



**THE-GLOW**

Transdisciplinary Higher Education  
for Global Wellbeing

# Transdisciplinary Approach to Health and Wellbeing

June 2024



Co-funded by  
the European Union

## Transdisciplinary Approach to Health and Wellbeing

<b>Name of the Institute of Higher Education</b>	Thammasat University
<b>Campus/Faculty/Department</b>	Rangsit Campus - Faculty of Public Health

<b>1</b>	<b>Categories-1: General information</b>	
1.1	Course code & title	GH669 Transdisciplinary Approach to Health and Well-being
1.2	Course credit & characteristic (lecture-practice)	2 credits
1.3	Course type [Identify program(s) that use this course]	Elective (MPH in Global Health)
1.4a	Course coordinator	Ajarn Fabio Saini
1.4b	Instructors (in alphabetical order)	Dr. Joyee S. Chatterjee (JSC) Dr. Chris Daeyun Kim (CDK) Dr. Li Liang (LL) Ajarn Fabio Saini (FB) Invited Guests (panel speakers)
1.5	Academic year/semester/year of study	3/2023
1.6	Pre-requisites (if any)	None
1.7	Co-requisites (if any)	None
1.8	Place of study (on-campus/off-campus)	Room #4023, Piyachart-2 Building, Thammasat University (Rangsit Campus)  All classes are in-person, though some of the guest speakers participate through video conference.
1.9	Date of last update	28 June 2024
<b>2</b>	<b>Category-2: Purpose &amp; objectives</b>	
2.1	Purpose of the course	The purpose of this course is to enable students to explore and understand TD perspectives, analyze complex health issues using diverse information, and apply inclusive, transformative approaches to create sustainable solutions for “Good health and well-being” and contribute to realizing SDG 3. The course uses active learning methodologies to enable students to contribute their existing knowledge and skills and build their critical thinking abilities. This approach challenges students to question their assumptions, interrogate their attitudes and values, and integrate and apply new knowledge and skills.
2.2	Objectives of course development (or revision)	1. Students are aware of and can explain what a transdisciplinary perspective on health and well-being means. 2. Students can unpack complex health and well-being



		<p>problems from a TD perspective using different sources and types of information.</p> <p>3. Students can apply transformative, and inclusive approaches and a TD perspective to health and well-being problems for sustainable development.</p> <p>4. Students can design health and well-being TD interventions that are transformative and inclusive and contribute to sustainable development.</p>
<b>3</b>	<b>Category -3: Course description</b>	
3.1	Course description	<p>The United Nations Framework Convention on Climate Change (UNFCCC) defines climate change as the change that can be attributed <i>“directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods.”</i><sup>1</sup> Over the last three decades, we have come to recognize that climate change is a result of social determinants, notably, human activities that lead to rising greenhouse gas emissions; at the same time, climate change is also increasingly functioning as a social determinant of health (SDH) in its own capacity due to its impacts on the complex web of processes that make life possible and sustainable on our planet. This understanding has led the World Health Organization (WHO) to affirm that <i>“climate change presents a fundamental threat to human health. It affects the physical environment as well as all aspects of both natural and human systems – including social and economic conditions and the functioning of health systems. It is therefore a threat multiplier, undermining and potentially reversing decades of health progress.”</i><sup>2</sup> Implicit in the WHO’s analysis is the understanding of health not just as the absence of disease and infirmity, but as a broader state of wellbeing, which is <i>“a resource for daily life and is determined by social, economic and environmental conditions.”</i><sup>3</sup> Hence, <i>“climate change is undermining many of the social determinants for good health, such as livelihoods, equality and access to health care and social support structures.”</i><sup>4</sup> Due to differential exposure, sensitivity and adaptive capacity of individuals and groups – i.e. their social vulnerability - the health and social impacts of climate change are not experienced in</p>

<sup>1</sup> United Nations Framework Convention on Climate Change (1992, page 3)

<https://unfccc.int/resource/docs/convkp/conveng.pdf>

<sup>2</sup> The World Health Organization (2023). Climate Change. Overview. <https://www.who.int/news-room/fact-sheets/detail/climate-change-and-health>

<sup>3</sup> World Health Organization. Promoting Wellbeing. <https://www.who.int/activities/promoting-well-being> (Accessed 18 March 2024)

<sup>4</sup> The World Health Organization (2023). Climate Change. Overview. <https://www.who.int/news-room/fact-sheets/detail/climate-change-and-health>



