Health Innovation Delivery

co+design lab for health equity

HLTH 485: Spring 2022
Emory University | Center for the Study of Human Health

Instructors: Rachel Hall-Clifford, PhD, MPH, MSc (*she/her*)
with Philip Wilson, MBA (*he/his*)

Office Hours:

Course Description (Atlas)
This course guides students through the process of planning the implementation and evaluation of a health innovation. Human-centered and collaborative innovation models guide development of a sustainable and ethical business plan.

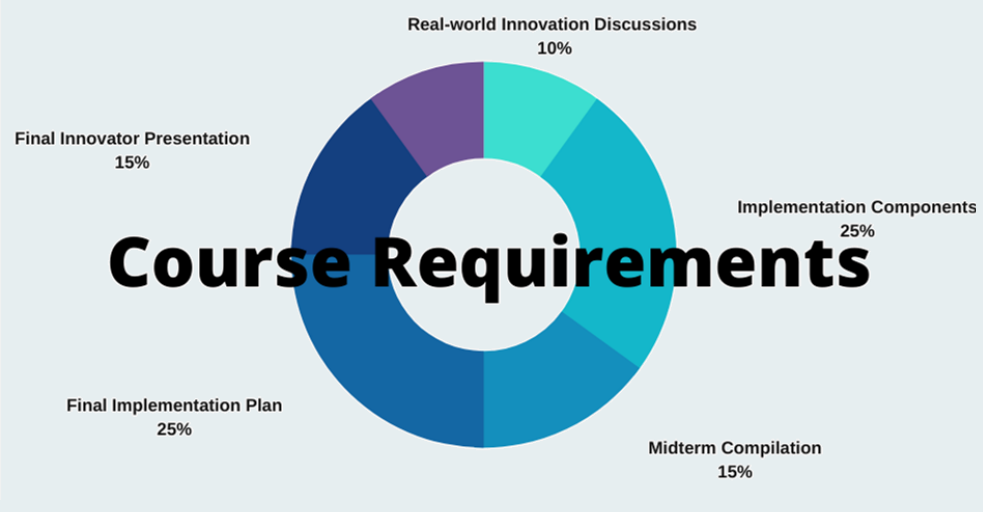
Course Description (Syllabus)
This course guides students through the process of planning the implementation and evaluation of a health innovation. Human-centered and collaborative innovation models guide development of a sustainable and ethical business plan. With the input of expert health innovators, student teams will work with an existing or prototyped health innovation to plan for its implementation, either in the U.S. or an international setting. They will begin with a technology landscape analysis and a needs and asset assessment to consider the potential benefits and challenges for their innovation within a specific context. Students will develop implementation plans, including a business plan, work plan, and protocols for monitoring and evaluation of implementation outcomes.

Student Learning Objectives
Upon completing this course, students will be able to:

1. Describe key principles of co-design
2. Articulate the political economy of health innovation, including power dynamics, regulatory bodies, and funding
3. Critically assess health innovation designs and potential impacts within local contexts, health systems, and sociopolitical systems
4. Apply essential components of public health intervention design to health innovations
5. Understand basic methods and designs of health innovation program evaluation

Course Competencies
Upon completing this course, students will have the skills to:

1. Perform a needs assessment and asset analysis for a specific health context
2. Conduct a technology landscape analysis
3. Build a basic health innovation implementation and evaluation plan
4. Develop a business model canvas
5. Engage with expert health innovators



Grading Scale

A = 100-93%
A- = 92.99-90%
B+ = 89.99-87%
B = 86.99-83%
B- = 82.99-80%
C+ = 79.99-77%
C = 76.99-73%
C- = 72.99-70%
D+ = 69.99-67%
D = 66.99-60%
F = <60

Course Requirements

Health Innovation Implementation and Evaluation is a workshop and discussion-based course. Health innovation research and implementation design is an iterative process – revisions and re-visiting steps in the process are expected. Please be open to feedback!

