</li> <li>Week 2 quiz (due 2/1 before 2pm)</li> </ul>
	1/27	Class discussion	
Week 2 materials <ul style="list-style-type: none"> <li>Nelson &amp; Staggers (2016): chapter 2</li> <li>Wyatt, J. C. (2019). The need for theory to inform clinical information systems and professionalise the health informatics discipline. In Scott et al. (Eds.), <i>Applied interdisciplinary theory in health informatics: A knowledge base for practitioners</i> (pp. 1-8). IOS Press.</li> </ul>			
3	2/1	Data standards and exchange	<ul style="list-style-type: none"> <li>Week 3 discussion questions (due 2/1 before 2pm)</li> <li>Week 3 quiz (due 2/8 before 2pm)</li> </ul>
	2/3	Class discussion	
Week 3 materials <ul style="list-style-type: none"> <li>Nelson &amp; Staggers (2016): chapter 22</li> <li>Hammond, W. E. (2005). The making and adoption of health data standards. <i>Health Affairs</i>, 24(5), 1205-1213.</li> </ul>			
4	2/8	Privacy and security in health informatics	<ul style="list-style-type: none"> <li>Week 4 discussion questions (due 2/8 before 2pm)</li> <li>Week 4 quiz (due 2/15 before 2pm)</li> </ul>
	2/10	Class discussion	
Week 4 materials <ul style="list-style-type: none"> <li>Nelson &amp; Staggers (2016): chapter 26</li> <li>The Medical Futurist (2020). <i>Your Privacy in the Digital Health Era / Episode 26 - The Medical Futurist</i>. <a href="https://www.youtube.com/watch?v=l6yKFeYSQjA">https://www.youtube.com/watch?v=l6yKFeYSQjA</a></li> </ul>			
<b>Part 2: Health information technologies</b>			
5	2/15	Electronic health records	<ul style="list-style-type: none"> <li>Week 5 discussion questions (due 2/15 before 2pm)</li> <li>Week 5 quiz (due 2/22 before 2pm)</li> <li><b>Ranking of preferred HIT for group project (in-class)</b></li> </ul>
	2/17	UT Nursing tour and testing EHR	
Week 5 materials <ul style="list-style-type: none"> <li>Nelson &amp; Staggers (2016): chapter 6</li> <li>World Health Organization. (2006). <i>Electronic Health Records A Manual for Developing Countries</i>. <a href="https://apps.who.int/iris/bitstream/handle/10665/207504/9290612177_eng.pdf">https://apps.who.int/iris/bitstream/handle/10665/207504/9290612177_eng.pdf</a> (chapters 3 &amp; 4 only)</li> </ul>			

