

American University of Beirut
Faculty of Health Sciences

PBHL 303
Design and Evaluation of Public Health Programs
[3 credits]

Course Syllabus
Spring Semester, Academic Year 2023-2024

Class Time and Venue:

Lectures: Mondays 3:30-5:10PM, Van Dyck Auditorium

Application sessions: One application session of 2 hours each (for two separate groups of students, Groups A and B)

Group A: Wednesday, 9:00-11:00AM, Van Dyck 103

Group B: Wednesday, 5:15-7:15PM, Van Dyck 103

Course Instructors and Contact Details:

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Course Description

This course introduces students to the concepts and methods of public health program design and evaluation. Students will develop skills for assessing population needs for the development of health programs. The course then covers public health program design, including developing measurable objectives, identifying evidence-based intervention strategies, and planning for program implementation. Students will learn to select

appropriate methods for impact and process evaluation of health programs.

Course Learning Objectives (LOs)

By the end of the course, students will be able to:

- LO1. Identify relevant sources of data that can inform a needs assessment
- LO2. Conduct a needs assessment
- LO3. Prioritize an identified public health problem with the target population based on a needs assessment
- LO4. Develop a logic model to address an identified public health problem among a specific population
- LO5. Identify relevant evidence-based interventions to address a public health problem
- LO6. Develop appropriate and feasible evaluation questions for a public health intervention
- LO7. Assess the strengths and weaknesses of different evaluation methods and their applicability to different program designs
- LO8. Integrate local culture, values, and beliefs, into the design of programs and their evaluations
- LO9. Apply ethical considerations to the design and evaluation of public health programs

Council on Education for Public Health (CEPH) Competencies mapped to PBHL 303:

- CC 7: Assess population needs, assets and capacities that affect communities' health
- CC 8: Apply awareness of cultural values and practices to the design or implementation of public health policies or programs
- CC 9: Design a population-based policy, program, project or intervention
- CC 11: Select methods to evaluate public health programs

Assigned Readings

All required readings will be made available on Moodle.

Course requirements and student evaluation:

Pre-requisites:

PBHL 312 Foundations of Public Health
PBHL 310: Research Methods in Public Health

Co-requisites:

EPHD 310: Biostatistics

Attendance:

Attendance will be taken in lecture and application sessions. Students are required to read the assigned readings *prior* to the class sessions, and participate in class discussions, activities and applications.

Student Evaluation:

Table-1 Summary of students' assessments mapped to course learning objectives

	Learning Objectives								
	LO1	LO2	LO3	LO4	LO5	LO6	LO7	LO8	LO9
Participation	X	X	X	X	X	X	X	X	X
Assignment #1	X	X							X
Assignment #2			X	X	X			X	
Assignment #3						X	X		X

Table -2 Description of Assessment methods, due dates and corresponding Learning Objectives

Detailed guidelines for all assignments, along with grading rubrics, will be posted on Moodle.

Assessment method	Date	LOs covered	Grade percentage
Assignment #1, Group assignment	<u>Thursday February 22</u>	LO's 1,2,& 9	30 points
<p>Develop and conduct a (needs) assessment: Your group will be assigned a public health topic of interest in a specified geographical area/population/sub-population. Your group will collaborate to develop and conduct an assessment around the topic (using primary and/or secondary and/or literature data sources). Your group should determine the scope of the assessment, develop the tools needed for the assessment, collect or compile the needed data, and analyze needs and resources. (Note: Primary data collection is not a requirement for this assignment, however relevant data collection tools should be developed).</p>			
Assignment #2, Individual assignment	<u>Monday, March 11</u>	LO 3,4,5, & 8	35 points
<p>Evidence-based program design: You will be provided with a case of an identified public health problem with data from an assessment that was conducted in relation to this problem. Based on the information provided, you will need to identify a priority health issue to address, propose an intervention to address the issue and answer questions about your selection of this intervention strategy. The assignment will be conducted as a short-answer format, paper-based, in-class assignment (individual work).</p>			
Assignment #3, Individual assignment	<u>TBC</u>	LO 6,7 & 9	25 points
<p>Selecting evaluation methods: You will be provided with a description of a public health program that include the program's objectives, anticipated outcomes and intervention components. Based on this information, you will develop the research questions for an evaluation of the program and propose a design for a process and impact evaluation.</p>			
Participation in lecture and application sessions	N/A	LO 1-10	10 points