- *Attendance & Participation*: Active participation includes contributions to class discussion during class meetings.
- *Real-world innovations discussions:* Course modules often include a discussion forum for engagement with health innovators who will visit our class. A specific prompt and deadline is noted within the modules.
- *Implementation components*: Each student will submit weekly steps toward a comprehensive health innovation implementation plan, including:
    - Problem statement and logic model
    - Proximal objectives
    - Implementation design
    - Sampling strategy
    - Survey, interview, or focus group discussion instrument
    - Evaluation plan
    - Business model canvas
    - Ethical considerations
    - Sustainability plan
- *Midterm compilation*: Students will complete revisions to project components as a step toward building the final proposal.
- *Final presentation:* Each innovation team will present their implementation proposal during the final class meeting as though they are presenting to a funding agency.
- *Final implementation and evaluation plan:* This will be the culmination of revisions to individual implementation components to create a cohesive implementation and evaluation plan suitable for a health innovation organization to undertake.

Course Communications

All course information will be posted and announced through our Canvas site. Please make sure your notifications are set to receive announcements and updates. Feel free to contact Dr. Hall-Clifford or teaching assistants anytime; our goal is to respond to all messages within 24 hours during the work week. This course supports the principles of diversity and inclusion integral to building a safe community. All community members are responsible for maintaining respectful communication.

Course Policies and College Resources

Learning during the Pandemic

During this semester, the COVID-19 pandemic continues to be ongoing. This class is being remotely taught. My goal is for all students to receive a high-quality experience in our course.

If your situation changes regarding health, housing, or in any other regard with respect to your ability to participate in the class, please contact the appropriate Emory student support organization first and then me as soon as feasible. It is easier for me to address your needs if I know about them as soon as they arise. This does not mean I can successfully respond to every request for consideration, but I emphasize that my goal is to treat you all equitably and do what I can to help you succeed in this course.

Technology Tools

Our class materials will all be linked from our Canvas site. We will make use of Canvas features, including discussion boards and peer feedback to engage with our course content. Your Health Innovation Team will have a Google Folder, linked from the group page on Canvas, to facilitate collaboration on team challenges. Additional tools, such as Canva/PowerPoint for graphics and Canvas Studio/Zoom for videos will be used for specific team challenges. Detailed instructions and links to tutorials will be provided; feel free to be in touch with the course instructors with any questions.

Class Session Recording

Our class sessions on Zoom class sessions will all be audio visually recorded for students in the class to refer back to the information, and for enrolled students who are unable to attend live.

Lectures and other classroom presentations presented through video conferencing and other materials posted on Canvas are for the sole purpose of educating the students enrolled in the course. The release of such information (including but not limited to directly sharing, screen capturing, or recording content) is strictly prohibited, unless the instructor states otherwise. Doing so without the permission of the instructor will be considered an Honor Code violation and may also be a violation of other state and federal laws, such as the Copyright Act.

Grading

Late assignments will result in a drop of ½ letter-grade per day. This penalty will be applied at the instructor's discretion. *Discussion posts may not be submitted for credit after the deadline.*

Absences

The Center for the Study of Human Health Absence Policy indicates that missing 25% or more of class meetings will result in automatic failure of a course. Students absent from four (4) or more HLTH 289 meetings will receive a grade of "F" for the course. Absences include trips, appointments, interviews, conferences, illness, injury, as well as

simply not showing up. Religious observances, school business, and major illness will be considered; however, the student must discuss these individually with the instructor prior to the planned absence.

This semester Create to the pandemic, some students might be sick or will need to go into isolation or quarantine. If you are sick, understand that I will be flexible about attendance. Please make sure to email me so that we can discuss your individual circumstances. Please also contact me via email if you are in quarantine.

Absences from Examinations

A student who fails to take any required midterm or final examination at the scheduled time may not make up the examination without written permission from a dean in the Office for Undergraduate Education. Permission will be granted only for illness or other compelling reasons, such as participation in scheduled events off-campus as an official representative of the University. A student who takes any part of a final examination ordinarily will not be allowed to defer or retake that final. Deferred examinations must be taken during the student's next semester of residence by the last date for deferred examinations in the academic calendar or within twelve months if the student does not re-enroll in the college. Failure to take a deferred examination by the appropriate deadline will result automatically in the grade IF or IU.

Honor Code

The Honor Code applies to all work submitted for courses in Emory College. Students who violate the Honor Code may be subject to probation, failure of the course, suspension, permanent exclusion, or a combination of these and other sanctions, which may be part of their reportable record. The Honor Code may be reviewed online.

