

**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 2019-2020**

Class Time and Venue:

Lectures: Monday, 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, 5:30-7:30pm, Van Dyck 332

Group B: Thursday 9-11am, Van Dyck 332

Course Instructor and Contact Details:

Dr. Maia Sieverding
Office: Van Dyck Rm. 301D Ext. 2949
Office Hours: By appointment
Email: ms299@aub.edu.lb

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. Identify potential risks to successful implementation of a program plan or policy
- LO7. Develop appropriate and feasible evaluation questions for a public health intervention
- LO8. Assess the strengths and weaknesses of different evaluation methods and their applicability to different program designs
- LO9. Integrate local culture, values, and beliefs, into the design of programs and their evaluations
- LO10. 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 Lectures 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	LO10
Participation	X	X	X	X	X	X	X	X	X	X
Assignment #1	X	X	X							X
Assignment #2			X	X	X	X			X	
Assignment #3				X			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>Due February 24</u>	LO's 1,2,3&10	30 points
<p>Develop and conduct a needs assessment: Your group will be assigned a community partner site from within AUB and a topic of interest to that site. Your group will collaborate with the site to conduct a needs assessment around the topic. Your group should determine the scope of the needs assessment, collect or compile needed data, and analyze community needs and resources. Your report should also include your group's recommendation of a priority area for intervention, with a justification of your selection.</p>			
Assignment #2, Individual assignment	<u>March 16 (held during lecture)</u>	LO 3,4,5,6&9	35 points
<p>Evidence-based program design: You will be provided with a case study of an identified public health problem with data from a needs assessment that was conducted in relation to this problem. The assignment will be conducted in class as a short-answer format exam. 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.</p>			
Assignment #3, Individual assignment	<u>Due May 6</u>	LO 4,7,8, 10	25 points
<p>Selecting evaluation methods: You will be provided with a description of one or more public health programs that include the program's objectives, anticipated outcomes, intervention components, and information on what the program implementers hope to learn from evaluating the program. Based on this information, you will develop the research questions for an evaluation of the program and propose a design for a process and/or impact evaluation. This will be a 2-day, take-home assignment.</p>			
Participation in lecture and application sessions	N/A	LO 1-10	10 points

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, lecture handouts, 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. Please be sure to check Moodle often for course updates.

All assignments must be turned in on Moodle by the due date. If your assignment is late, you will not be able to submit it on Moodle and therefore you will need to email it to your instructor with an explanation of the late submission.

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 Trudi Hodges 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	No lecture this week Application sessions: A – January 22 B – January 23	Application sessions: Introduction to the course and review of syllabus. Introduction to the design and evaluation cycle for public health interventions	No reading.	
2	Lecture: January 27 Application Sessions: A – January 29 B- January 30	Lecture: How to conduct a needs assessment: Tools and frameworks Application: Case studies of needs assessments using different frameworks	Lecture: McKenzie et al (2013), Chapter 4 Application: Li et al (2009); Krause et al (2015)	1, 2
3	Lecture: February 3 Application Sessions: A – February 5 B- February 6	Lecture: Needs assessment in context – participation, cultural awareness, community resources and ethical considerations Application: Case study of needs assessment & ethics; group work for Assignment 1	Lecture: Community Tool Box Chapter 3: Assessing Community Needs and Resources Application: Kumwenda et al (2017)	1, 2, 9
4	Lecture: February 10	Lecture: From needs assessment to intervention: Problem identification and prioritization	Lecture: Issel (2014) Chapter 5 (selections)	2, 3

Week	Dates of Lecture/ Application Sessions	Topic	Readings	LOs
	Application Sessions: A- February 12 B- February 13	Application: Prioritizing needs and formulating a problem statement	Application: Prioritization activity materials will be posted on Moodle.	
5	Lecture: February 17 Application Sessions: A- February 19 B- February 20	Lecture: Intervention approaches at different levels of the ecological model Application: How to identify evidence-based interventions	Lecture: Issel (2014), Chapter 6 (selections); Fong et al (2006); Padian et al (2011) Application: Brownson et al. (2009); Where to find evidence (see online resources in reference list)	5
6	Lecture: February 24 Application Sessions: A - February 26 B- February 27	Lecture: Logic models Part I – components of the logic model Application: Developing a logic model for an intervention	Lecture: Community Tool Box Chapter 2, Section 1: Developing a Logic Model or Theory of Change; Huhman et al (2004) Application: A description of a program (Healthy Kitchens, Healthy Children) will be posted on Moodle for the class activity.	5
7	Lecture: March 2 Application Sessions: A- March 4 B- March 5	Lecture: Logic models Part II – assumptions, ethical considerations and adaptation of interventions to local contexts Application: Formulating intervention objectives and testing the logic model chain of causation	Lecture: Renger & Hurley (2006) Application : Afifi et al (2011)	4, 6

