Human Factors in Health Care Engineering Systems
Industrial Engineering/Educational Psychology 546:
University of Illinois at Urbana-Champaign
Department of Industrial and Enterprise Systems Engineering
Fall 2022

Course Description
Complex health care systems often challenge providers, patients, and other health system participants, contributing to problems that threaten patient and provide safety, increase provider workload, reduce quality of care, and increase the cost of health care. This course overviews research that applies theories and methods from human factors and cognitive science to analyze the sources of these problems and to develop and evaluate design and training interventions to help providers and patients successfully navigate health care systems. An introduction to health care problems and accidents related to human factors is followed by an overview of concepts and methods from the fields of human factors and cognitive science. This background provides a foundation for considering specific topics related to human factors in health care. Topics range from provider and patient interaction with medical devices to collaboration and teamwork, concluding with broader socio-technical issues such as the impact of health information technology on clinical work.

Credits: 4

Schedule:
        Lectures: Mondays, 2:00-3:20 pm (central time),
                                    0018 Campus Instructional Facility (CIF)

Instructor:
        Dr. Abigail R. Wooldridge
        Office: 209A Transportation Building
        Lab: 2311/2313 DCL
        Email: arwool@illinois.edu
        Phone: 217-300-8086
        Office Hours: Wednesdays 3:30-4:30 pm, 2311 DCL
                                  Or by appointment (schedule through https://calendly.com/arwool)

Course content
Provides an overview of research that applies theories and methods from human factors and ergonomics to analyze the sources of these problems and to develop and evaluate design and training interventions to help providers and patients successfully navigate heath care systems. An introduction to problems and accidents in health care related to human factors is followed by an overview of concepts and methods from the fields of human factors and ergonomics.

Readings:
This is a reading intensive, graduate level class. Readings are available on the website of the course: **https://canvas.illinois.edu/**. Class time will be spent discussing the research papers, reports, etc. This discussion will allow you to apply the material covered in the readings. Each week, students will be in charge of leading the discussion (see assignment description, below).

Course website: https://canvas.illinois.edu/
Course materials such as syllabus, handouts, notes, assignment instructions, etc. can be found on the Canvas Learning Management System course website at **https://canvas.illinois.edu/**. You are responsible for regularly checking the course site as well as your email and compass messages to learn of any updates.
Note: Class material is copyright to the University of Illinois at Urbana-Champaign and should not be distributed or disseminated.

Grading Scale: Straight (i.e., no +/-)
90% and up: A   80% - 89%: B   70% - 79%: C   60% - 69%: D   below 59%: F

Grade Determination and Assignments

Item	Points	
Student Bio Survey	5 points	out of maximum 5 points
Office Hours Visit	5 points	out of maximum 5 points
Class Participation	Score	out of maximum 15 points
Reading Journal	Score	out of maximum 15 points
In Class Presentation of Articles, Leading of Discussion	Score	out of maximum 30 points
System Analysis (Group) Project Topic	Score	out of maximum 5 points
System Analysis (Group) Project Outline	Score	out of maximum 5 points
System Analysis (Group) Final Project	Score	out of maximum 20 points
Extra Credit (optional)	*Extra credit points will be available over the course of the semester as described below; additional opportunities may be announced during class*	
Total	Sum of the above, out of 100 points	

Class Participation (15 points):
Participation is what you would expect: Attend class and contribute!

Reading Journal (15 points):
The reading journal encourages active reading of the articles (and integrating concepts from articles, lectures, and discussion). It also gives me and other presenters a sense of what people find interesting, what is challenging to understand, etc. For each article, you should summarize the main points (a brief paragraph about the goals, key findings, and conclusions) and write 2 questions. Questions can be about specific aspects of the article (e.g., a study's procedure or findings) or how the article relates to other papers and concepts covered in the course. A good journal entry is complete (summary and 2 questions) and reflects an attempt to work through the material. Your goal in these assignments is to ensure and demonstrate that you critically read the article and integrated it with concepts from other articles, lectures and discussion. Using Canvas, the summaries and questions will be shared with me and the other students before the class in which the paper(s) are discussed. *Please upload your entries no later than 11:59 am the Sunday of the week that the readings are discussed (e.g., upload journal entries for week 2 by 11:59 pm August 28).*

FORMAT:
- MS-Word document
- Maximum of 2 pages
- Double spaced lines
- 11 point Arial
- 1 inch margins
- Run the spell checker and check the English.