		<p>the same ways by all people and by all social and ecological systems. But social vulnerability to climate change is also influenced by the response at global, regional and national levels. The 2024 report by the Intergovernmental Panel on Climate Change (IPCC) found that the response to climate change is uneven around the world with significant gaps between action taken and what is needed to deal with the increasing risks, which are mostly experienced by low-income populations. Climate change compounds environmental degradation, growing urbanization, social inequalities, and losses and damages from extreme climate events and a pandemic, jeopardizing current global strategies for sustainable development, namely Agenda 2030 and the Sustainable Development Goals (SDGs).<sup>5</sup> Similarly, the WHO has pointed out that climate change is disproportionately impacting those most socially vulnerable, such as children and the elderly, socially marginalized racial/ethnic groups, poverty-stricken communities, displaced persons, stigmatized LGBTIQ+ persons and communities, as well as persons with chronic and/or underlying health conditions who already face barriers to access health care and social protection.<sup>6</sup> As urged by the IPCC, there is a short window of opportunity still available to act, but action must be multisectoral and transdisciplinary. Hence, the 2024 IPCC report <i>“recognizes the interdependence of climate, biodiversity and people and integrates natural, social and economic sciences more strongly than earlier IPCC assessments.”</i><sup>7</sup></p> <p>Building on these considerations, this course revolves around a case study on dengue and climate change to examine and apply transdisciplinary perspectives to unpack social, environmental and public health factors that make dengue a complex health, wellbeing, and development problem. Current global data on dengue helps to illuminate the relevance of the course case study. Over the last fifty years, globally the disease burden of dengue has been steadily rising due to many factors, such as global trade and travel, rapid urbanization, and population growth, among others. From 2000 to 2019, worldwide cases rose from 500 000 to 5.2 million. Some</p>
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<sup>5</sup> Intergovernmental Panel on Climate Change (2024). Climate change: a threat to human wellbeing and health of the planet. Taking action now can secure our future. <https://www.ipcc.ch/2022/02/28/pr-wgii-ar6/>

<sup>6</sup> The World Health Organization (2023). Climate Change. Overview. <https://www.who.int/news-room/fact-sheets/detail/climate-change-and-health>

<sup>7</sup> Intergovernmental Panel on Climate Change (2024). Climate change: a threat to human wellbeing and health of the planet. Taking action now can secure our future. <https://www.ipcc.ch/2022/02/28/pr-wgii-ar6/>



		estimates place the true global burden in the region of 400 million infections each year. <sup>8</sup> Almost half of the world’s population, about 4 billion people, live in areas at risk of dengue. <sup>9</sup> The course case study will provide a practical context for critical discussions through active learning methodologies and panels of stakeholders from different sectors working on dengue in Thailand and in Southeast Asia with the aim to identify and apply inclusive and participatory approaches to design a transdisciplinary intervention contributing to transformative and sustainable solutions.
3.2	No. hours/semester (10 sessions of 3.5 hours each not including final take-home exam)	35 hours over a period of two weeks.
3.3	No. hours/week for student consultation	This is at the discretion of the students. The course instructors make themselves available to respond via email to questions and draft assignments and it is left to the students’ initiative to avail themselves of this support.
<b>4</b>	<b>Category-4: Development of learning outcomes</b>	
<b>4.1</b>	<b>Knowledge</b>	
4.1.1	TD perspectives on health and well being	<ul style="list-style-type: none"> <li>- Exploring and understanding different constructs of health and wellbeing and their relevance to the SDGs, particularly SDG 3, and sustainable development.</li> <li>- Exploring and understanding the meaning of transdisciplinary perspectives to health and wellbeing, and implications for addressing complex health problems.</li> </ul>
4.1.2	Social Determinants of Health (SDH)	<ul style="list-style-type: none"> <li>- Exploring and understanding current perspectives on SDH in relation to constructs of health and wellbeing and implications for the SDGs, particularly SDG 3, equity, and sustainable development.</li> <li>- Understanding the relevance of the SDH to unpack complex health and wellbeing problems – such as Dengue - as social justice and development issues in the context of the SDGs, particularly SDG3, and sustainable development.</li> <li>- Understanding climate change as a SDH affecting complex health and wellbeing issues – such as Dengue - through interconnections with other SDH, structural and</li> </ul>

<sup>8</sup> Talha Burki. Risk of dengue spread is high globally, says WHO. *The Lancet Infectious Diseases* Volume 24, Issue 3, E161-E162, March 2024 [https://www.thelancet.com/journals/laninf/article/PIIS1473-3099\(24\)00095-1/abstract#:~:text=Dengue%20has%20been%20trending%20upwards%20at%20least%20since,the%20region%20of%20400%20million%20infections%20each%20year.](https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(24)00095-1/abstract#:~:text=Dengue%20has%20been%20trending%20upwards%20at%20least%20since,the%20region%20of%20400%20million%20infections%20each%20year.)