Assessment method	Date	LOs covered	Grade percentage
The participation grade will be based on the application sessions. Students are expected to read the materials for application sessions prior to class and be ready to participate in discussions and group activities.			

A Note on Working in Groups: Public health research is often conducted in groups, and the combination of different perspectives and disciplines enriches the outcome. A vital component of this course is learning to divide the work fairly among your group, being accountable to one another for commitments made in terms of the work individuals will do, and having shared ownership over the quality of the final product. For the assignment that you will do in groups (Assignment 1), you will be asked upon submission to add a statement about each individual's contributions to the final work. We recommend that any problems in group collaboration be addressed promptly and where necessary raised with the course instructors.

Policies and other General Notes:

Moodle:

Readings, lectures, assignment guidelines and announcements will be posted on Moodle. You will not receive messages via Moodle until you have signed into the course on Moodle, so please do that as soon as possible. Be sure to check Moodle often for course updates. All assignments must be turned in on Moodle by the due date.

Academic integrity:

Education is demanding and you need to properly manage your time. Do not hesitate to use the resources around you but do not cut corners. Cheating and plagiarism will not be tolerated. Please review the Student Code of Conduct in your handbook and familiarize yourself with definitions and penalties related to plagiarism. If you're in doubt about what constitutes plagiarism, ask your instructor because it is your responsibility to know. The American University of Beirut has a strict anti-cheating and anti-plagiarism policy. Penalties include failing marks on the assignment in question, suspension or expulsion from University and a permanent mention of the disciplinary action in the student's records.

Students with Disabilities:

AUB strives to make learning experiences as accessible as possible. If you anticipate or experience academic barriers due to a disability (including mental health, chronic or temporary medical conditions), please inform me immediately so that we can privately discuss options. In order to help establish reasonable accommodations and facilitate a smooth accommodations process, you are encouraged to contact the Accessible Education Office: accessibility@aub.edu.lb; +961-1-350000, x3246; West Hall, 314

Non-Discrimination – Title IX – AUB:

AUB is committed to facilitating a campus free of all forms of discrimination including sex/gender-based harassment prohibited by Title IX. The University's non-discrimination policy applies to, and protects, all students, faculty, and staff. If you think you have experienced discrimination or harassment, including sexual misconduct, we encourage you to tell someone promptly. If you speak to a faculty or staff member about an issue such as harassment, sexual violence, or discrimination, the information will be kept as private as possible, however, faculty and designated staff are required to bring it to the attention of the University's Title IX Coordinator. Faculty can refer you to fully confidential resources, and you can find information

and contacts at www.aub.edu.lb/titleix. **To report an incident**, contact the University's Title IX Coordinator Mitra Tauk at 01-350000 ext. 2514, or titleix@aub.edu.lb. An anonymous report may be submitted online via EthicsPoint at www.aub.ethicspoint.com.