In Class Presentation of Articles, Leading of Discussion (30 points):
Two students lead discussion of one or more topics. The presentation involves briefly summarizing and leading class discussion about the readings. A good presentation summarizes the paper(s) so everyone is on the same page for discussion, elaborates the paper in some way (e.g., presenting related or updated material from the web or from your own experience), and helps students integrate the presented paper with other course concepts. Part of the presenters' task is to read students' questions before class and group them into related topics. You might try your hand at labeling the groups in order to help synthesize people's reactions to the article. This should also help organize your thoughts about the material you are presenting. Grading of the presentation is based on adequacy of the article summary, elaboration, and encouraging class participation.

Class participation will be naturally promoted by addressing students' questions about the article! It also helps to talk with me when preparing presentations!

Signups to lead discussion begin in week 2.

System Analysis (Group) Project (30 points):
Students may work individually or in groups up to 4 for this assignment, which involves both a class presentation and paper/report. The assignment provides an opportunity to 'drill down' and work with course concepts of interest to better understand aspects of patient safety related to human factors covered in the course. You will identify an important problem related to patient safety (for example, a type of adverse event such as wrong-site surgery or giving the wrong medication to a patient; the impact of EHRs on clinical workload), analyze why it occurs, and develop an approach to address the problem. There are four parts to the project.

- Introduction and Background. This part has two sub-sections. First, describe in detail a specific case/example of the problem, based on the literature, media reports, or other sources. For example, in addition to describing the general problem that nurses can confuse patient medications, also describe and analyze an actual incident that you think is representative of the problem. This would include an analysis of factors contributing to the incident (a "root cause analysis"). Second, conduct a literature review to find out what is already known about this type of problem (more generally), focusing on human factors issues related to preventable errors and other factors that contribute to the problem and its consequences.
- Develop an approach to address the problem. How (and why) will this approach reduce the likelihood that the problem will occur, and/or mitigate the effects of this problem if it does occur?
- Describe how you would evaluate the effectiveness of your approach. The evaluation should involve one (or likely more) of the following methods: direct observation, analysis of incident/error reports or patient records; interviewing participants, usability testing, experiment (e.g., involving simulation of the target activities), or modeling of the processes involved. This section will also include expected results from the evaluation, and what new procedures, technology, or other products would result from your project.
- Conclusion. This part summarizes the main points in the paper. It should also include possible new procedures, technology, or other products that might result from your project.

Ideally, this project would involve going to an actual health care setting to study the problem and perhaps evaluate changes that address the problem, but this would be hard to do in one semester, so we'll stick with the hypothetical!

Project Deliverables:
- Topic proposal – following form on Canvas, due 10/16/2022 (5 points)
- Project outline – following sections above, with bullet outline for each, due 11/6/2022 (5 points)
- Class presentation (10 points) – Each student/group will present their project to the class (using power point or other presentation software) and also produce a paper/report about their findings. The report can be the powerpoint presentation (revised in light of feedback during class), or a paper. The report should be organized according to the four sections described above. Group members should work together on all parts of the project.
- Project Report/Paper (10 points) – The report takes the form of a written paper, which should be 10-15 pages, 12-pt font and double-spaced. Include a title page (this doesn't count toward page limits). When using information from published sources in the presentation and report (this will often be course readings, but you can certainly use other sources as well), include citations and references, which also do not count toward page limits. Use APA format for citations and references, and list references at the end of the paper. *Finally, it always helps to include pictures and/or diagrams to illustrate the system and how you would redesign it!!*

More information will be provided about this project later in the semester.

