IUPUI

SCHOOL OF INFORMATICS AND COMPUTING

DEPARTMENT OF BIOHEALTH INFORMATICS

Indiana University–Purdue University Indianapolis

Human Factors Engineering for Health Informatics- INFO B626

Fall

Course Info 3 Credit hours

Location Class

Prerequisites: None

COURSE DESCRIPTION

In this course, students review and critique traditional and emerging human factors engineering approaches, concepts, and methods and apply them to contemporary health informatics problems. Class activities include discussions and interactive peer review of articles, presentations, and original research proposals.

EXTENDED COURSE DESCRIPTION

In this highly participatory advanced seminar course, classic and emerging human factors engineering approaches, concepts, and methods are reviewed, critiqued, and applied to contemporary health informatics issues. Example human factors engineering topics include automation, cognitive task analysis, field research methods, human information processing, process redesign, product design, safety science, team cognition, usability engineering, user-centered design, work system models, and workflow assessment. Health informatics applications areas include consumer health informatics, clinical decision support, health data visualization, learning health systems, technology-enabled care coordination, team-based care, patient/family engagement, technology implementation and evaluation, change management, and simulation. Class activities include interactive discussions and peer review of articles, presentations, and original research proposals. Students enrolled in 3 credits develop and present a research project, formulated as a peer-reviewed proposal.

Communication policies:
These policies are intended to minimize lost or delayed e-mails. They are not meant to create a barrier between you and your instructor.

1) If possible, **use your instructor's actual e-mail instead of writing through Canvas**.
2) Your email should **contain the course number in the subject line (no space, no dash)**. This is done so that your e-mail is flagged for your instructor's attention.
3) **Attend office hours or make an appointment** if you wish to speak to the instructor in person. Phone- or Skype-based appointments are acceptable but must be made by appointment. Note that your instructor may not be able to accommodate evening or weekend meetings.

Rationale: Human factors engineering is the scientific and practice-based discipline concerned with studying and improving work performance in sociotechnical systems. Human factors engineering is listed as a core competency area for medical and nursing informatics graduate programs (Gardner et al., 2009; Kulikowski et al., 2012; Staggers & Thompson, 2002). It is, therefore, acknowledged as a key topic in biomedical informatics education by the accrediting body for health informatics education programs (AMIA, CAHIIM) and the American Board of Medical Specialties (ABMS) offering certification in the medical informatics specialty. Furthermore, human factors engineering and the affiliate disciplines usability engineering and human-computer interaction are promoted in national and global reports on the future of health, healthcare, and health information technology (Institute of Medicine, 2000, 2012; National Research Council, 2009; World Health Organization, 2000).

Gardner, R. M., Overhage, J. M., Steen, E. B., Munger, B. S., Holmes, J. H., Williamson, J. J., & Detmer, D. E. (2009). Core content for the subspecialty of clinical informatics. *Journal of the American Medical Informatics Association, 16*(2), 153-157. doi: 10.1197/jamia.M3045

Institute of Medicine. (2000). *To Err is Human: Building a Safer Health System. Institute of Medicine Report on Medical Errors.* Washington, DC: National Academies Press.

Institute of Medicine. (2012). Health IT and Patient Safety: Building Safer Systems for Better Care. Washington, DC: The National Academies Press.

Kulikowski, C. A., Shortliffe, E. H., Currie, L. M., Elkin, P. L., Hunter, L. E., Johnson, T. R., . . . Williamson, J. J. (2012). AMIA Board white paper: definition of biomedical informatics and specification of core competencies for graduate education in the discipline. *Journal of the American Medical Informatics Association,* 19(6), 931-938. doi: 10.1136/amiajnl-2012-001053

National Research Council. (2011). Health Care Comes Home: The Human Factors. Washington, DC: National Academies Press. Committee on the Role of Human Factors in Home Health Care, Board on Human-Systems Integration, Division of Behavioral and Social Sciences and Education.

Staggers, N., & Thompson, C. B. (2002). The evolution of definitions for nursing informatics: a critical analysis and revised definition. *Journal of the American Medical Informatics Association,* 9(3), 255-261.