6	2/22	Clinical decision support systems	<ul style="list-style-type: none"> <li>Week 6 discussion questions (due 2/22 before 2pm)</li> <li>Week 6 quiz (due 3/1 before 2pm)</li> <li><b>1<sup>st</sup> meeting for group project (in-class)</b></li> </ul>
	2/24	Class discussion	
<p>Week 6 materials</p> <ul style="list-style-type: none"> <li>Nelson &amp; Staggers (2016): chapter 10</li> <li>Wright, A., Hickman, T. T. T., McEvoy, D., Aaron, S., Ai, A., Andersen, J. M., ... &amp; Bates, D. W. (2016). Analysis of clinical decision support system malfunctions: A case series and survey. <i>Journal of the American Medical Informatics Association</i>, 23(6), 1068-1076.</li> </ul>			
7	3/1	Mobile health (Zoom)	<ul style="list-style-type: none"> <li>Week 7 discussion questions (due 3/1 before 2pm)</li> <li>Week 7 quiz (due 3/8 before 2pm)</li> </ul>
	3/3	Testing and rating mHealth apps	
<p>Week 7 materials</p> <ul style="list-style-type: none"> <li>Nelson &amp; Staggers (2016): chapter 15</li> <li>Stoyanov, S. R., Hides, L., Kavanagh, D. J., Zelenko, O., Tjondronegoro, D., &amp; Mani, M. (2015). Mobile app rating scale: a new tool for assessing the quality of health mobile apps. <i>JMIR mHealth and uHealth</i>, 3(1), e3422.</li> </ul>			
8	3/8	Telehealth	<ul style="list-style-type: none"> <li>Week 8 discussion questions (due 3/8 before 2pm)</li> <li>Week 8 quiz (due 3/22 before 2pm)</li> <li><b>Submit "Proposal" (due 3/10 before 11:59pm)</b></li> </ul>
	3/10	Class discussion	
<p>Week 8 materials</p> <ul style="list-style-type: none"> <li>Nelson &amp; Staggers (2016): chapter 8</li> <li>Thomas, E. E., Haydon, H. M., Mehrotra, A., Caffery, L. J., Snoswell, C. L., Banbury, A., &amp; Smith, A. C. (in press). Building on the momentum: Sustaining telehealth beyond COVID-19. <i>Journal of Telemedicine and Telecare</i>.</li> </ul>			
9	3/15	<i>Spring Break!</i> (Mar 14-19)	Enjoy!
	3/17		
10	3/22	Personal health records	<ul style="list-style-type: none"> <li>Week 10 discussion questions (due 3/22 before 2pm)</li> <li>Week 10 quiz (due 3/29 before 2pm)</li> <li><u>Create a fictitious Health Companion account</u></li> </ul>
	3/24	Health Companion hands-on (laptop)	
<p>Week 10 materials</p> <ul style="list-style-type: none"> <li>Nelson &amp; Staggers (2016): chapter 14</li> <li>Stanford Medicine X. (2015). <i>Joshua Reicher: Health companion</i>. <a href="https://www.youtube.com/watch?v=3hzPeZHwiY">https://www.youtube.com/watch?v=3hzPeZHwiY</a> (watch first 15 mins)</li> </ul>			
11	3/29	Public health informatics	<ul style="list-style-type: none"> <li>Week 11 discussion questions (due 3/29 before 2pm)</li> <li>Week 11 quiz (due 4/5 before 2pm)</li> <li>Project consultation</li> <li><b>Submit "Draft 1" (due 3/31 before 11:59pm)</b></li> </ul>
	3/31	<u>CDC Public Health Informatics Fellow</u> guest talk	
<p>Week 11 materials</p> <ul style="list-style-type: none"> <li>Nelson &amp; Staggers (2016): chapter 11</li> <li>Johns Hopkins University. (2020). <i>Professor Lauren Gardner Discusses How the COVID-19 Dashboard is Built and Maintained</i>. <a href="https://www.youtube.com/watch?v=0JR9qhz2eMw">https://www.youtube.com/watch?v=0JR9qhz2eMw</a>; <a href="https://coronavirus.jhu.edu/map.html">https://coronavirus.jhu.edu/map.html</a></li> </ul>			

Part 3: Using health informatics to improve health			
12	4/5	MIMIC guest talk + Data science and analytics in health (lecture part 1)	<ul style="list-style-type: none"> <li>Week 12 discussion questions (due 4/5 before 2pm)</li> <li>Week 12 quiz (due 4/12 before 2pm)</li> </ul>
	4/7	Data science and analytics in health (lecture part 2) Class discussion	
Week 12 materials <ul style="list-style-type: none"> <li>Nelson &amp; Stagers (2016): chapter 23</li> <li>Johnson, A. E., Pollard, T. J., Shen, L., Li-Wei, H. L., Feng, M., Ghassemi, M., ... &amp; Mark, R. G. (2016). MIMIC-III, a freely accessible critical care database. <i>Scientific Data</i>, 3(1), 1-9.</li> </ul>			
13	4/12	Safety and quality initiatives	<ul style="list-style-type: none"> <li>Week 13 discussion questions (due 4/12 before 2pm)</li> <li>Week 13 quiz (due 4/19 before 2pm)</li> </ul>
	4/14	Class discussion	
Week 13 materials <ul style="list-style-type: none"> <li>Nelson &amp; Stagers (2016): chapter 24</li> <li>Sittig, D. F., Wright, A., Coiera, E., Magrabi, F., Ratwani, R., Bates, D. W., &amp; Singh, H. (2020). Current challenges in health information technology–related patient safety. <i>Health Informatics journal</i>, 26(1), 181-189.</li> </ul>			
14	4/19	Work on group project	<ul style="list-style-type: none"> <li>Project consultation</li> <li><b>Submit “Draft 2” (due 4/21 before 11:59pm)</b></li> </ul>
	4/21	Work on group project	
15	4/26	Work on group project	<ul style="list-style-type: none"> <li><b>Submit “Presentation slides” (due 4/28 before 2pm)</b></li> </ul>
	4/28	Group presentations	
16	5/3	Wrap-up and work on group project	<ul style="list-style-type: none"> <li><b>Submit “Final report” (due 5/5 before 11:59pm)</b></li> <li><b>Submit “Peer evaluation” (due 5/5 before 11:59pm)</b></li> </ul>
	5/5	Work on group project	