Week	Dates of Lecture/ Application Sessions	Topic	Readings	LOs
8	Lecture: March 9 Application Sessions: A- March 11 B- March 12	Lecture: Program planning, implementation challenges, and consideration of unintended consequences Application: Case studies of implementation failures and unintended consequences	Lecture: Hornik et al (2008); Ramos Salas (2015) Application: Reiss et al (2019); Carpenter & Stehr (2011)	4, 6, 9, 10
9	Lecture: March 16 Application Sessions: A- March 18 B- March 19	Lecture: Assignment #2 will be held in lecture this week Application: Developing evaluation research questions	Lecture: No reading Application: Case studies will be posted on Moodle.	6, 9, 10
10	Lecture: March 23 Application Sessions: A- March 25 (holiday – makeup will be scheduled) B- March 26	Lecture: Key concepts in evaluation design Application: Measurement considerations	Lecture: Hawe et al (1990) Application: Case studies will be posted on Moodle.	7, 10
11	Lecture: March 30 Application Sessions: A- April 1 B- April 2	Lecture: Randomized evaluation designs Application: Interpreting quantitative impact evaluation results	Lecture: White (2013); Victoria et al (2004) Additional resource: 3ie (2010) impact evaluation glossary Application: Kabakian & Campbell (2007); Rivera et al (2004)	8

Week	Dates of Lecture/ Application Sessions	Topic	Readings	LOs
12	Lecture: April 6 Application Sessions: A- April 8 B- April 9	Lecture: Quasi-experimental evaluation designs I – difference-in-difference designs & power calculations Application: Power calculations; Identifying threats to evaluation validity	Lecture: DesJarlais et al (2004) Application: Sieverding & Elbadawy (2016) ; Watt et al (2015)	8
13	Lecture: April 13 is a holiday, lecture will be rescheduled Application Sessions: A- April 15 B- April 16	Lecture: Quasi-experimental evaluation designs II: Regression discontinuity, interrupted time series, etc. Application: “Natural experiments” – evaluating public health policy effects	Lecture: Bernal et al (2017) ; Venkataramani et al (2016) Application: Ejlerskov et al (2018) ; Sommers & Kronik (2012)	8
14	No lecture this week (April 20 holiday) Application Sessions: A- April 22 B- April 23	Application sessions: Case study – proposing an impact evaluation design	Application: Case study materials will be posted on Moodle.	7, 8, 9, 10
15	Lecture: April 27 Application Sessions: A- April 29 B- April 30	Lecture: Process evaluation Application: Process evaluation case studies	Lecture: Linnan & Steckler (2002); Glasgow et al (1999) Application : Nakkash et al (2011) ; Greenland et al (2017)	7, 8,10

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 2: How to Conduct a Needs Assessment

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

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.

Krause, S, Williams H, Onyango MA, Sami S, Doedens W, Giga N, Stone E, Tomczyk B (2015). Reproductive Health Services for Syrian Refugees in Zaatri Camp and Irbid City, Hashemite Kingdom of Jordan: An Evaluation of the Minimum Initial Services Package. *Conflict and Health* 9 (1): S4.

Week 3: Needs Assessment In Context

Community Tool Box Chapter 3: Assessing Community Needs and Resources
<https://ctb.ku.edu/en/table-of-contents/assessment/assessing-community-needs-and-resources>

Kumwenda, M, Nzala S, Zulu JM (2017). Health Care Needs Assessment among Adolescents in Correctional Institutions in Zambia: An Ethical Analysis. *BMC Health Services Research* 17 (1): 581.

Week 4: Moving From Needs Assessment to Intervention

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 5: Intervention Approaches at Different Levels of The Ecological Model

Issel, L. M. and Wells, R. (3rd Edition). *Health Program Planning and Evaluation-A Practical, Systematic Approach for Community Health*. Chapter 6, pages 185-197 "Interventions"

Fong, G. T., Cummings, K. M., Borland, R., Hastings, G., Hyland, A., Giovino, G. A., ... & Thompson, M. E. (2006). The conceptual framework of the International Tobacco Control (ITC) policy evaluation project. *Tobacco control*, 15(suppl 3), iii3-iii11.