World Health Organization. (2009). Human Factors in Patient Safety: Review of Topics and Tools Retrieved July 11, 2015, from http://www.who.int/patientsafety/research/methods_measures/human_factors/human_factors_review.pdf

For more on human factors engineering:

http://www.hfes.org/Web/EducationalResources/HFEdefinitionsmain.html (Human Factors & Ergonomics Society)

Carayon, P. (Ed.). (2012). *Handbook of Human Factors and Ergonomics in Patient Safety* (2nd ed.). Mahwah, NJ: Lawrence Erlbaum.

Salvendy, G. (Ed.). (2012). *Handbook of Human Factors and Ergonomics* (4th ed.). Hoboken, NJ: Wiley.

Stanton, N. A., Hedge, A., Brookhuis, K., Salas, E., & Hendrick, H. (Eds.). (2005). *Handbook of Human Factors and Ergonomics Methods*. Boca Raton, FL: CRC Press.

Wickens, C. D., Lee, J. D., Liu, Y., & Gordon-Becker, S. (2003). *An Introduction to Human Factors Engineering* (2nd ed.). Englewood Cliffs, NJ: Prentice Hall.

TEXTBOOKS AND READINGS

This course does not use a textbook. Weekly course readings of articles, chapters, proceedings papers, and reports are assigned and posted on Canvas. Course readings are selected at the start of the semester from: 1) human factors engineering scholarly works and 2) literature in the area of health informatics. Each week, about 2–3 readings are assigned.

Students are expected to complete the readings and come prepared to discuss them. ***Not doing so hurts every single learner in the class and defeats the purpose of a graduate-level, discussion-based seminar course.*** Students not completing readings or unprepared for to discuss them will be asked to withdraw from the class.

The full schedule of readings is created over the course of the semester and reflects student topic selections.

REQUIRED SOFTWARE

None.

LEARNING OBJECTIVES:

Course Objectives	AMIA Functional Domains	Proposed competency driven objectives	Miller's Pyramid(map)	Class activities	Assessment
Human factors engineering, including its principles and subspecialties.	F4	Students will be able to apply human factors engineering, including its principles and subspecialties.	SHOWS HOW	Mini lectures, Class projects, Class papers	Weekly readings, quizzes, Student-led discussions, Work-in-progress (WIP) sessions.
Health informatics problem using	F4	Students will be able to evaluate a	SHOWS HOW	Mini lectures,	Weekly readings,

human factors engineering concepts and methods.		health informatics problem using human factors engineering concepts and methods.		Class projects, Class papers	quizzes, Student-led discussions, Work-in-progress (WIP) sessions.
Readings on Human Factors, Consumer Health Information Technology/eHealth, Work Systems Models, Workflow Research and Field Research Methods, Implementation, Adoption, and Acceptance, Macro cognition, User-Centered Design, Online Patient Education, Distributed Cognition, Cognitive Workload, Expertise, Naturalistic Decision Making, Resilience Engineering / Safety II	F4, F5, F6	Students will be able to critique scientific articles and other readings on human factors engineering and synthesize knowledge from different areas of human factors engineering to solve a contemporary health informatics problem.	DOES	Mini lectures, Class projects, Class papers	Weekly readings, quizzes, Student-led discussions, Work-in-progress (WIP) sessions.
Classic and emerging human factors engineering approaches, concepts, and methods applied to contemporary health informatics issues.	F4, F5	Students will be able to develop and communicate a research study proposal to apply human factors engineering to a contemporary health informatics issue.	DOES	Mini lectures, Class projects, Class papers	Weekly readings, quizzes, Student-led discussions, Work-in-progress (WIP) sessions.

Activity	1. Apply	2. Evaluate	3. Critique	4. Combine	5. Develop
1. Weekly readings	X				
2. Mini lectures	X				
3. Discussion / reflection	X	X	X	X	
4. Lead discussion		X	X	X	
5. Work-in-progress		X	X	X	X
6. Class paper	X	X	X	X	X
7. Class project	X	X	X	X	X

Principles of Graduate and Professional Learning (PGPL)

Learning outcomes are assessed in the following areas:

1. Knowledge and skills mastery (K&S) Moderate emphasis
2. Critical thinking and good judgment (CT) *Major emphasis*
3. Effective communication (EC) Some emphasis
4. Ethical behavior (EB)

GRADING

Grade calculation:

Paper (× 3)	30%
Project (× 2)	20%
Quiz (× 6)	20%
Reflection paper (× 13)	20%
Weekly discussions (× 16)	5%
Leading discussions (× 8)	5%

Grading Scale:

A+	97 – 100	Outstanding achievement, given at the instructor's discretion
A	93 – 100	Excellent achievement
A–	90 – 92.99	Very good performance and quality of work
B+	87 – 89.99	Good performance and quality of work
B	83 – 86.99	Modestly acceptable performance and quality of work
B–	80 – 82.99	Marginal acceptable performance and quality of work
F	Below 80	Unacceptable work (Course must be repeated for credit)

No credits toward major, minor, or certificate requirements are granted for a grade below B–.