Final Presentation + Report/Paper Grading

I will grade by a rubric (which will be provided later in the semester). However, your score will also include input from your group members, as follows. When in groups, students will evaluate their peers using CATME For example, consider a 4-person team that earned a score of 95% (19 of 20 points). The table below demonstrates how the scaling will work. (A 1 person team will just evaluate themselves)

Student	CATME Adj Factor (w/o self)	Final Project Score (Earned Score * CATME Scaling Factor)
1	1	19 * 1 = 19
2	1.4	19 * 1.4 = 26.6
3	1.2	19 * 1.2 = 22.8
4	0.4	19 * 0.4 = 7.6

Extra Credit:
You can earn 0.5 extra credit point (to be added on to your final grade, i.e., worth 0.5% extra) by coming to my office hours any week other than the first three weeks to *have a conversation* (can be about this course, it could be about the broader HFE field, career advice, life advice, etc.). This can be repeated each week, except for fall break and after the last day of class, for a total of 6 extra credit points over the course of the semester. You can also receive 0.5 extra credit points for completing the weekly check-in survey to give feedback, share strategies that have been useful in your other classes, etc. Other opportunities for extra credit may be announced in class throughout the semester.

Email policy
Please check the syllabus and Canvas before asking questions. When sending an email, observe the following rules or professionalism:

- Title the email **"HF in HCES – (subject of your email)"** in the subject line. This prevents your email from going to the junk folder.
- Maintain professional etiquette, including a respectful greeting, and clear, polite body of the email.
- Frame your question clearly and professionally. Include all relevant information about what you need up front.
- Email in advance. Allow 48 business hours for a response.

Expectations for course meetings
- Participate in class discussions, contribute individual experiences when relevant to the topic so that others can benefit and learn
- Ask questions…there is no bad question if you learned something from the response
- Maturity and respect for others is mandatory (see statement on diversity).
- Cell Phones should be turned off at the beginning of class unless you are emergency personnel on-call. Activation or use of a cell phone will be penalized.
- Use other electronic devices (tablets, laptops, etc.) for course-related purposes only. Do not bring any electronic devices to exams.
- Take individual responsibility for completing assignments on time.
- Check e-mail and Compass frequently (just not in class)
- All readings should be completed prior to class (except for first day, but those need to be done before the first lab).
- Lecture notes will be available in the "Lectures" tab prior to class. I recommend you bring them (printed or otherwise) to help you take notes.
- Class begins and ends on time. Arriving late or leaving early may result in missed points on the exercise.

Absences and make up/late assignments
Students are expected to attend every class. However, it is understood that there may be times when absences are unavoidable, such as illness. For every absence, the student must 1) read all readings, 2)

prepare a 3-page document addressing key points in the readings, points of discussion, and responses to these discussion points, 3) email this paper to me (on the Friday before the class to be missed for a planned absence or within a week after the class for an unplanned absence), and 4) speak with another student about the in-class discussion.

Religious Observances

Illinois law requires the University to reasonably accommodate its students' religious beliefs, observances, and practices in regard to admissions, class attendance, and the scheduling of examinations and work requirements. You should examine this syllabus at the beginning of the semester for potential conflicts between course deadlines and any of your religious observances. If a conflict exists, you should notify your instructor of the conflict and follow the procedure at https://odos.illinois.edu/community-of-care/resources/students/religious-observances/ to request appropriate accommodations. This should be done in the first two weeks of classes.

Academic Integrity

The University of Illinois at Urbana-Champaign Student Code should also be considered as a part of this syllabus. Students should pay particular attention to Article 1, Part 4: Academic Integrity. Read the Code at the following URL: http://studentcode.illinois.edu/.

Academic dishonesty may result in a failing grade. Every student is expected to review and abide by the Academic Integrity Policy: https://studentcode.illinois.edu/article1/part4/1-401/. Ignorance is not an excuse for any academic dishonesty. It is your responsibility to read this policy to avoid any misunderstanding. Do not hesitate to ask the instructor(s) if you are ever in doubt about what constitutes plagiarism, cheating, or any other breach of academic integrity.

I will enforce the university's standards of Academic Integrity. All alleged infractions will be documented in the campus-wide FAIR database and investigated, and all committed infractions will result in sanctions.