This class is using the Lectures Online recording system. This system records the audio and video material presented in class for you to review after class. Links for the recordings will appear in the Lectures Online tab on the Canvas page for this class. You will find this tab along the left side navigation in Canvas.

To review a recording, simply click on the Lectures Online navigation tab and follow the instructions presented to you on the page. You can learn more about how to use the Lectures Online system at <http://sites.la.utexas.edu/lecturesonline/students/how-to-access-recordings/>.

You can find additional information about Lectures Online at: <https://sites.la.utexas.edu/lecturesonline/>.

## Course Policies and Disclosures

### ACADEMIC INTEGRITY EXPECTATIONS

Students who violate University rules on academic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and/or dismissal from the University. Since such dishonesty harms the individual, all students, and the integrity of the University, policies on academic dishonesty will be strictly enforced. For further information, please visit the Student Conduct and Academic Integrity website at: <http://deanofstudents.utexas.edu/conduct>.

### CONFIDENTIALITY OF CLASS RECORDINGS

Class recordings are reserved only for students in this class for educational purposes and are protected under FERPA. The recordings should not be shared outside the class in any form. Violation of this restriction by a student could lead to Student Misconduct proceedings.

### GETTING HELP WITH TECHNOLOGY

Students needing help with technology in this course should contact the UT iSchool Helpdesk: [help@ischool.utexas.edu](mailto:help@ischool.utexas.edu)

### CONTENT WARNING

Our classroom provides an open space for the critical and civil exchange of ideas. Some readings and other content in this course will include topics that some students may find offensive and/or traumatizing. I'll aim to forewarn students about potentially disturbing content and I ask all students to help to create an atmosphere of mutual respect and sensitivity.

### SHARING OF COURSE MATERIALS IS PROHIBITED

No materials used in this class, including, but not limited to, lecture hand-outs, videos, assessments (quizzes, exams, papers, projects, homework assignments), in-class materials, review sheets, and additional problem sets, may be shared online or with anyone outside of the class without explicit, written permission of the instructor. Unauthorized sharing of materials promotes cheating. The University is well aware of the sites used for sharing materials, and any materials found online that are associated with you, or any suspected unauthorized sharing of materials, will be reported to Student Conduct and Academic Integrity in the Office of the Dean of Students. These reports can result in sanctions, including failure of the course.

### RELIGIOUS HOLY DAYS

By UT Austin policy, you must notify me of your pending absence as far in advance as possible of the date of observance of a religious holy day. If you must miss a class, an examination, a work assignment, or a project in order to observe a religious holy day, you will be given an opportunity to complete the missed work within a reasonable time after the absence.

## NAMES AND PRONOUNS

Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with differences of race, culture, religion, politics, sexual orientation, gender, gender variance, and nationalities. I will gladly honor your request to address you by your chosen name and by the gender pronouns you use. Class rosters are provided to the instructor with the student's chosen (not legal) name, if provided. If you wish to provide or update your name, that can be done easily at this page, and you can add your pronouns to Canvas.