Office for Undergraduate Education

• The Office for Undergraduate Education (OUE) central office is located in White Hall 300
• Please visit or call 404.727.6069 with questions about academic affairs, concerns or policies.
• All Emory College of Arts and Sciences policies may be found in the College Catalog: http://catalog.college.emory.edu/

Important Spring 2021 Dates

xx: End of Add/Drop/Swap
xx: Degree application deadline
xx: Deadline for partial course withdrawals and grading basis (S/U or graded) changes
xx: One-time partial withdrawal deadline (First-years, transfer students, Oxford continuees)

Academic Advising

Students who have an academic concern or question about Emory College of Arts and Sciences policies or who seek supplemental advising to that of their faculty pre-major or major advisors can seek advising from an Office for Undergraduate Education (OUE) staff. Academic advisors are assigned alphabetically. If an academic advisor is unavailable and the situation is time-sensitive, students may email oue.advising@emory.edu to determine how we can connect you. To schedule, see OUE Academic Advisor.

Academic Support

There is a range of resources available to Emory undergraduates designed to enrich each student's educational experience and support their academic progress. A list of programs and appointment instructions is available here.

Office of Accessibility Services

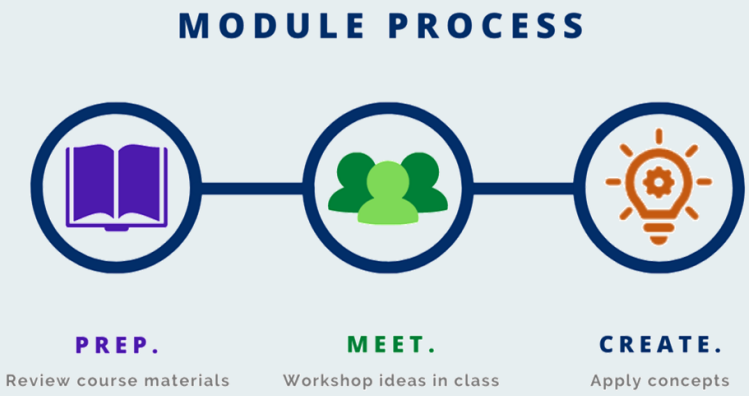
Office of Accessibility Services works with students who have disabilities to provide reasonable accommodations. To receive consideration for reasonable accommodations, you must contact OAS. It is the responsibility of the student to register with OAS. Accommodations are not retroactive and that disability accommodations are not provided until an accommodation letter has been processed. **Students registered with OAS who have a letter outlining their academic accommodations, are strongly encouraged to coordinate a meeting time with your professor that will be best for both to discuss a protocol to implement the accommodations as needed throughout the semester. This meeting should occur as early in the semester as possible.** Students must renew their accommodation letter every semester they attend classes. Contact the Office of Accessibility Services for more information at (404) 727-9877 or accessibility@emory.edu. Additional information is available at the OAS website.

Required Texts

IDEO. 2015. The Field Guide to Human-Centered Design – Design Kit.

Rowan, David. 2019. Non-Bullshit Innovation: Radical Ideas from the World's Smartest Minds.

Varkevisser, Corlien et al. 2003. Designing and conducting health system research projects. Geneva: WHO. Free download.



Course Schedule

*Please note that course schedule is subject to change.