<sup>9</sup> **Centers for Disease Control and Prevention (2023). About Dengue: What You Need to Know** <https://www.cdc.gov/dengue/about/index.html>



		intermediary.
4.1.3	Socially inclusive and transformative approaches to health interventions	<ul style="list-style-type: none"> <li>- Exploring and understanding the meaning of “health interventions”.</li> <li>- Exploring and understanding socially inclusive and transformative approaches to health interventions contributing to the SDGs, particularly SDG 3, and sustainable development.</li> <li>- Exploring and understanding a continuum of health interventions from harmful to transformative, and implications for designing interventions with the meaningful participation of those most affected by the problem and with the intentionality to leave no one behind, and implications for contributing to the SDGs, particularly SDG 3, and sustainable development.</li> </ul>
4.1.4	Technical knowledge about Dengue fever	<ul style="list-style-type: none"> <li>- Understanding the basics of Dengue fever – what it is, current global/regional/national magnitude of the problem, vectors and modes of transmission, social and environmental factors such as climate change contributing to Dengue outbreaks and current trends, current relevant global and national strategies, success and limitations of current ways of preventing and responding to the problem e.g. Integrated Vector Management (IVM), diagnosis and treatment, barriers to prevention and treatment especially for socially marginalized population groups, the role of community engagement, and lessons learned.</li> </ul>
<b>4.2</b>	<b>Skill</b>	
4.2.1	Identification of Data and Information	<ul style="list-style-type: none"> <li>- Being able to identify and use relevant data from a variety of sources to inform the design of TD interventions to help address complex health and wellbeing problems such as Dengue and contribute to the SDGs, particularly SDG 3, and sustainable development.</li> </ul>
4.2.2	Stakeholder Analysis	<ul style="list-style-type: none"> <li>- Being able to conduct and apply stakeholders’ analyses to realize a TD perspective that is socially inclusive, equitable and relevant to the felt needs of those most affected by the problem/s, addresses data gaps (quantitative and qualitative), and demonstrates intentionality to leave no one behind.</li> <li>- Being able to critically reflect and use the lessons emerging from the experiences of stakeholders working in Dengue prevention and control interventions in Thailand and regionally, and apply these critical reflections and lessons to design Dengue prevention and control interventions that support capacity building of</li> </ul>



		key stakeholders for ownership and sustainability, and promote partnerships and synergies among relevant stakeholders across sectors for solutions that are transformative beyond immediate quick fixes and contribute to the SDGs, particularly SDG3, and sustainable development.
4.2.3	Critical Thinking	<ul style="list-style-type: none"> <li>- Being able to critically examine lessons from current Dengue prevention and control interventions to identify the roles and impacts of social determinants creating differential vulnerability and risk and systemic disadvantage and exclusion, and suggest possible ways forward.</li> <li>- Being able to critically integrate lessons from current Dengue prevention and control interventions to design innovative responses that are socially inclusive, responsive to environmental concerns and environmentally sustainable in the era of climate change               <ul style="list-style-type: none"> <li>- especially to transform environmentally harmful approaches/practices.</li> </ul> </li> <li>- Being able to examine, elaborate, and integrate lessons from current Dengue prevention and control interventions to strengthen the role of public health for transformative change beyond quick fixes, including TD partnerships and synergies that recognize and realize meaningful, inclusive, and sustainable community engagement.</li> </ul>
4.2.4	Communication Skills	<ul style="list-style-type: none"> <li>- Being able to engage effectively with a range of stakeholders, including other students, the course instructors, and the panel speakers.</li> <li>- Being able to use technical terminology as well as ability to translate it and make it accessible to different audiences, as necessary and appropriate.</li> <li>- Being able to use effectively different media to present and explain ideas and to engage stakeholders in meaningful participation.</li> </ul>
<b>4.3</b>	<b>Character</b>	
4.3.1	Valuing Diversity	<ul style="list-style-type: none"> <li>- Expressing one's feelings, preferences, needs, and opinions in a way that is neither threatening nor punishing to another person.</li> </ul>
4.3.2	Creating a Safe Environment for Open discussion	<ul style="list-style-type: none"> <li>- Clarifying expectations, roles and responsibilities as team members.</li> <li>- Clarifying values and attitudes for taking responsibility of own learning.</li> <li>- Creating a safe environment for open discussion.</li> <li>- Clarifying distinction between criticism and feedback, and how to provide constructive feedback; openness to</li> </ul>