## LAND ACKNOWLEDGMENT

I would like to acknowledge that we are meeting on the Indigenous lands of Turtle Island, the ancestral name for what now is called North America. Moreover, I would like to acknowledge the Alabama-Coushatta, Caddo, Carrizo/Comecrudo, Coahuiltecan, Comanche, Kickapoo, Lipan Apache, Tonkawa and Ysleta Del Sur Pueblo, and all the American Indian and Indigenous Peoples and communities who have been or have become a part of these lands and territories in Texas.

# University Resources for Students

## COUNSELING AND MENTAL HEALTH CENTER (CMHC)

All of us benefit from support during times of struggle. Know you are not alone. If you or anyone you know is experiencing symptoms of stress, anxiety, depression, academic concerns, loneliness, difficulty sleeping, or any other concern impacting your wellbeing – you are strongly encouraged to connect with CMHC. The Counseling and Mental Health Center provides a wide variety of mental health services to all UT students including crisis services, counseling services with immediate support and well-being resources. Additionally, CARE Counselors are located within the academic schools and colleges. These counselors get to know the concerns that are unique to their college's students. For more information on CMHC, visit <https://cmhc.utexas.edu> or call 512-471-3515 or you may also contact Bryce Moffett, LCSW (iSchool CARE counselor) at 512-232-2983.

## UNIVERSITY HEALTH SERVICES (UHS)

Your physical health and wellness are a priority. University Health Services is an on-campus high-quality medical facility providing care to all UT students. Services offered by UHS include general medicine, urgent care, a 24/7 nurse advice line, women's health, sports medicine, physical therapy, lab and radiology services, COVID-19 testing and vaccinations and much more. For additional information, visit <https://healthyhorns.utexas.edu> or call 512-471-4955.

## SANGER LEARNING CENTER

Did you know that more than one-third of UT undergraduate students use the Sanger Learning Center each year to improve their academic performance? All students are welcome to take advantage of Sanger Center's classes and workshops, private learning specialist appointments, peer academic coaching, and tutoring for more than 70

courses in 15 different subject areas. For more information, please visit <https://ugs.utexas.edu/slc> or call 512-471-3614 (JES A332).”

### STUDENT EMERGENCY SERVICES (SES)

Student Emergency Services in the Office of the Dean of Students helps students and their families during difficult or emergency situations. Assistance includes outreach, advocacy, intervention, support, and referrals to relevant campus and community resources. If you need to be absent from class due to a family emergency, medical or mental health concern, or academic difficulty due to crisis or an emergency situation, you can work with Student Emergency Services. SES will document your situation and notify your professors. Additional information is available at <https://deanofstudents.utexas.edu/emergency/> or by calling 512-471-5017.

## Important Safety Information

If you have concerns about the safety or behavior of fellow students, TAs or professors, contact BCCAL (the Behavior Concerns and COVID-19 Advice Line) at <https://safety.utexas.edu/behavior-concerns-advice-line> or by calling 512-232-5050. Confidentiality will be maintained as much as possible, however the university may be required to release some information to appropriate parties.

### CLASSROOM SAFETY AND COVID-19

To help preserve our in-person learning environment, the university recommends the following.

- Adhere to university [mask guidance](#). Masks are strongly recommended, but optional, inside university buildings for vaccinated and unvaccinated individuals, except when alone in a private office or single-occupant cubicle.
- [Vaccinations are widely available](#), free and not billed to health insurance. The vaccine will help protect against the transmission of the virus to others and reduce serious symptoms in those who are vaccinated.
- [Proactive Community Testing](#) remains an important part of the university’s efforts to protect our community. Tests are fast and free.
- We encourage the use of the [Protect Texas App](#) each day prior to coming to campus.
- If you develop COVID-19 symptoms or feel sick, stay home and contact the [University Health Services’](#) Nurse Advice Line at 512-475-6877. If you need to be absent from class, contact [Student Emergency Services](#) and they will notify your professors. In addition, to help understand what to do if you have been had close contact with someone who tested positive for COVID-19, see this [University Health Services link](#).
- [Behavior Concerns and COVID-19 Advice Line](#) (BCCAL) remains available as the primary tool to address questions or concerns from the university community about COVID-19.
- Students who test positive should contact [BCCAL](#) or self-report (if tested off campus) to [University Health Services](#).
- Visit [Protect Texas Together](#) for more information.

