ENGG4950W –

Global Health Project Implementation

(3 Credits) 2025-2026 Spring

Course Details

Course instructor: Dr. H I Malinda M ABEYNAYAKE

No. of Credits: 3

Course Description:

This course offers a unique opportunity for students to engage in the real-world implementation of user-centered solutions for global health challenges. Working in collaboration with local medical professionals and community partners, students will address critical health issues through the development of sustainable, affordable, and context-specific technological solutions.

Throughout the course, students will design and prototype functional systems that meet local healthcare needs. The course emphasizes interdisciplinary teamwork, human-centered design principles, and impact-driven innovation. Students' solutions will be evaluated by faculty for functionality, feasibility, and user relevance. A final report with personal reflections will be submitted at the end of the course.

Design outcomes will be showcased at the **SIGHT Final Roadshow** at **HKUST**, and selected projects will proceed to real-world implementation at partner sites early in the summer.

Note:

- **Instructor approval is required for enrollment.**
- **This is a letter-graded course.**

Course ILOs / Objectives

- Develop a passion for lifelong learning by exploring global health challenges, broadening their perspectives on social issues, and fostering an appreciation for arts, culture, and technological advancements.
- Acquire professional and technical knowledge in global health while understanding the ethical, responsible, and compassionate considerations in designing healthcare solutions.

- Apply user-centered design principles to develop a design solution that meets the needs of diverse stakeholders, ensuring accessibility and usability.
- Demonstrate project implementation skills by conducting stakeholder analyses, facilitating initial training sessions, and integrating feedback to refine healthcare technology solutions.

Class time: 3 hours per week, based on the individual's/ team's availability.

Course Outline

- The schedule may be subject to minor changes depending on the circumstances.
- The arrangements for different teams may vary slightly based on project nature.

Week 1	• Kickstart Meeting/Introduction to the course • Confirm team time • Skills assessment • Finalize Project Objectives during the 1st Team Meeting
Week 2	• Design Thinking Workshop • Prepare for Literature Review
Week 3	• Extensive Literature Review on existing solutions/technologies & global market:
Week 4	• Feedback session with project partner and finalize project objectives
Week 5	• Project update session with teaching team.
Week 6	• 1st Project Evaluation
Week 7	• Project development
Week 8	• Share the partner about the updates
Week 9	• 2nd Project Evaluation
Week 10	• Project development

Week 11	• Submit project implementation plan
Week 12	• Final Project demonstration
Week 13	• Submission of Final Documentation & Personal Reflections • Course debrief

Assessment scheme

Assessment components	Percentage
Literature Review: Presentation on existing solutions & global market	15%
1st Project Evaluation	15%
2nd Project Evaluation	15%
Final Project demonstration	25%
Final Documentation & Personal Reflections	20%
Communication with partner	10%