TOPIC 1

Topic: What is Human Factors?

Readings:

1. Hignett, S., Carayon, P., Buckle, P., & Catchpole, K. (2013). State of science: Human factors and ergonomics in healthcare. *Ergonomics, 56*, 1491–1503.

2. Carayon, P. (2007). Human factors and ergonomics in health care and patient safety. In P. Carayon (Ed.), *Handbook of Human Factors and Ergonomics in Patient Safety* (pp. 3–20). Mahwah, NJ: Lawrence Erlbaum.
3. Russ, A. L., Fairbanks, R. J., Karsh, B., Militello, L. G., Saleem, J. J., & Wears, R. L. (2013). The science of human factors: Separating fact from fiction. *BMJ Quality & Safety, 22*, 802–808.

TOPIC 2

Topic: What is Consumer Health Information Technology/eHealth?

Readings:

1. Ricciardi, L., Mostashari, F., Murphy, J., Daniel, J. G., & Siminerio, E. P. (2013). A national action plan to support consumer engagement via e-health. *Health Aff (Millwood), 32*(2), 376–384.
2. Jimison, H., Gorman, P., Woods, S., Nygren, P., Walker, M., Norris, S., & Hersh, W. (2008). Barriers and drivers of health information technology use for the elderly, chronically ill, and underserved. Evidence Report/Technology Assessment No. 175. Rockville, MD: Agency for Healthcare Research and Quality. [Note before printing: this is a long report – but read only the first ~60 pages .. in any case, it's a quick read]
3. Zayas-Cabán, T., & Dixon, B. E. (2010). Considerations for the design of safe and effective consumer health IT applications in the home. *Quality & Safety in Health Care, 19*, i61–i67.

TOPIC 3

Topic: Work Systems Models

Readings:

1. Holden, R. J., Carayon, P., Gurses, A. P., Hoonakker, P., Hundt, A. S., Ozok, A. A., & Rivera-Rodriguez, A. J. (2013). SEIPS 2.0: A human factors framework for studying and improving the work of healthcare professionals and patients. *Ergonomics, 56*(11), 1669–1686.
2. Valdez, R. S., Holden, R. J., Novak, L. L., & Veinot, T. C. (2015). Transforming consumer health informatics through a patient work framework: Connecting patients to context. *Journal of the American Medical Informatics Association, 22*(1), 2–10.
3. Patel, V. L., & Kannampallil, T. G. (2014). Human factors and health information technology: Current challenges and future directions. *IMIA Yearbook of Medical Informatics*, 58–66.

TOPIC 4

Topic: Workflow Research and Field Research Methods

Readings:

1. Carayon, P., Cartmill, R., Hoonakker, P., Schoofs Hundt, A., Karsh, B., Krueger, D., . . . Wetterneck, T. B. (2012). Human factors analysis of workflow in health information technology implementation. In P. Carayon (Ed.), *Handbook of Human Factors and Ergonomics in Patient Safety* (2nd ed., pp. 507–521). Mahwah, NJ: Lawrence Erlbaum.
2. Unertl, K. M., Weinger, M. B., Johnson, K. B., & Lorenzi, N. M. (2009). Describing and modeling workflow and information flow in chronic disease care. *Journal of the Americal Medical Informatics Association, 16*, 826–836.
3. Holden, R. J., McDougald Scott, A. M., Hoonakker, P. L. T., Hundt, A. S., & Carayon, P. (2015). Data collection challenges in community settings: Insights from two field studies

of patients with chronic disease. *Quality of Life Research, 24*, 1043–1055.