Accommodations for Individuals with Disabilities

To obtain disability-related academic adjustments and/or auxiliary aids, students with disabilities must contact the course instructor and the Disability Resources and Educational Services (DRES) as soon as possible **during the first week of the course**. To contact DRES, you may visit 1207 S. Oak St., Champaign, call 333-4603, e-mail disability@illinois.edu or go to the http://www.disability.illinois.edu/. If you are concerned you have a disability-related condition that is impacting your academic progress, there are academic screening appointments available on campus that can help diagnosis a previously undiagnosed disability by visiting the DRES website and selecting "Sign-Up for an Academic Screening" at the bottom of the page. I am happy to follow your DRES accommodations but do need them to know what to do – please feel free to see me after class, during office hours or by appointment.

Additional University Resources

If you are interested in obtaining information to improve writing, study skills, time management or organization, the following campus resources are available to all students:
- Library Savvy Researcher workshops and guides
    - https://calendars.illinois.edu/list/4068
    - https://guides.library.illinois.edu/sb.php?subject_id=70338
- Graduate College Grant Writing Workshops and Resources
    - https://grad.illinois.edu/fellowship/external-workshops
    - https://grad.illinois.edu/fellowship/external-resources
- Writer's Workshop
    - Undergrad Library
    - 217-333-8796
    - https://writersworkshop.illinois.edu
    - Offers consultations, workshops, resources, etc. Explore their website!
- http://www.cws.illinois.edu/workshop

- https://www.disability.illinois.edu/strategies
- http://www.counselingcenter.illinois.edu/self-help-brochures/

Also, most college offices and academic deans provide academic skills support and assistance for academically related and personal problems. Links to the appropriate college contact can be found by going to this website and selecting your college or school: http://illinois.edu/colleges/colleges.html

If you are experiencing symptoms of anxiety or depression or are feeling overwhelmed, stressed, or in crisis, you can seek help through the following campus resources:

Counseling Center
206 Student Services Building
7:50 a.m.-5:00 p.m., Monday through Friday
Phone: 217-333-3704

McKinley Mental Health
313 McKinley Health Center
8:00 a.m.-5:00 p.m., Monday through Friday
Phone: 333-2705
McKinley Health Education offers individual consultations for students interested in learning relaxation and other stress/time management skills, call 333-2714.

The following resources or programs may be useful to you – please use them if you need!

Technology Loan Program
Visit the Technology Loaner Program page for technology loan information. https://answers.uillinois.edu/illinois/99680
The Technology Loan Program is a partnership established across the campus IT community to loan technology hardware to eligible students who have unmet needs. This includes the loaning of computers, peripherals, and internet hotspot technologies to support online learning and work-from-home activities for the duration of the COVID-19 crisis.

Student Assistance Center
If a student does not have access to functional computers or internet connectivity, they can contact the Student Assistance Center at 217-333-0050 or helpdean@illinois.edu. The Center serves as the first point of contact for students who contact the Office of the Dean of Students. The Assistant Deans help students understand university policies and procedures, educate them about and connect them to campus resources, and support students in crisis. https://odos.illinois.edu/community-of-care/student-assistance-center/#utilize

Family Educational Rights and Privacy Act (FERPA)
Any student who has suppressed their directory information pursuant to *Family Educational Rights and Privacy Act* (FERPA) should self-identify to the instructor to ensure protection of the privacy of their attendance in this course. See https://registrar.illinois.edu/academic-records/ferpa/ for more information on FERPA.

Sexual Misconduct Policy and Reporting
The University of Illinois is committed to combating sexual misconduct. Faculty and staff members are required to report any instances of sexual misconduct to the University's Title IX and Disability Office. In turn, an individual with the Title IX and Disability Office will provide information about rights and options, including accommodations, support services, the campus disciplinary process, and law enforcement options. I am a mandatory reporter. A list of the designated University employees who, as counselors, confidential advisors, and medical professionals, do not have this reporting responsibility and can maintain confidentiality, can be found here: https://wecare.illinois.edu/resources/students/#confidential. Other information about resources and reporting is available here: wecare.illinois.edu.

Statement on Diversity and Inclusion
The Grainger College of Engineering is committed to the creation of an anti-racist, inclusive community that welcomes diversity along a number of dimensions, including, but not limited to, race, ethnicity and national origins, gender and gender identity, sexuality, disability status, class, age, or religious beliefs. The College recognizes that we are learning together in the midst of the Black Lives Matter movement, that Black, Hispanic, and Indigenous voices and contributions have largely either been excluded from, or not recognized in, science and engineering, and that both overt racism and micro-aggressions threaten the well-being of our students and our university community.