		develop, communicate, and respond to/incorporate new or different ideas.
4.3.3		
<b>4.4</b>	<b>Ethic</b>	
4.4.1	Accountability Respect Representation Equality	<p>Ethical skills are gained from the integration of public health-global health related ethics with a human rights-based approach to health and development, as well as Gender-Equality-Diversity-Inclusion (GEDI) frameworks such as those exemplified in a continuum of interventions from harmful to transformative. These approaches and frameworks are utilized in the course’s multicultural and TD learning environment and position ethical skills as integral to responsible, inclusive, and accountable public health leadership, which is what we hope our students will bring into their professional lives. For this purpose, the course uses values clarification as an educational methodology that includes personal, sociocultural, and intercultural processes of reflective thinking and reflexive practice. This builds students’ ability to identify their own assumptions or values that influence their perceptions of issues, as well as their choices, actions, and reactions in a variety of interpersonal and social contexts beyond their original or main field of expertise. Most importantly, this process enables students to interrogate what they learn, the paradigms that may influence how disciplines construct and respond to complex health and wellbeing issues - including power dynamics that may promote or hinder inclusion and transformative and sustainable solutions.</p> <p>Students define codes of conduct for their teams to realize a safe environment that is conducive to valuing diversity and upholding ethical skills.</p>
4.4.2		
4.4.3		
<b>5</b>	<b>Category-5: Lesson &amp; evaluation plan</b>	
5.1	Lesson plan (see below table)	(see below table)
5.2	Evaluation plan (methods to evaluate achievements relevant to course mapping)	<ul style="list-style-type: none"> <li>• Group Assignment &amp; Class Presentation – 45 % [Graded on (A) Content: quality and depth of research, strength of analysis, use of analytical tools and understanding of concepts (B) Presentation: verbal, presentation &amp; reporting skills]</li> <li>• Final exam - 40% [Take Home Exam]</li> <li>• Class Participation - 15% (graded on quality of participation throughout the semester including in</li> </ul>





		<p>class activities – coming to class prepared, keeping up with the class readings &amp; timelines, being involved in all class/group activities and assigned tasks – in other words contributing in a consistent, well-informed and thoughtful manner to class discussion and group project which shows engagement with the class materials and peers and enhances the quality of the class for everyone).</p>
<b>6</b>	<b>Category-6: Learning resources &amp; materials</b>	
6.1	Required main texts/textbook	No designated textbook, but class notes and handouts are provided. Also, for each class, required and optional readings materials are provided.
6.2	Required readings (publications/web-sites/etc.)	
6.2.1	Dengue prevention and control interventions	<ul style="list-style-type: none"> <li>• WHO (2020) Multisectoral approach to the prevention and control of vector-borne disease: A conceptual framework. <a href="https://iris.who.int/bitstream/handle/10665/331861/9789240004788-eng.pdf?sequence=1&amp;isAllowed=y">https://iris.who.int/bitstream/handle/10665/331861/9789240004788-eng.pdf?sequence=1&amp;isAllowed=y</a></li> <li>• The Lancet 2024) Brazil to start widespread dengue vaccinations. <a href="https://www.thelancet.com/action/showPdf?pii=S0140-6736%2824%2900046-1">https://www.thelancet.com/action/showPdf?pii=S0140-6736%2824%2900046-1</a></li> <li>• Margaret C. Hardy and Dani J. Barrington (2017) A Transdisciplinary Approach to Managing Emerging and Resurging Mosquito-Borne Diseases in the Western Pacific Region. <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6082050/pdf/tropicalmed-02-00001.pdf">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6082050/pdf/tropicalmed-02-00001.pdf</a></li> <li>• Wawan Kurniawan et al (2019). The effectiveness of the One Health SMART approach on dengue vector control in Majalengka, Indonesia</li> <li>• WHO (2017) Global vector control response 2017-2030. <a href="https://www.emerald.com/insight/content/doi/10.1108/JHR-07-2019-0162/full/pdf?title=the-effectiveness-of-the-one-health-smart-approach-on-dengue-vector-control-in-majalengka-indonesia">https://www.emerald.com/insight/content/doi/10.1108/JHR-07-2019-0162/full/pdf?title=the-effectiveness-of-the-one-health-smart-approach-on-dengue-vector-control-in-majalengka-indonesia</a></li> <li>• Thomas J. Hladisha et.al (2019) Designing effective control of dengue with combined interventions. <a href="https://www.pnas.org/doi/epdf/10.1073/pnas.1903496117">https://www.pnas.org/doi/epdf/10.1073/pnas.1903496117</a></li> <li>• Ahmad Firdhaus Arham et al. (2012) Participatory: Stakeholder’s Engagement Toward Dengue Control Techniques in Klang Valley, Malaysia. <a href="https://www.researchgate.net/publication/348694795_Participatory_Stakeholder's_Engagement_Toward_De">https://www.researchgate.net/publication/348694795_Participatory_Stakeholder's_Engagement_Toward_De</a></li> </ul>