TOPIC 5

Topic: Implementation, Adoption, and Acceptance

Readings:

1. Or, C. K., Karsh, B. T., Severtson, D. J., Burke, L. J., Brown, R. L., & Brennan, P. F. (2011). Factors affecting home care patients' acceptance of a web-based interactive self-management technology. *Journal of the American Medical Informatics Association*, *18*(1), 51–59.
2. Yuan, S., Ma, W., Kanthawala, S., & Peng, W. (2015). Keep Using My Health Apps: Discover Users' Perception of Health and Fitness Apps with the UTAUT2 Model. *Telemedicine Journal and E-Health.* doi: 10.1089/tmj.2014.0148
3. Price, M. M., Pak, R., Müller, H., & Stronge, A. (2013). Older adults' perceptions of usefulness of personal health records. *Universal Access in the Information Society, 12*(2), 191–204.
4. Hung, M., Conrad, J., Hon, S. D., Cheng, C., Franklin, J. D., & Tang, P. (2013). Uncovering patterns of technology use in consumer health informatics. *Wiley Interdiscip Rev Comput Stat, 5*(6), 432–447

TOPIC 6

Topic: Macrocognition

Readings:

1. Hoffman, R. R., & Woods, D. D. (2011). Beyond Simon's slice: five fundamental trade-offs that bound the performance of macrocognitive work systems.*Intelligent Systems, IEEE, 26*(6), 67–71.
2. Fiore, S. M., Rosen, M. A., Smith-Jentsch, K., Salas, E., Letsky, M., & Warner, N. (2010). Toward an understanding of macrocognition in teams: predicting processes in complex collaborative contexts. *Human Factors: The Journal of the Human Factors and Ergonomics Society*.
3. Militello, L. G., Patterson, E. S., Saleem, J. J., Anders, S., & Asch, S. M. (2008). Supporting macrocognition in health care: Improving clinical reminders.*Naturalistic decision making and macrocognition*, 203–220.

TOPIC 7

Topic: User-Centered Design

Readings:

1. Abras, C., Maloney-Krichmar, D., Preece, J. (2004) User-Centered Design. In Bainbridge, W. Encyclopedia of Human-Computer Interaction. Thousand Oaks: Sage Publications
2. De Vito Dabbs A, Myers B, McCurry K, Dunbar–Jacob J, Hawkins R, Begley A, Dew M, "User-Centered Design and Interactive Health Technologies for Patients "Computers, Informatics, Nursing, Vol. 27, No. 3, 175–183 2009
3. Johnson C, Johnson T, Zhang J, " A user-centered framework for redesigning health care interfaces," Journal of Biomedical Informatics 38 (2005) 75–87
4. Siek K, Khan D, Ross S, Haverhals L, Meyers J, ·Cali S, "Designing a Personal Health Application for Older Adults to Manage Medications: A Comprehensive Case Study,"J Med Syst (2011) 35:1099–1121

TOPIC 8

Topic: Online Patient Education

Readings:

1. Manning, T. (2013). Interactive Environments for Promoting Health. In R. L. Street, W. R. Gold, & T. R. Manning, Health Promotion and Interactive Technology: Theoretical Applications and Future Directions (pp. 67–78). Routledge.
2. Potts, H. W. W., & Wyatt, J. C. (2002). Survey of Doctors' Experience of Patients Using the Internet. Journal of Medical Internet Research, 4(1), e5. **http://doi.org/10.2196/jmir.4.1.e5**
3. McDermott, M. S., & While, A. E. (2013). Maximizing the healthcare environment: A systematic review exploring the potential of computer technology to promote self-management of chronic illness in healthcare settings. Patient Education and Counseling, 92(1), 13–22. **http://doi.org/10.1016/j.pec.2013.02.014**

TOPIC 9

Topic: Distributed Cognition

Readings:

1. Hutchins, E. (2000). Distributed cognition. In International Encyclopedia of the Social and Behavioral Sciences. Elsevier Science.
2. Hutchins, E. (1995). How a Cockpit Remembers Its Speeds. Cognitive Science, 19(3), 265–288. **http://doi.org/10.1207/s15516709cog1903_1**
3. Carmien, S. P., & Koene, R. A. (2009). Distributed Intelligence and Scaffolding in Support of Cognitive Health. In C. Stephanidis (Ed.), Universal Access in Human–Computer Interaction. Addressing Diversity (pp. 334–343). Springer Berlin Heidelberg. Retrieved from **http://link.springer.com/chapter/10.1007/978–3–642–02707–9_38**
4. Wu, M., Birnholtz, J., Richards, B., Baecker, R., & Massimi, M. (2008). Collaborating to Remember: A Distributed Cognition Account of Families Coping with Memory Impairments. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (pp. 825–834). New York, NY, USA: ACM. **http://doi.org/10.1145/1357054.1357186**