The effectiveness of this course is dependent upon each of us to create a safe and encouraging learning environment that allows for the open exchange of ideas while also ensuring equitable opportunities and respect for all of us. Everyone is expected to help establish and maintain an environment where students, staff, and faculty can contribute without fear of personal ridicule, or intolerant or offensive language. If you witness or experience racism, discrimination, micro-aggressions, or other offensive behavior, you are encouraged to bring this to the attention of the course director if you feel comfortable. You can also report these behaviors to the Bias Assessment and Response Team (BART) (https://bart.illinois.edu/). Based on your report, BART members will follow up and reach out to students to make sure they have the support they need to be healthy and safe. If the reported behavior also violates university policy, staff in the Office for Student Conflict Resolution may respond as well and will take appropriate action.

The diversity of the participants in this course is a valuable source of ideas, problem solving strategies, and engineering creativity. If you feel that your contribution is not being valued for any reason, please speak with me privately. If you wish to communicate anonymously, you may do so in writing. We are all members of an academic community where it is our shared responsibility to cultivate a climate where all students/individuals are valued and where both they and their ideas are treated with respect. Developing and maintaining that climate is part of the expectations for this course.

If you have made it this far paying attention, thank you. Email me before the second class, using the correct subject line format with your name in the subject line to receive 1 extra credit point.

COVID-19 Requirements and Considerations

Following University policy, all students are required to engage in appropriate behavior to protect the health and safety of the community to follow the campus COVID-19 testing protocol. For the Fall 2022 COVID 19 Guidelines massmail, please see https://massmail.illinois.edu/massmail/944870250.html. I will be wearing a face covering – you are welcome to if you would like.

If you feel ill or are unable to come to class or complete class assignments due to issues related to COVID-19, including but not limited to testing positive yourself, feeling ill, caring for a family member with COVID-19, or having unexpected child-care obligations, you should contact your instructor immediately, and you are encouraged to copy your academic advisor.

General Emergency Response Recommendations
Emergency response recommendations can be found at the following website: https://police.illinois.edu/em/run-hide-fight/. I encourage you to review this website and the campus building floor plans website within the first 10 days of class. http://police.illinois.edu/emergency-preparedness/building-emergency-action-plans/. Check out campus safety video and be sure to join Illini Alerts. Here is a handout they requested we share with you.

Run > Hide > Fight

Emergencies can happen anywhere and at any time. It is important that we take a minute to prepare for a situation in which our safety or even our lives could depend on our ability to react quickly. When we're faced with almost any kind of emergency – like severe weather or if someone is trying to hurt you – we have three options: Run, hide or fight.

Run
Leaving the area quickly is the best option if it is safe to do so.

▶ Take time now to learn the different ways to leave your building.
▶ Leave personal items behind.
▶ Assist those who need help, but consider whether doing so puts yourself at risk.
▶ Alert authorities of the emergency when it is safe to do so.

Hide
When you can't or don't want to run, take shelter indoors.

▶ Take time now to learn different ways to seek shelter in your building.
▶ If severe weather is imminent, go to the nearest indoor storm refuge area.
▶ If someone is trying to hurt you and you can't evacuate, get to a place where you can't be seen, lock or barricade your area if possible, silence your phone, don't make any noise and don't come out until you receive an Illini-Alert indicating it is safe to do so.

Fight
As a last resort, you may need to fight to increase your chances of survival.

▶ Think about what kind of common items are in your area which you can use to defend yourself.
▶ Team up with others to fight if the situation allows.
▶ Mentally prepare yourself – you may be in a fight for your life.

Please be aware of people with disabilities who may need additional assistance in emergency situations.

Other resources

▶ **police.illinois.edu/safe** for more information on how to prepare for emergencies, including how to run, hide or fight and building floor plans that can show you safe areas.

▶ **emergency.illinois.edu** to sign up for Illini-Alert text messages.

▶ **Follow the University of Illinois Police Department** on Twitter and Facebook to get regular updates about campus safety.