		<p><a href="#">ngue Control Techniques in Klang Valley Malaysia/lin/64459bcd749e4340e3191db/download</a></p> <ul style="list-style-type: none"><li>• Jubayer Hossain et al. (2024) Community engagement and social participation in dengue prevention: A cross-sectional study in Dhaka City. <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10987789/pdf/HSR2-7-e2022.pdf">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10987789/pdf/HSR2-7-e2022.pdf</a></li></ul>
6.2.2	SDH, GEDI, and Dengue	<ul style="list-style-type: none"><li>• <a href="#">Kate Mulligan et al. (2015) Is Dengue a disease of poverty? A systematic review. Pathogens and Global Health Feb, 109(1): 10-18</a> <a href="https://pubmed.ncbi.nlm.nih.gov/25546339/">https://pubmed.ncbi.nlm.nih.gov/25546339/</a></li><li>• <a href="#">Siddikur Rahman et al. Ecological, Social, and Other Environmental Determinants of Dengue Vector Abundance in Urban and Rural Areas of Northeastern Thailand. International Journal of Environmental Research and Public Health 2021 Jun; 18(11): 5971.</a> <a href="https://www.mdpi.com/1660-4601/18/11/5971">https://www.mdpi.com/1660-4601/18/11/5971</a></li><li>• Joshua M. Wong et al. Dengue: A Growing Problem With New Interventions. <i>Pediatrics</i> (2022) 149 (6): e2021055522. <a href="https://doi.org/10.1542/peds.2021-055522">https://doi.org/10.1542/peds.2021-055522</a></li><li>• <a href="#">Natalie J. Sabik</a> The Intersectionality Toolbox: A Resource for Teaching and Applying an Intersectional Lens in Public Health. <i>Frontiers in Public Health</i> 2021; 9: 772301. <a href="https://pubmed.ncbi.nlm.nih.gov/34926389/">https://pubmed.ncbi.nlm.nih.gov/34926389/</a></li><li>• <a href="#">Damião da Conceição Araújo et al. Determining the association between dengue and social inequality factors in north-eastern Brazil: A spatial modelling. Geospatial Health 2020; 15:854</a> <a href="https://pubmed.ncbi.nlm.nih.gov/32575962/">https://pubmed.ncbi.nlm.nih.gov/32575962/</a></li><li>• <a href="#">Maitreyi Bordia Das et al. (2017) SOCIAL INCLUSION: WHAT DOES IT MEAN FOR HEALTH POLICY AND PRACTICE?</a> <a href="https://openknowledge.worldbank.org/server/api/core/bitstreams/6a671205-c5fd-504d-a31c-c51f843a97db/content">https://openknowledge.worldbank.org/server/api/core/bitstreams/6a671205-c5fd-504d-a31c-c51f843a97db/content</a></li><li>• <a href="#">Ari Whiteman et al. (2020) Do socioeconomic factors drive Aedes mosquito vectors and their arboviral diseases? A systematic review of dengue, chikungunya, yellow fever, and Zika Virus. One Health 11 (2020) 100188</a> <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7772681/pdf/main.pdf">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7772681/pdf/main.pdf</a></li><li>• <a href="#">Cathy Mungall-Baldwin. Women’s participation in the prevention and control of dengue using environmental methods in the global south: a qualitative meta-synthesis. International Journal for Equity in Health (2022) 21:140</a></li></ul>



