MIH2202 Course Outline

Faculty/School: Yong Loo Lin School of Medicine
Department/Programme: Department of Microbiology & Immunology / Minor in Integrative Health

Course Details
Course code: MIH2202
Course title: The Landscape of Health: Evolving Spaces and Technology
Credits: 4 units/MCs
Max class size: 50

Course Description
This course will introduce the critical contributions of design and environment, and technological applications for healthcare innovations. Students will engage in various projects to critically identify gaps and solutions for real-life healthcare related issues. Key concepts and application exercises are arranged into topics including, (1) the role and application of design and technology in health, (2) role of environmental and human microbes in health, and the (3) changes in health during growth and aging. At the end of this course, students will be able to communicate and integrate information in an interdisciplinary manner to provide healthcare solutions for the community.

Eligibility and Requirements
Pre-Requisites: MIH1101 or MIH1102 or GEC1011/GEH1043 or LSM3228 or LSM3232

Course Learning Outcomes
1. Explain the role of (a) design/environment and (b) application of technologies on health and wellbeing.
2. Demonstrate the role of physical space and technology on health through interpretation and analysis of relevant data, and communication via a short report/presentation.
3. Propose how cutting-edge advances in respective disciplines influence health, via augmentation of physical spaces or use of technology, and formulate strategies to leverage on these advances to reap health benefits in the local/regional context.
4. Identify gaps and propose solutions to overcome challenges in built and technological design to support health in the future.
5. Demonstrate the ability to work comfortably and effectively in groups with other members from different backgrounds, and to acknowledge the value and potential of other disciplines in complement their own.

Course Schedule
Weeks 1-3: Understanding the foundational relationship between space, design and health. How are our homes, neighborhoods and hospitals designed to promote or limit health? What technologies have been incorporated which impact our wellbeing?

Weeks 4-6: Microbes: connecting us to our planet. How is the health of our planet, and the health of animals directly impacting our health? Is our obsession with being ‘clean’ doing us more harm than good? How are microbes able to impact so many facets of our healthy development?

Weeks 7-10: Designed for life, from cradle to grave (including CA on week 9). As we mature from infants to our golden years, how do our needs change and what design and technologies augment our lifestyles?

Weeks 10-13: Real world applications of design, technology and health integration (including student presentations on week 12). As we conclude the course, how do we envision the future of health in

Singapore? What concrete steps can be implemented to improving health, or to mitigate risks associated with design and technology? What new challenges and opportunities are likely to arise?

Modes of Teaching

Includes lectures, group discussions, dialogues, case-based learning, and presentations. During group discussions, students will actively share their opinions and discuss the subject matter in relation to the various aspects of health in an interdisciplinary manner. Similarly for case-based learning, cases based on real life experiences and problems faced by individuals from different walks of the society will be used. This will provide a framework for students from different disciplines to work together for an in-depth examination of each case. They will be tasked to identify problems and proposed realistic solutions that incorporate the use of technology & environmental design to improve health.

Workload (weekly): Lecture (3hr), Tutorial (1hr), Fieldwork, Projects and Assignments (2hr), Preparatory Work (4hr)

Assessments (100% CA)

10%: Pre-Assignment Presentation
30%: CA
35%: Assignment Presentation
15%: Teammates Evaluation
10%: Reflection
No Final Exam

Lecturers

Dr Ch'ng Jun Hong (Dept. of Immunology & Microbiology, NUSmed) – Course Coordinator
Ms Chan Chuu Ling (Dept. of Immunology & Microbiology, NUSmed)
Dr Png Chin Wen (Dept. of Immunology & Microbiology, NUSmed)
Assoc. Prof Ruzica Bozovic Stamenovic (Dept. of Architecture, CDE)
Assoc. Prof Zdravko Trivic (Dept. of Architecture, CDE)
Dr Boyd Anderson (Dept. of Computer Science, SOC)

TIMETABLE FOR SEMESTER I, 2025/2026

MIH2202 – The Landscape of Health: Evolving Spaces and Technology

Course Coordinator: Ch'ng Jun Hong

Email : micchn@nus.edu.sg :: Tel: 6516-3789

Lectures : Tuesdays – 10am to 1pm Venue : MD4 level 2 Seminar Room

Tutorials : Tuesdays – 1-2pm or 2-3pm (either session) Venue : Online

		LECTURE	TUTORIAL
WK	**MTH**	**Tuesday 10am-1pm**	**Tuesday 1-2pm|2-3pm**
1.	**Aug**	**12.** L0: Course introduction and Pre-Assignment Briefing (CJH, CCL, PCW)	**12.** Tutorial#1 (CJH, CCL)
2.	Aug	**19.** Group Pre-Assignment Presentations (RBA, RBS, TZ, CJH, CCL, PCW)	**19.** Tutorial#2 (CJH, CCL)
3.		**26.** L1: Understanding the foundational relationship between Design and Health (RBS)	**26.** Tutorial#3 (CJH CCL)
4.	**Sept**	**2.** L2: One Planet, One Health (CCL)	**2.** Tutorial#4 (CJH, CCL)
5.		**9.** L3: Defence Against the Dark Arts (RBA)	**9.** Tutorial#5 (CJH, CCL)
6.		**16.** L4: Microbes - In Sickness (CJH)	**16.** Tutorial#6 (CJH, CCL)
		RECESS WEEK	
7.		**30.** CA + Review (CJH, CCL)	**30.** Tutorial#7 (CJH, CCL)
8.	**Oct**	**7.** L5: Designed to Heal (TZ)	**7.** Tutorial#8 (CJH, CCL)
9.		**14.** Field Trip (CJH, CCL)	**14.** Tutorial#9 (CJH, CCL)
10.		**21.** NUS Well Being Day	
11.		**28.** L6: Immunity: from Birth to Death (PCW)	**28.** Tutorial#10 (CJH, CCL)
12.	**Nov**	**4.** Group Assignment Presentations (RBA, RBS, TZ, CJH, CCL, PCW)	**4.** Tutorial#11 (CJH, CCL)
13.		**11.** L8: Course Conclusion (CJH, CCL, PCW)	**11.** Tutorial#12 (CJH, CCL)
		READING WEEK: 15/11 – 21/11	
		EXAMINATION WEEK: 22/11 – 06/12	
		VACATION: 7/12 – 11/01/2026	

Mode of Assessment:

10%: Pre-Assignment Presentation (19Aug)

30%: CA (30Sep)

35%: Assignment Presentation (4Nov)

15%: Teammates Evaluation (9Nov)

10%: Individual Course Reflection (14Nov)