	TOPIC AND DELIVERABLES	READING TFG = The Field Guide to Human-Centered Design NBS = Non-Bullshit Innovation HSR = Health Systems Research in Developing Countries
Module 1	**Health Innovation and Principles of Co-Design**	
Week of Jan. 10	Course introduction: Our co-design approach Health innovation through co-design	Design Thinking for Social Innovation - World Bank Special Report (Brown and Wyatt); The Dilemmas of Innovation (Christensen)
	Workshop: Topic description **Create: Annotated bibliography**	TFG (9-26); HSR (Module 4); P-ACT Co-Design Toolkit (MIT D-Lab; read intro., skim contents)
Module 2	**Political Economy of Innovation**	
Week of Jan. 17	Decolonizing innovation Guest lecture: John Banja (Emory U), Ethical Health Innovation	Ethical Considerations in AI (Safdar, Banja & Meltzer); Design Thinking and Global Labor Hierarchies (Irani)
	Workshop: Framing objectives through stakeholder and power dynamics analysis **Create: Project scope and specific objectives**	HSR (Module 6); TFG (27-37); NBI (1-17)
Module 3	**Innovation Landscape Analysis**	
Week of Jan. 24	Learning from the graveyard of pilots: What's out there? Guest lecture: Zhang Yale (CEO, Safe Heart USA), Iterative product design and development	TFG (75-122); Explore Safe Heart iOximeter; Health Entrepreneur Debates Going to Data's Dark Side
	Workshop: Technology and innovation landscape analysis **Create: Landscape analysis**	HSR (Module 5); NBI (17-42)
Module 4	**Needs Assessment and Asset Mapping**	
Week of Jan. 31	Identifying needs and harnessing assets	HSR (Module 3); "Using the Sen Capability Approach for Health Needs Assessment" (Ndomoto et al.)
	Workshop: logic modelling **Create: Project logic model**	NBI (43-60); "Five Reasons to Embrace Logic Models" Clip
Module 5	**Implementation Models**	
Week of Feb. 7	Study design and implementation science: When research meets the real world	"Building Organizational Capabilities" (Liedtka et al.); TFG (133-157)
	Workshop: Implementation strategy **Create: Implementation design and strategy**	HSR (Modules 8 & 9); NBI (148-167)
Module 6	**Data Collection Methods**	
Week of Feb. 14	Right sizing implementation: Sampling strategies and instrument design	HSR (Modules 10-11); Download EpiInfo
	Workshop: Instrument design **Create: Pilot sampling strategy and sample data collection instrument**	NBI (187-205); FHI, Qualitative Research Methods: A Data Collector's Field Guide
Module 7	**Socially Responsible Business Models**	
Week of Feb. 21	Social entrepreneurship and innovating for good: business models (Mr. Wilson)	"Identifying Sustainable business Models through Sustainable Value Creation" (Aagaard);

	Case study: EcoFiltro (Mr. Wilson)	"Conception of Community-based Entrepreneurship – Ecofiltro" (Figueredo et al.)
	Workshop: Business model canvas (Mr. Wilson) **Create: Business model canvas**	TFG (123-128); NBI (309-330)
Module 8	**Revisions: Meet the health innovators**	
Week of Feb. 28	Team meetings with health innovation mentors	
	Workshop: Midterm compilation **Create: Midterm compilation**	
Week of March 7	**Spring Break**	
Module 9	**Evaluation Design – Outcome and Impact Evaluation**	
Week of March 14	Measuring impacts	HSR (Module 12 & 13); GA Evaluation Resource Center Modules (2a-c & 3c-d)
	Workshop: Outcome and Impact Evaluation **Create: Evaluation Plan I**	NBI (103-125)
Module 10	**Evaluation Design – Process Evaluation**	
Week of March 21	Project accountability and process evaluation	HSR (Module 17); Saunders et al. – "Process Evaluation"
	Workshop: Process Evaluation **Create: Evaluation Plan II**	NBI (285-308)
Module 11	**Implementation Ethics**	
Week of March 28	Protecting human subjects and ethical considerations Guest lecture: Gari Clifford (Emory U) – Regulatory frameworks and FDA approval	FDA Device Regulation (skim); "E-health in LMICs" – Clifford
	Workshop: Ethical considerations **Create: Ethical challenges and limitations**	NBI (331-345)
Module 12	**Sustainability and Scalability Planning**	
Week of April 4	Planning for success Guest lecture: Dave Albert (CMO, Alivecor) – Bringing a product into the innovation marketplace	Davis et al. – "Knowledge Translation;" Explore Kardia on AliveCor; Watch AliveCor Overview
	Workshop: Sustainability plan (Mr. Wilson) **Create: Sustainability plan**	TFG (147-157); "Strategies for Learning from Failure" (Edmondson)
Module 13	**Implementation Logistics**	
Week of April 11	Practicalities of implementation: timeline, staffing, and budgets	TFG (137-146); HSR (Modules 15 and 16)
	Workshop: Logistics plan **Create: Logistics plan**	NBI (243-261);
Module 14	**Final Proposal Presentations**	
Week of April 18	**Team presentations**	
	CREATE: Peer feedback	

Health innovation mentors for team feedback session (examples):

- David Baran, Bitmec
- Gari Clifford, safe+natal

- Jose Marquez Gomez, MIT Little Devices Lab
- Eric Manders, CDC Global Health Informatics
- Philip Wilson, EcoFiltro
- Yale Zhang, Safe Heart USA