		<a href="https://doi.org/10.1186/s12939-022-01726-0">https://doi.org/10.1186/s12939-022-01726-0</a>
6.2.3	Climate change, health, and Dengue	<ul style="list-style-type: none"> <li>• Campbell-Lendrum et al. (2023) Climate change and health: three grand challenges <a href="https://www.nature.com/articles/s41591-023-02438-w">https://www.nature.com/articles/s41591-023-02438-w</a></li> <li>• WHO (2022) Measuring the climate resilience of health systems <a href="https://iris.who.int/bitstream/handle/10665/354542/9/789240048102-eng.pdf">https://iris.who.int/bitstream/handle/10665/354542/9/789240048102-eng.pdf</a></li> <li>• Joacim Rocklöv and Yesim Tozan. Climate change and the rising infectiousness of dengue. <i>Emerging Topics in Life Sciences</i> (2019) <a href="https://pubmed.ncbi.nlm.nih.gov/33523146/">https://pubmed.ncbi.nlm.nih.gov/33523146/</a></li> <li>• Surbhi Bhatia et al. A Retrospective Study of Climate Change Affecting Dengue: Evidences, Challenges and Future Directions. <i>Frontiers in Public Health</i> 2022; 10: 884645 doi: <a href="https://doi.org/10.3389/fpubh.2022.884645">10.3389/fpubh.2022.884645</a></li> </ul>
6.3	Suggested readings etc.	
<b>7</b>	<b>Category-7: Course evaluation &amp; improvement</b>	
7.1	Strategy for course assessment by students	<ul style="list-style-type: none"> <li>- Students complete individual self-reflections forms to self-assess what they feel they have learned in the course.</li> <li>- Students complete a peer assessment form to assess their team members on how they contributed to the team's research, planning and intervention design, developing the final presentation, and embodying the values of their team's code of conduct.</li> <li>- Students also complete individually the MPH-GH evaluation form that is mandatory for every course in the Program.</li> </ul>
7.2	Strategy for evaluation of teaching	<ul style="list-style-type: none"> <li>- Course ratings by students using the standard online faculty format</li> <li>- Final students' reflections and feedback</li> </ul>
7.3	Strategies for course improvement	<ul style="list-style-type: none"> <li>- Discussion among students and instructors for challenges and possible solutions.</li> </ul>
7.4	Strategy to evaluate the student assessment procedure	<ul style="list-style-type: none"> <li>- Checking the level of exam scores including students' and instructors' opinions by program committee in order to improve the course.</li> <li>- Final evaluation by Erasmus program.</li> <li>-</li> </ul>
7.5	Improvement process based on 7.1/7.2	Based on students' final evaluation and Erasmus program's evaluation.

## Lesson Plan

<b>Course Code: GH669</b>	<b>Course Title: Transdisciplinary Approach to Health and Well-being</b>	<b>Coordinator: Ajarn Fabio Saini</b>	<b>Semester: 3/2023</b>	<b>Credits: 2</b>
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#	Topic	Learning Objectives	Contents (Notes)	Date/Time	Teaching Method	Learning Resources	Evaluation Method	Instructors
1	Context: Health and well-being and TD  Setting up the students' TD team	By the end of this session, the students will be able to:  Begin to interrogate constructs of health and wellbeing, particularly through a social determinants of health (SDH) lens;  Building on their discussions in the pre-program orientation seminar on trans-disciplinarity (TD), articulate their initial understanding of TD and TD approaches to health and well-being, concerning the Sustainable Development	What is Health and Wellbeing? What is transformative social change for the SDGs, and SDG 3 in particular? What is a social determinants lens to health and wellbeing? How does it relate to health as a social justice issue? What is a TD perspective to health and wellbeing? Do we need one? Why?	May 20, 2024	Introducing the case study  Active listening activity and discussion  Agree-disagree discussion  Explaining the scenarios assigned to each team to develop a socially inclusive and transformative TD Dengue prevention and control intervention.  Explaining how the students will be evaluated.	Case study  Agree-disagree statements.  PPT: Social determinants of health, well-being, and transformative social change for inclusive, equitable, and sustainable development .	Learner-centered assessment techniques	All three instructors



#	Topic	Learning Objectives	Contents (Notes)	Date/Time	Teaching Method	Learning Resources	Evaluation Method	Instructors
		<p>Goals (SDGs) and SDG 3 in particular;</p> <p>Gain an initial orientation to the case study that this course revolves around;</p> <p>Set up small working groups in which the students will work through the course.</p>				<p>Scenarios for each team.</p> <p>Required readings.</p>		
2	Dengue prevention and control interventions in the context of climate change - Information and discussion with panel of stakeholders	<p>By the end of this session, the students will be able to understand: What is a dengue outbreak, and how it happens;</p> <p>Biological and ecological aspects on dengue;</p> <p>Clinical treatments and infrastructure for dengue patient care;</p> <p>Community engagement in responses to dengue prevention and control;</p>	<p>Lessons learned from different types of current Dengue prevention and control interventions, e.g. IVM, and in the context of climate change;</p> <p>Why Dengue prevention and control interventions often fail;</p> <p>The critical importance of community engagement;</p> <p>Lessons from engaging socially marginalized</p>	May 21, 2024	<p>Presentations by a panel of stakeholders and discussion. Students begin discussing their scenarios with stakeholders.</p> <p>Critical reflections in each team and discussions with the course instructors who rotate.</p>	<p>Materials prepared by the guest speakers.</p> <p>Scenarios assigned to each team.</p> <p>Required readings.</p>	Learner-centered assessment techniques	All three instructors and panel speakers.