Schedule

Week	Date	Day	Topic	Reading	Discussion Leader(s)
1	8/22/2022	Mon	Introduction to course, review syllabus, etc.	None.	Prof. Wooldridge
	8/24/2022	Wed	What is human factors/ergonomics?	https://iea.cc/what-is-ergonomics/ Dul et al. (2012) Wilson (2014) International Labour Organisation and International Ergonomics Association (2021) – Ch. 3 and 4	Prof. Wooldridge
	8/28/2022	Sun	**Week 1 due date (no class meeting):** Student Bio due by 11:59 p.m. via Canvas Reading journal entries for Week 2 readings due by 11:59 p.m. via Canvas		
2	8/29/2022	Mon	Why does health care need human factors/ergonomics?	Hignett, Carayon, Buckle, and Catchpole (2013) Hignett et al. (2015) Waterson (2009) Kohn, Corrigan, and Donaldson (1999) – Ch. 2 and 3	1. 2.
	8/31/2022	Wed	What is safe, high quality care?	Vincent and Amalberti (2016) – Ch. 1-3 Waterson and Catchpole (2016) Donabedian (1988)	1. 2.
	9/4/2022	Sun	**Week 2 due date (no class meeting):** Reading journal entries for Week 3 readings due by 11:59 p.m. via Canvas		
3	9/5/2022	Mon	*Labor Day - no class*		
	9/7/2022	Wed	Concept of patient journey	Carayon and Wooldridge (2020) Carayon, Wooldridge, Hoonakker, Hundt, and Kelly (2020) Vincent and Amalberti (2016) – Ch. 4 *Optional:* *Carayon et al. (2006)* *Carayon et al. (2014)*	1. 2.

NOTE: Schedule subject to change with fair notice, check "Announcements" on Canvas for updates.

Week	Date	Day	Topic	Reading	Discussion Leader(s)
	9/11/2022	Sun	**Week 3 due date (no class meeting):** Reading journal entries for Week 4 readings due by 11:59 p.m. via Canvas		
	9/12/2022	Mon	Accident/Incident Analysis and Safety Methods	Vincent and Amalberti (2016) – Ch. 5-6 and 11-12	1. 2.
	9/14/2022	Wed	Healthcare as a complex sociotechnical system	Vincent and Amalberti (2016) – Ch. 10 Plsek and Greenhalgh (2001) Carayon (2006) Carayon et al. (2011)	1. 2.
4	9/18/2022	Sun	**Week 4 due date (no class meeting):** Reading journal entries for Week 5 readings due by 11:59 p.m. via Canvas		
	9/19/2022	Mon	Health care at home	Vincent and Amalberti (2016) – Ch. 8 Wooldridge and Rogers (2021) R.J. Holden, Cornet, and Valdez (2020)	1. 2.
	9/21/2022	Wed	Guest speaker - Rupa Valdez	TBA	Prof. Wooldridge/Guest Speaker
5	9/25/2022	Sun	**Week 5 due date (no class meeting):** Reading journal entries for Week 6 readings due by 11:59 p.m. via Canvas		
	9/26/2022	Mon	Chronic conditions (focused on patient management)	R.J. Holden, Schubert, and Mickelson (2015) Mickelson and Holden (2018) Santos, Olumese, and Vaughn-Cooke (2014)	1. 2.
	9/28/2022	Wed	Caregiving and care givers	Werner, Rutkowski, Holden, Ponnala, and Gilmore-Bykovskyi (2022) Barton et al. (2022) Wust et al. (2022)	1. 2.
6	10/2/2022	Sun	**Week 6 due date (no class meeting)**: Reading journal entries for Week 7 readings due by 11:59 p.m. via Canvas Early informal feedback		

NOTE: Schedule subject to change with fair notice, check "Announcements" on Canvas for updates.