## CARRYING OF HANDGUNS ON CAMPUS

Texas' Open Carry law expressly prohibits a licensed to carry (LTC) holder from carrying a handgun openly on the campus of an institution of higher education such as UT Austin. Students in this class should be aware of the following university policies:

- Students in this class who hold a license to carry are asked to review the university policy regarding campus carry.
- Individuals who hold a license to carry are eligible to carry a concealed handgun on campus, including in most outdoor areas, buildings and spaces that are accessible to the public, and in classrooms.
- It is the responsibility of concealed-carry license holders to carry their handguns on or about their person at all times while on campus. Open carry is NOT permitted, meaning that a license holder may not carry a partially or wholly visible handgun on campus premises or on any university driveway, street, sidewalk or walkway, parking lot, parking garage, or other parking area.
- Per my right, I prohibit carrying of handguns in my personal office. Note that this information will also be conveyed to all students verbally during the first week of class. This written notice is intended to reinforce the verbal notification, and is not a “legally effective” means of notification in its own right.

## TITLE IX DISCLOSURE

Beginning January 1, 2020, Texas Senate Bill 212 requires all employees of Texas universities, including faculty, to report any information to the Title IX Office regarding sexual harassment, sexual assault, dating violence and stalking that is disclosed to them. Texas law requires that all employees who witness or receive any information of this type (including, but not limited to, writing assignments, class discussions, or one-on-one conversations) must report it. If you would like to speak with someone who can provide support or remedies without making an official report to the university, please email [advocate@austin.utexas.edu](mailto:advocate@austin.utexas.edu). For more information about reporting options and resources, visit <http://www.titleix.utexas.edu/>, contact the Title IX Office via email at [titleix@austin.utexas.edu](mailto:titleix@austin.utexas.edu), or call 512-471-0419. Although graduate teaching and research assistants are not subject to Texas Senate Bill 212, they are still mandatory reporters under Federal Title IX laws and are required to report a wide range of behaviors we refer to as sexual misconduct, including the types of sexual misconduct covered under Texas Senate Bill 212. The Title IX office has developed supportive ways to respond to a survivor and compiled campus resources to support survivors.

Faculty members and certain staff members are considered “Responsible Employees” or “Mandatory Reporters,” which means that they are required to report violations of Title IX to the Title IX Coordinator. **I am a Responsible Employee and must report any Title IX-related incidents** that are disclosed in writing, discussion, or one-on-one. Before talking with me or with any faculty or staff member about a Title IX-related incident, be sure to ask whether they are a responsible employee. If you want to speak with someone for support or remedies without making an official report to the university, email [advocate@austin.utexas.edu](mailto:advocate@austin.utexas.edu). For more information about reporting options and resources, visit the [Title IX Office](#) or email [titleix@austin.utexas.edu](mailto:titleix@austin.utexas.edu).

## CAMPUS SAFETY

The following are recommendations regarding emergency evacuation from the Office of Campus Safety and Security, 512-471-5767,

- Students should sign up for Campus Emergency Text Alerts at the page linked above.
- Occupants of buildings on The University of Texas at Austin campus must evacuate buildings when a fire alarm is activated. Alarm activation or announcement requires exiting and assembling outside.
- Familiarize yourself with all exit doors of each classroom and building you may occupy. Remember that the nearest exit door may not be the one you used when entering the building.
- Students requiring assistance in evacuation shall inform their instructor in writing during the first week of class.
- In the event of an evacuation, follow the instruction of faculty or class instructors. Do not re-enter a building unless given instructions by the following: Austin Fire Department, The University of Texas at Austin Police Department, or Fire Prevention Services office.
- For more information, please visit [emergency preparedness](#).