Padian, N S, McCoy S, Abdool Karim S, Hasen N, Kim J, Bartos M, Katabira E, Bertozzi SM, Schwartländer B, Cohen MS (2011). HIV Prevention Transformed: The New Prevention Research Agenda. *The Lancet* 378 (9787): 269–78.

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.

Guide to Community Preventive Services www.thecommunityguide.org/index.html

Cochrane reviews <http://www.cochrane.org/> www.ph.cochrane.org/

Week 6: Logic models Part I

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>

Huhman, M., Heitzler, C., & Wong, F. (2004). The VERB™ campaign logic model: a tool for planning and evaluation. *Preventing Chronic Disease*, 1(3).

Week 7: Logic models Part II

Renger, R., Hurley, C. (2006) From Theory to Practice: Lessons Learned in the Application of the ATM Approach to Developing Logic Models. *Evaluation and Program Planning* 29 (2): 106–19.

Affi, 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* 1–10. *Health Policy and Planning* 26.

Week 8: Program Planning, Implementation Challenges, and Consideration of Unintended Consequences

Hornik, R, Jacobsohn L, Orwin R, Piesse A, Kalton G (2008). Effects of the National Youth Anti-Drug Media Campaign on Youths. *American Journal of Public Health* 98 (12): 2229–36.

Ramos Salas, X. 2015. The Ineffectiveness and Unintended Consequences of the Public Health War on Obesity. *Canadian Journal of Public Health* 106 (2): E79.

Carpenter, C S., Stehr M. 2011. Intended and Unintended Consequences of Youth Bicycle Helmet Laws. *The Journal of Law and Economics* 54 (2): 305–24.

Reiss, L, Andersen K, Pearson E, Biswas K, Taleb F, Ngo TD, Hossain A, Barnard S, Smith C, Carpenter J. 2019. Unintended Consequences of MHealth Interactive Voice Messages Promoting Contraceptive Use after Menstrual Regulation in Bangladesh: Intimate Partner Violence Results from a Randomized Controlled Trial. *Global Health: Science and Practice* 7 (3): 386–403.

Week 9

No readings.

Week 10: Key Concepts in Evaluation Design

Hawe P., Degeling D., Hall J., & Brierley A. (1990) Impact and outcome evaluation: Assessing programme effects. Chapter 6 In Hawe P., Degeling D., Hall J., & Brierley A, *Evaluating Health Promotion: A Health Worker's Guide*. MacLennan & Petty: Sydney, Australia.

Week 11: 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.

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

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 12: Quasi-experimental Evaluation Designs I

Des Jarlais, DC., Lyles C, Crepaz, N (2004). Improving the Reporting Quality of Nonrandomized Evaluations of Behavioral and Public Health Interventions: The TREND Statement. *American Journal of Public Health* 94 (3): 361–66.

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).

Watt, C, Abuya, T, Warren, CE, Obare. F, Kanya, L, Bellows B. 2015. Can Reproductive Health Voucher Programs Improve Quality of Postnatal Care? A Quasi-Experimental Evaluation of Kenya's Safe Motherhood Voucher Scheme. *PLOS ONE* 10 (4): e0122828.

Week 13: 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.

Ejlertskov, KT et al. 2018. Supermarket Policies on Less-Healthy Food at Checkouts: Natural Experimental Evaluation Using Interrupted Time Series Analyses of Purchases. *PLoS Medicine* 15 (12): e1002712.

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

Week 14

No readings.

Week 15: 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.

Nakkash, R.T., Alaouie, H., Haddad, P; El Hajj T., Salem, H., Mahfoud, Z., & Afifi, R. A. (2011). Process evaluation of a community-based mental health promotion intervention for refugee children. *Health Education Research* 27(4):595-607.

Greenland, K., Chipungu, J. Chilekwa, J. Chilengi, R., Curtis, V. 2017. Disentangling the Effects of a Multiple Behaviour Change Intervention for Diarrhoea Control in Zambia: A Theory-Based Process Evaluation. *Globalization and Health* 13 (1): 78.

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	LO 10	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				X	None	Assignment #2, Individual assignment
CEPH 11: Select methods to evaluate public health programs				X			X	X		X	None	Assignment #3, Individual assignment