Week	Date	Day	Topic	Reading	Discussion Leader(s)
	10/3/2022	Mon	Designing technology for patients, family, (informal) caregivers	Schurgin, Schlager, Vardoulakis, Pina, and Wilcox (2021) Srinivas, Cornet, and Holden (2017) Haggstrom and Carr (2022)	1. 2.
	10/5/2022	Wed	Guest Speaker - Wendy Rogers (tentative)	TBA	Prof. Wooldridge/Guest Speaker
7	10/9/2022	Sun	**Week 7 due date (no class meeting):** Project teams due		
	10/10/2022	Mon	HFES - project work day (no class meeting)	None.	None.
	10/12/2022	Wed	HFES - project work day (no class meeting)	None.	None.
8	10/16/2022	Sun	**Week 8 due date (no class meeting):**Project topic proposal due by 11:59 p.m. via CanvasReading journal entries for Week 9 readings due by 11:59 p.m. via Canvas		
	10/17/2022	Mon	Outpatient/primary care	Vincent and Amalberti (2016) – Ch. 9 Temte et al. (2020) Holman et al. (2016)	1. 2.
	10/19/2022	Wed	Guest Speaker - Edmond Ramly (tentative)	TBA	Prof. Wooldridge/Guest Speaker
9	10/23/2022	Sun	**Week 9 due date (no class meeting):** Reading journal entries for Week 10 readings due by 11:59 p.m. via Canvas		
	10/24/2022	Mon	Diagnosis	Balogh, Miller, and John R. Ball (2015) – Ch. 2 and 3 Carayon, Hoonakker, et al. (2020)	1. 2.
	10/26/2022	Wed	Hospital-based care	Vincent and Amalberti (2016) – Ch. 7 Richard J. Holden et al. (2011) Carayon et al. (2015)	1. 2.
10	10/30/2022	Sun	**Week 10 due date (no class meeting):**		

NOTE: Schedule subject to change with fair notice, check "Announcements" on Canvas for updates.

Week	Date	Day	Topic	Reading	Discussion Leader(s)
	10/31/2022	Mon	HEPS - project work day (no class meeting)	None.	None.
	11/2/2022	Wed	HEPS - project work day (no class meeting)	None.	None.
11	11/6/2022	Sun	**Week 11 due date (no class meeting):** Project paper outline due by 11:59 p.m. via Canvas Reading journal entries for Week 12 readings due by 11:59 p.m. via Canvas		
	11/7/2022	Mon	Care transitions	Carroll, Williams, and Gallivan (2012) Wooldridge, Carayon, et al. (2022) Werner, Gurses, Leff, and Arbaje (2016)	1. 2.
	11/9/2022	Wed	Guest Speaker - Myrtede Alfred (tentative)	TBA	Prof. Wooldridge/Guest Speaker
12	11/13/2022	Sun	**Week 12 due date (no class meeting):** Reading journal entries for Week 13 readings due by 11:59 p.m. via Canvas		
	11/14/2022	Mon	Health care professional fatigue, stress, burnout	Bodenheimer and Sinsky (2014) Steege, Arsenault Knudsen, Brzozowski, and Cho (2022) National Academies of Sciences (2019) - summary	1. 2.
	11/16/2022	Wed	Guest Speaker - Ken Catchpole (tentative)	TBA	Prof. Wooldridge/Guest Speaker
13	11/20/2022	Sun	**Week 13 due date (no class meeting):** Reading journal entries for Week 15 readings due by 11:59 p.m. via Canvas		
	11/21/2022	Mon	*Fall Break - no class*		
	11/23/2022	Wed			
14	11/27/2022	Sun			

NOTE: Schedule subject to change with fair notice, check "Announcements" on Canvas for updates.

Week	Date	Day	Topic	Reading	Discussion Leader(s)
	11/28/2022	Mon	Designing technology for clinicians	Fairbanks and Caplan (2004) Garg et al. (2005) Ash, Sittig, Dykstra, Campbell, and Guappone (2009)	1. 2.
	11/30/2022	Wed	COVID-19	Wooldridge, Carman, and Xie (2022) Hignett et al. (2021) Carayon and Perry (2021)	1. 2.
15	12/4/2022	Sun	**Week 15 due date (no class meeting):** Final project paper due by 11:59 p.m. via Canvas		
	12/5/2022	Mon	Project Presentations	None.	None.
	12/7/2022	Wed	Project Presentations	None.	None.
16	12/8/2022	Thu	***Reading day - no classes! Good luck preparing for finals***		
17	FINAL TBD	TBD	No Exam. **Due date:** CATME Peer Evaluates due by end of exam period.		

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