Detailed course outline:

Schedule of Lectures, Application Sessions, Readings and Assessments

Week	Dates of Lecture/ Application Sessions	Topic	Readings	LOs
1 (GK)	Lecture 1 January 22 Application Sessions: January 24 (ZK)	Lecture 0: Introduction to course and assignments Lecture 1: How to conduct a needs assessment Application : Needs assessment case studies	Lecture: McKenzie et al (2013), Chapter 4 ; Community Tool Box Chapter 3: Assessing Community Needs and Resources Application: Li et al (2009); McClung et al (2022)	1, 2
2 (GK)	Lecture 2 January 29 (GK) Application Sessions: (GK) January 31	Lecture: Needs assessment, problem identification and prioritization Application: Group work for Assignment 1	Lecture: Khan et al. (2017) ; optional - Issel & Wells, Chapter 5 Application: Worksheet.	2, 8
3 (GK)	Lecture 3 February 5 Application Sessions: February 7 (GK – ZK)	Lecture: Analyzing health determinants and root causes Application: Prioritizing needs and Formulating a problem statement; Identifying and analyzing determinants of a prioritized public health problem	Lecture: Alegría et al. (2018) Application: Activity will be posted on Moodle.	2, 3

Week	Dates of Lecture/ Application Sessions	Topic	Readings	LOs
4 (GK)	Lecture 4 February 12 Application Sessions: February 14 (ZK)	Lecture: Evidence-based interventions Application: Identifying evidence-based interventions	Lecture: Brownson et al. (2009) Application: Activity will be posted on Moodle.	5
5 (GK)	Lecture 5 February 19 Application Sessions: February 21 (ZK)	Lecture: Frameworks for adapting interventions Application: Adapting an intervention to the context of Lebanon	Lecture: Card et al. (2011) Application: Activity will be posted to Moodle.	5
6 (GK)	Lecture 6 February 26 Application Sessions: February 28 (GK – ZK)	Lecture: Key concepts in intervention design: Theory of Change and Objectives Application: Developing a theory of change for a selected public health problem	Lecture: Funnell & Rogers, (2011). Chapter 7 Application: Activity will be posted on Moodle.	8
7 (GK)	Lecture 7 March 4 Application Sessions: March 6 (GK – ZK)	Lecture: Logic models and indicators Application: Developing a logic model for an intervention	Lecture: Afifi et al. (2011) Optional - Community Tool Box Chapter 2, Section 1 Application: Activity will be posted on Moodle.	4
8 (KEA)	Lecture 8 March 11 (Lecture will be audi-	Assignment #2 – IN CLASS	Lecture: Harris (2017), Chs 1 & 7	6

Week	Dates of Lecture/ Application Sessions	Topic	Readings	LOs
	recorded) Application Sessions: March 13	Lecture: Key concepts in evaluation design Application: Developing evaluation research questions	Application: Case studies will be posted on Moodle.	
9 (KEA)	Lecture 9 March 18 Application Sessions: March 20	Lecture: Randomized evaluation designs Application: Interpreting quantitative impact evaluation results; Power calculations	Lecture: White (2013); 3ie (2010) impact evaluation glossary Application: Kabakian & Campbell (2007); Rivera et al (2004)	7, 9
10 (KEA)	Lecture 10 April 8 Application Sessions: April 10 (<i>Fitr Holiday, will be rescheduled</i>)	Lecture: Quasi-experimental evaluation designs I – difference-in-difference designs Application: Identifying threats to evaluation validity	Lecture: Victoria et al (2004); Caniglia & Murray (2020) Application: Sieverding & Elbadawy (2016) ; Sommers & Kronick (2012)	7, 9
11 (KEA)	Lecture 12 April 15 Application Sessions: April 7 (<i>holiday; sessions will be rescheduled</i>)	Lecture: Quasi-experimental evaluation designs II: Regression discontinuity, interrupted time series Application: “Natural experiments” – evaluating public health policy effects	Lecture: Bernal et al (2017) ; Venkataramani et al (2016) Application: Callaghan et al (2013) ; Siedner et al (2020)	7, 9

Week	Dates of Lecture/ Application Sessions	Topic	Readings	LOs
12 (KEA)	Lecture 13 April 22 Application Session: April 24	Lecture: Process evaluation Application: Designing a process evaluation	Lecture: Linnan & Steckler (2002); Glasgow et al (1999) Application : Case study will be posted on Moodle.	7, 8

Course reading list-organized by week

*Check detailed schedule of sessions for which readings are for lecture and which are for application sessions. Some application sessions will have case study materials rather than articles. Case study materials will be posted on Moodle and should be read prior to the application session.