#	Topic	Learning Objectives	Contents (Notes)	Date/Time	Teaching Method	Learning Resources	Evaluation Method	Instructors
		Key lessons from current Dengue prevention and control interventions.	populations in Dengue control and prevention;  Lessons from the health systems to provide prevention, treatment, and care and barriers face by patients.					
3.	Transformative approaches to complex health and wellbeing problems	By the end of this session, the students will be able to: Build their understanding of health as a human rights issue;  Build their understanding of Health Equity;  Build their understanding of what it means that Sex and Gender are important SDH, and the centrality of power in this context;	Health and Human Rights;  Sex and Gender as SDH;  Intersectionality of multiple forms of social marginalization and exclusion;  Frameworks for realizing transformative approaches to health and development;	22 May, 2024	Lecture  Power walk activity and debriefing in small groups: SDH affecting the team's scenarios. Gender and power as SDH through an intersectional lens. Understanding social diversity even within the same population group to leave no one behind.	PPT: Transformative Approaches to Health Interventions  Power walk role cards  Required readings	Learner-centered assessment techniques	All three instructors



#	Topic	Learning Objectives	Contents (Notes)	Date/Time	Teaching Method	Learning Resources	Evaluation Method	Instructors
		<p>Build an understanding of how an intersectional perspective helps to unpack multidimensional marginalization and exclusion;</p> <p>Build their understanding of what a (Gender) Transformative Approach is and implications for TD interventions;</p> <p>Critically reflect on the relevance of these issues to their assigned scenarios.</p>						
4	Critical analysis of Dengue prevention and control interventions	<p>By the end of this session, the students will be able to:</p> <p>Build their understanding of current types of Dengue prevention and control interventions;</p> <p>Learn about current technologies and tools used for vector control;</p>	<p>Dengue Interventions: Examples;</p> <p>Hands-on tools and technologies for Dengue prevention and control.</p>	May 23, 2024	<p>Lecture</p> <p>Critical Analysis of interventions. Teams' discussions:            What <u>research/information is required</u> for your scenario? Why?            What <u>background knowledge</u> would</p>	<p>PPT: Dengue interventions</p> <p>Critical analysis of interventions</p>	Learner-centered assessment techniques	All three instructors



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		<p>Discuss the relevance of this information to their scenarios;</p> <p>Brainstorm questions to discuss with the second panel of stakeholders in Week 2 of the course.</p>			you need to deepen? Why?			
5	Applying a transdisciplinary perspective to intervention designs, considering the implications of climate change, and using inclusive and transformative approaches toward contributing to sustainable development and SDG 3.	<p>By the end of this class, students will be able to:</p> <p>Develop a code of conduct for their respective teams;</p> <p>Apply their knowledge and critical reflections to real-life scenarios for developing Dengue prevention and control interventions that realize the following brief: <b>Develop outlines of Dengue prevention and control interventions for the assigned scenario that demonstrate a transdisciplinary perspective, consider the</b></p>	<p>Core values of teams' codes of conduct.</p> <p>In each team: What main ideas do you have a consensus on so far, and why? What main ideas are you still unsure about or cannot reach a consensus on, and why? Which questions have you prepared for the stakeholders' panel on Day 6? What are your plans to continue working toward your final deliverable?</p>	May 24, 2024	<p>In each team: brainstorming values and principles for their code of conduct.</p> <p>Team work: Which aspects of your scenario have you unpacked most so far? Have you neglected any aspect of your scenario? Do you need to research additional background information to realize the brief in your scenario? How would you identify</p>	<p>Questions for teams' discussion. See PPT for day 5.</p> <p>Required readings.</p>	Learner-centered assessment techniques	All three instructors





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		<p><b>implications of climate change, and use inclusive and transformative approaches toward contributing to sustainable development, and SDG 3 in particular.</b></p> <p>Formulate questions to discuss with stakeholders and support needed from the course's instructors, including questions they want to discuss with the stakeholders' panel on Day 6.</p>			<p>stakeholders? At which stage/stages of the intervention would you involve them, for which purpose, and how? What kinds of information would you need at different stages of the intervention? From which sources? What else would you need to consider? Which questions relevant to your scenario can you prepare for the stakeholders' panel on Day 6? (Refer to biographies of the Day 6 panel)</p>			
6	Unpacking complex health and well-being problems: Designing solutions	<p>By the end of this sessions, the students will be able to:</p> <p>Critically reflect on real-world problems that</p>	<p>Identify lessons relevant to each team's scenario;</p> <p>Who defines the problem? Who defines</p>	Jun 27, 2024	Presentations by a panel of stakeholders and discussion. Students begin discussing their scenarios with stakeholders.	Materials prepared by the guest speakers.	Learner-centered assessment techniques	All three instructors and panel speakers.