TOPIC 10

Topic: Cognitive Workload

Readings:

1. Shippee, N. D., Shah, N. D., May, C. R., Mair, F. S., & Montori, V. M. (2012). Cumulative complexity: a functional, patient-centered model of patient complexity can improve research and practice. Journal of Clinical Epidemiology, 65(10), 1041–51. http://doi.org/10.1016/j.jclinepi.2012.05.005
2. Lin, F., Chaboyer, W., & Wallis, M. (2014). Understanding the distributed cognitive processes of intensive care patient discharge. Journal of Clinical Nursing, 23(5–6), 673–682. **http://doi.org/10.1111/jocn.12194**
3. Calandra, D. M., Caso, A., Cutugno, F., Origlia, A., & Rossi, S. (2013). CoWME: A General Framework to Evaluate Cognitive Workload During Multimodal Interaction. In Proceedings of the 15th ACM on International Conference on Multimodal Interaction (pp. 111–118). New York, NY, USA: ACM. **http://doi.org/10.1145/2522848.2522867**

TOPIC 11

Topic: Expertise

Readings:

1. Hartzler, A., & Pratt, W. (2011). Managing the Personal Side of Health: How Patient Expertise Differs from the Expertise of Clinicians. Journal of Medical Internet Research, 13(3). http://doi.org/10.2196/jmir.1728
2. Hardey, M. (1999). Doctor in the house: the Internet as a source of lay health knowledge and the challenge to expertise. Sociology of Health & Illness, 21(6), 820–835. http://doi.org/10.1111/1467–9566.00185
3. Sternberg, R. J. (1997). Cognitive conceptions of expertise. In P. J. Feltovich, K. M. Ford, & R. R. Hoffman (Eds.), Expertise in Context: Human and Machine. Cambridge, MA, USA: MIT Press.
4. Ericsson, K. A. (2006). Protocol Analysis and Expert Thought: Concurrent Verbalizations of Thinking during Experts' Performance on Representative Tasks. In K. A. Ericsson, N. Charness, P. J. Feltovich, & R. R. Hoffman (Eds.), The Cambridge Handbook of Expertise and Expert Performance (1 edition, pp. 223–241). Cambridge ; New York: Cambridge University Press.

TOPIC 12

Topic: Naturalistic Decision Making

Readings:

1. Klein, G. (2008). Naturalistic decision making. Human Factors: The Journal of the Human Factors and Ergonomics Society, 50(3), 456–460.
2. Lipshitz, R., Klein, G., Orasanu, J., & Salas, E. (2001). Taking stock of naturalistic decision making. Journal of behavioral decision making, 14(5), 331–352.
3. Riegel, B., Dickson, V. V., & Topaz, M. (2013). Qualitative analysis of naturalistic decision making in adults with chronic heart failure. Nursing research, 62(2), 91–98.
4. Klein, H. A., & Lippa, K. D. (2008). Type 2 diabetes self-management: controlling a dynamic system. Journal of Cognitive Engineering and Decision Making, 2(1), 48–62.

TOPIC 13

Topic: Resilience Engineering / Safety II

Readings:

1. Furniss, D., Barber, N., Lyons, I., Eliasson, L., & Blandford, A. (2014). Unintentional non-adherence: can a spoon full of resilience help the medicine go down?. BMJ quality & safety, 23(2), 95–98.
2. Strachan, P. H. (2013). Mrs. Jones can't breathe: can a resilience framework help. Resilient Health Care, Surrey, UK: Ashgate, 215–25. (Ch 18 in Hollnagel et al 2013)
3. Hollnagel, E. (2013). Making Health Care Resilient: From Safety-I to Safety-II, Resilient Health Care, , Surrey, UK: Ashgate, 3–17 (Ch 1 in Hollnagel et al 2013)

ADDITIONAL TOPICS

- Human factors field work methods in emerging settings
- Emerging topics in sensing, augmented reality, and virtual reality
- Technologies spanning personal and clinical computing
- Health and the Web
- Individual and team situation awareness
- Human-system integration

- Physical ergonomics issues and product design
- Cognitive task analysis
- Cultural ergonomics
- Health literacy and numeracy in the context of human factors engineering
- Automation and trust in sociotechnical systems
- Social networks and social network analysis
- HCI models for health information technology