Week 1: How to conduct an assessment

McKenzie, J F., Neiger, R, Thackeray R. (2013) Chapter 4: Assessing Needs in *Planning, Implementing & Evaluating Health Promotion Programs: A primer*. Pearson, 2013.

Community Tool Box Chapter 3: Assessing Community Needs and Resources

<https://ctb.ku.edu/en/table-of-contents/assessment/assessing-community-needs-and-resources>

Li, Y, Cao J, Lin H, Li D, Wang Y, He J. (2009) Community Health Needs Assessment with Precede-Proceed Model: A Mixed Methods Study. *BMC Health Services Research* 9:181.

McClung, Sarah, Sarah Delaney, Ashley Aakesson, Kaleab Baye, Alyssa Klein, Zoe Mowl, and Lydia Clemmons. 2022. "Formative Research to Inform Market-Based Interventions to Increase Egg Purchase and Consumption in Tigray, Ethiopia." *Global Health: Science and Practice* 10 (4).

Week 2: Needs assessment, problem identification and prioritization

Khan, M. S., Schwanke-Khilji, S., Yoong, J., Tun, Z. M., Watson, S., & Coker, R. J. (2017). Large funding inflows, limited local capacity and emerging disease control priorities: a situational assessment of tuberculosis control in Myanmar. *Health policy and planning*, 32(suppl_2), ii22-ii31.

Optional: Issel, L. M. and Wells, R. (3rd Edition). *Health Program Planning and Evaluation-A Practical, Systematic Approach for Community Health*. Chapter 5, pages 164-174 "Prioritizing Health Problems"

Week 3: Analyzing health determinants and root causes

Alegría, M., NeMoyer, A., Falgàs Bagué, I., Wang, Y., & Alvarez, K. (2018). Social determinants of mental health: where we are and where we need to go. *Current psychiatry reports*, 20(11), 1-13.

Week 4: Evidence-based interventions

Brownson, R. C., Fielding, J. E., & Maylahn, C. M. (2009). Evidence-based public health: a fundamental concept for public health practice. *Annual Review of Public Health*, 30, 175-201.

Week 5: Frameworks for adapting interventions

Card, Josefina J., Julie Solomon, and Shayna D. Cunningham. 2011. "How to Adapt Effective Programs for Use in New Contexts." *Health Promotion Practice* 12 (1): 25–35.

Week 6: Key concepts in intervention design

Funnell, S. C., & Rogers, P. J. (2011). Chapter 7: Developing a Theory of Change. In *Purposeful program theory: Effective use of theories of change and logic models* (Vol. 31). San Francisco: Jossey Bass - John Wiley & Sons.

Week 7: Logic models and indicators

Afifi, R. A., Makhoul, J., El Hajj, T., & Nakkash, R. T. (2011). Developing a logic model for youth mental health: participatory research with a refugee community in Beirut. *Health Policy and Planning*, 26(6), 508-517.

Optional: Community Tool Box. Chapter 2, Section 1: Developing a Logic Model or Theory of Change.

<http://ctb.ku.edu/en/table-of-contents/overview/models-for-community-health-and-development/logic-model-development/main>

Week 8: Key concepts in evaluation design

Harris, Muriel J. 2016. *Evaluating Public and Community Health Programs*. John Wiley & Sons.

Week 9: Randomized evaluation designs

White, H (2013) An Introduction to the Use of Randomised Control Trials to Evaluate Development Interventions. *Journal of Development Effectiveness* 5 (1):30–49.

International Initiative for Impact Evaluation. (2010) Impact Evaluation Glossary. *Journal of Development Effectiveness* 2 (1):187–94.