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		<p>Dengue interventions must tackle;</p> <p>Identify potential operational challenges and obstacles to improve pre-existing or current dengue interventions;</p> <p>Critically apply the information provided from various stakeholders to revise their TD intervention outlines.</p>	<p>the objectives of the interventions? Which processes to realize social inclusion, transformative approaches, meaningful community engagement? What kind of information is needed to achieve these purposes, from which stakeholders, and how to get it?</p> <p>Exercise: Critical reflection on the Objective/process (use continuum and/or framework)</p>		<p>Critical reflections in each team and discussions with the course instructors who rotate.</p>	<p>Scenarios assigned to each team.</p> <p>Required readings.</p>		
7	Designing TD intervention considering the implications of climate change, and using inclusive and transformative	As Per Day 5 above.	As per Day 5 above, but applying critical reflections from the discussions with the panel of stakeholders on Day 6.	May 28, 2024	Take stock of your progress: What have you made progress on? What work is still remaining? How will you prioritize it? What else would you need to consider to	<p>Intervention scenarios.</p> <p>Materials by the stakeholders' panels from</p>	Learner-centered assessment techniques	All three instructors.



#	Topic	Learning Objectives	Contents (Notes)	Date/Time	Teaching Method	Learning Resources	Evaluation Method	Instructors
	approaches toward contributing to sustainable development and SDG 3.				meet the brief in your scenario? Share the main issues during the plenary discussion.	Day 2 and Day 6.  Required readings.  Course instructors provide support by rotating.		
8	Designing TD intervention considering the implications of climate change, and using inclusive and transformative approaches toward contributing to sustainable development and SDG 3.	As per Day 7 above.	As per Day 7 above.	May 29, 2024	As per Day 7 above.	As per day 7 above.	Learner-centered assessment techniques	All three instructors.
9	Presentation of team's intervention outlines to a	By the end of this session, the students will be able to:	To what extent the interventions outlines address the brief in each scenario?	May 30, 2024	Presentations to a panel of stakeholders.	Intervention outlines developed by each team.	Learner-centered assessment techniques	All three instructors and panel speakers.



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	panel of stakeholders.	<p>Discuss their intervention outlines with stakeholders and receive inputs and feedback on how they met their brief in their respective scenarios;</p> <p>Critically reflect on opportunities and challenges to realize a TD perspective in their respective scenarios;</p> <p>Critically reflect on opportunities and challenges to apply socially inclusive and transformative approaches in their respective scenarios.</p>	Critical take aways.		<p>Each team addresses the panel's questions and comments.</p> <p>Students engage in critical reflections with the stakeholders.</p>			
10	Wrap Up	By the end of this class, students will be able to: Critically reflect on and define learning from this course that is strengthening their attitudes, knowledge, and skills to continue applying transdisciplinary	<p>Attitudes, Knowledge and Skills (AKS)</p> <p>Opportunities and challenges to apply a TD perspective to real world health and wellbeing problems.</p>	May 31, 2024	<p>The AKS Murial:</p> <p>Which attitudes, aspect of knowledge, and skills have you gained or strengthened by participating in this course? Write On A4</p>	<p>The AKS questions.</p> <p>Self-reflections form.</p>	Learner-centered assessment techniques	All three instructors.



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		<p>perspectives to complex health and social issues;</p> <p>Identifying relevance and opportunities for doing so in their academic and professional future;</p> <p>Suggest ways to improve the design and delivery of this course in the future.</p>	<p>Self-reflections and open discussion.</p> <p>Explaining how to complete the peer assessment form.</p> <p>Explaining the guidelines for the take-home final individual exam, and grading.</p>		<p>paper sheets, post on the wall.</p> <p>Discussion: Do you feel that you built any of the AKS <u>posted by other students?</u> Which ones, and how did the course help you doing this? Which of A-K-S should the course provide more support in the future? What is the relevance of what you have learned to what you want to do academically and professionally in the future? Do you see any opportunities to apply it? Challenges? Any ideas on how to manage the challenges?</p>	<p>Peer assessment form.</p> <p>Guidelines for final individual take-home exam.</p>		