CLASS ACTIVITIES AND ASSESSMENT METHODS:

1. **Weekly readings and quizzes.** These pair 1) human factors engineering scholarly works on a given topic with 2) either an application of human factors engineering to the topic or a publication describing a health informatics problem to which the human factors engineering topic can be applied. Each week, approximately 2–3 readings are selected by the instructor or Discussion Leader, as described below. Unannounced quizzes are administered to check whether the readings were understood.
2. **Mini lectures.** These are 10–20 min. presentations given by the instructor or invited expert, most often a faculty member from within or outside the university. Mini lectures introduce either 1) a novel topic, theory, or method from human factors engineering or related field or 2) a health informatics topic or problem to which human factors engineering can be applied. Mini lectures will include an interactive question and answer session with the presenter.
3. **In-class discussion and reflection papers.** These are facilitated discussions between students and instructor in which participants discuss the content of readings, connect readings to prior readings and class activities, apply the readings to health informatics topics, identify strengths and weaknesses of assigned readings and the theories or methods they describe, identify opportunities for answering additional research questions or solving problems, and engage other relevant concepts, findings, or works from various disciplines.

   Pass/fail written reflections are solicited from each student prior to class to enhance discussion.
4. **Student-led discussions.** Students self-assign a week to lead the in-class discussion. They may propose to supplement or replace assigned readings. The student or team of students is responsible for conducting a critical, constructive, and interactive discussion of the week's topic and readings. Discussion leaders review classmates' reflection papers prior to class and use these to facilitate discussion. Students leading discussions are expected to have given additional thought to the topic and will often benefit from completing additional readings. Discussion leaders are encouraged but not required to prepare supporting materials, including presentation slides, figures, tables, demonstrations, and summary documents.
5. **Work-in-progress (WIP) sessions**. Some weeks will be designated WIP sessions. For these, a student or team of students will present their work for feedback from classmates and course instructor(s). The presentation will be informative and professional, but need not describe a completed project. Completed projects may only be presented to obtain feedback on future directions, quality of the presentation (e.g., when preparing to present the work at a professional meeting), or preparation of publications. WIP presenters may assign supporting readings or provide a draft for feedback. Classmates will provide feedback and participate in an interactive Question and Answer session.
6. **Class papers**. Papers are designed to meet all learning objectives, but especially to apply human factors engineering to health informatics in a valid and thought-out manner. Students may collaborate on papers but are held to higher standards if choosing to do so. Students are

strongly encouraged to pick a paper format that will be useful outside of the course, such as a peer-reviewed publication, proposal, technical report, introduction to empirical paper, etc.

7. **Class projects**. Projects are developed over the course of the semester and should address at least one human factors engineering topic to be covered during the semester. Projects components will vary but are proposed by the student and approved by the instructor. Students must present their projects. Presentations are to be graded by instructor(s) and student peers. Teamwork is permitted.

Notes on advanced graduate courses

a. Students assume responsibility for the quality of weekly discussion. This means doing the readings, preparing your thoughts, and actively participating in discussion.
b. Ground rules and best practices for discussion:
    - Be respectful.
    - Listen!
    - Try not to cut off others; try to let others take turns; try to make eye contact with your fellow classmates.
    - Take notes – these will help you during and after the discussion.
    - Don't go off on long monologues. Let everyone talk.
    - Respond to one another – build on what one another is saying.
    - Either "jump in" or raise your hand to be heard. I will help "direct traffic" but all participants are responsible for
    - The strongest arguments are based on scientific evidence. Your experiences are also evidence, but of a different sort.
    - Be active. Think, ask, suggest, question, hypothesize, brainstorm, summarize, reflect, assert, challenge, and connect (to other work). If students are not participating, I may put them on the spot. If for some reason you are uncomfortable talking in class, please see me about alternative activities.
c. Except for the occasional 10–20 minute mini-lectures, I will not give lectures. Instead, I will facilitate discussion, provide interpretation of what I am hearing or try to connect the discussion with the relevant literature, and otherwise add to the discussion. I will ask questions or offer ideas as a way to provoke your thinking, sometimes playing "devil's advocate," but this should not be interpreted as "instructing" you how to think.
d. Attend to both strengths and weaknesses of the readings. Critiquing the methods, theories, and other aspects of a reading is of some value, but can distract us from learning from the readings.
e. When leading the discussion:
    - Strongly consider doing additional readings beyond what is assigned!
    - Provide a short introduction to the topic and readings (rule of thumb: less than 10 minutes). It is okay to use PowerPoint and handouts, but not required.
    - Have discussion questions ready. Plan to lead off discussion with a question or exercise.
    - Facilitate the subsequent discussion (I will help, too). Take notes to help you.
f. Both discussion leader(s) and non-leaders will write pre-class reflections and will post these to Canvas under the appropriate discussion thread. These will be graded and will be due by a pre-class deadline: **24 HOURS prior to class start time**.
g. Because you have to be present to discuss, you should minimize absences. Multiple absences will be penalized; if unable to attend class for some reason, please speak to me about make-up assignment options.