Kabakian-Kasholian T & Campbell OMR (2007). Impact of written information on women's use of postpartum services: a randomized controlled trial. *Acta Obstetrica et Gynecologica* 86: 793-798.

Rivera, JA., Sotres-Alvarez D, Habicht JP, Shamah T, Villalpando S (2004) Impact of the Mexican Program for Education, Health, and Nutrition (Progresa) on Rates of Growth and Anemia in Infants and Young Children: A Randomized Effectiveness Study. *JAMA* 291 (21):2563–70.

Week 10: Quasi-experimental evaluation designs I

Victora, CG., Habicht P, Bryce J. 2004. Evidence-Based Public Health: Moving beyond Randomized Trials. *American Journal of Public Health* 94 (3): 400–405.

Caniglia, Ellen C., and Eleanor J. Murray. 2020. "Difference-in-Difference in the Time of Cholera: A Gentle Introduction for Epidemiologists." *Current Epidemiology Reports* 7 (4): 203–11.

Sieverding, M, Elbadawy A (2016) Empowering Adolescent Girls in Socially Conservative Settings: Impacts and Lessons Learned from the Ishraq Program in Rural Upper Egypt. *Studies in Family Planning* 47 (2).

Sommers, Benjamin D., and Richard Kronick. 2012. "The Affordable Care Act and Insurance Coverage for Young Adults." *JAMA* 307 (9): 913–14.

Week 11: Quasi-experimental evaluation designs II

Bernal, JL, Cummins, S, Gasparrini, A. 2017. Interrupted Time Series Regression for the Evaluation of Public Health Interventions: A Tutorial. *International Journal of Epidemiology* 46 (1): 348–355.

Venkataramani, AS., Bor, J, Jena, AB. 2016. Regression Discontinuity Designs in Healthcare Research. *BMJ* 352 (March): i1216.

Callaghan, Russell C., Marcos Sanches, Jodi M. Gatley, and James K. Cunningham. 2013. "Effects of the Minimum Legal Drinking Age on Alcohol-Related Health Service Use in Hospital Settings in Ontario: A Regression–Discontinuity Approach." *American Journal of Public Health* 103 (12): 2284–91.

Siedner, Mark J., John D. Kraemer, Mark J. Meyer, Guy Harling, Thobeka Mngomezulu, Patrick Gabela, Siphophelo Dlamini, Dickman Gareta, Nomathamsanqa Majozi, and Nothando Ngwenya. 2020. "Access to Primary Healthcare during Lockdown Measures for COVID-19 in Rural South Africa: An Interrupted Time Series Analysis." *BMJ Open* 10 (10): e043763.

Week 12: Process evaluation

Linnan, L., Steckler, A. 2002. "Process Evaluation for Public Health Interventions and Research: An Overview." In *Process Evaluation for Public Health Interventions and Research*, edited by L. Linnan and A. Steckler, 2–24. San Francisco, CA: Jossey-Bass.

Glasgow RE, Vogt TM, Boles SM. (1999). Evaluating the Public Health Impact of Health Promotion Interventions: The RE-AIM Framework. *American Journal of Public Health*, 89: 1322-1327.

Appendix –I Mapping of Course Learning Objectives to CEPH Competencies

	LO 1	LO 2	LO 3	LO 4	LO 5	LO 6	LO 7	LO 8	LO 9	Other courses that also address competency	Assignment where Competency primarily assessed
CEPH 7: Assess population needs, assets and capacities that affect communities' health	X	X	X						X	None	Assignment #1, Group assignment Assignment #2, Individual assignment
CEPH 8: Apply awareness of cultural values and practices to the design or implementation of public health policies or programs								X	X	None	Assignment #1, Group assignment Assignment #2, Individual assignment
CEPH 9: Design a population-based policy, program, project or intervention			X	X	X				X	None	Assignment #2, Individual assignment
CEPH 11: Select methods to evaluate public health programs						X	X		X	None	Assignment #3, Individual assignment