h. To avoid disrupting class discussion and to maximize class flow, show up on time. If tardiness becomes a problem, additional rules and penalties will be imposed.
i. After class, you may want to continue the discussion. You are free to do this in any way you like, including via Canvas discussion forums. Sometimes discussion will carry over from class to class and we will return to various discussion threads along our semester-long journey.
j. I will add other suggestions here as the semester progresses.

EXPECTATIONS, GUIDELINES, AND POLICIES

Statement on graduate-level coursework:

In accordance with IUPUI policies and expectations, a 3:1 workload is expected for three-credit, graduate-level courses. On-average, in addition to 3 hours in-class, this course should take approximately 12 - 15 hours per week. This workload will increase dramatically before assignments are due. This translates to a significant commitment of time each week. A graduate course is the equivalent of a rigorous, part-time job (15+ hours per week). Plan accordingly, pace yourself, and frontload your workflow."

Attendance:

A basic requirement of this course is that you will participate in all class meetings, whether online or face-to-face, and conscientiously complete all required course activities and assignments. Class attendance is required for classroom-based courses. It entails being present and attentive for the entire class period. Attendance shall be taken in every class. If you do not sign the attendance sheet while in class, you shall be marked absent. Signing the attendance sheet for another student is prohibited. The instructor is required to submit to the Registrar a record of student attendance, and action shall be taken if the record conveys a trend of absenteeism.

Only the following are acceptable excuses for absences: death in the immediate family (e.g. mother, father, spouse, child, or sibling), hospitalization or serious illness; jury duty; court ordered summons; religious holiday; university/school coordinated athletic or scholastic activities; an unanticipated event that would cause attendance to result in substantial hardship to one's self or immediate family. Absences must be explained with the submission of appropriate documentation to the satisfaction of the instructor, who will decide whether missed work may be made up. Absences that do not satisfy the above criteria are considered unexcused. To protect your privacy, doctor's excuses should exclude the nature of the condition and focus instead on how the condition impacts your attendance and academic performance.

If you miss class due to an excused or unexcused absence, you are still responsible for that week's work. However, because much of the work occurs during in-class discussion, students missing class must:

- Send the instructor a complete but concise set of notes and discussion points ahead of the class session (if the absence is anticipated) OR
- Send the instructor a 5-page discussion paper on the readings within 48 hours of the end of class (if the absence is unanticipated)

Missing class reduces your grade through the following grade reduction policy: You are allowed

two excused or unexcused absences. Each additional absence, unless excused, results in a 5% reduction in your final course grade. More than four absences result in an F in the course. Missing class may also reduce your grade by eliminating opportunities for class participation. For all absences, the student is responsible for all covered materials and assignments.

Incomplete:

The instructor may assign an Incomplete (I) grade only if at least 75% of the required coursework has been completed at passing quality and holding you to previously established time limits would result in unjust hardship to you. All unfinished work must be completed by the date set by the instructor. Left unchanged, an Incomplete automatically becomes an F after one year. http://registrar.iupui.edu/incomp.html

Deliverables:

You are responsible for completing each deliverable (e.g., assignment, quiz) by its deadline and submitting it by the specified method. Deadlines are outlined in the syllabus or in supplementary documents accessible through Canvas. Should you miss a class, you are still responsible for completing the deliverable and for finding out what was covered in class, including any new or modified deliverable. In fairness to the instructor and students who completed their work on time, a grade on a deliverable shall be reduced 10%, if it is submitted late and a further 10% for each 24-hour period it is submitted after the deadline.