

2022 Fogarty GID Postgraduate Web-Based Course: “Mixed-Methods Research for Infectious Diseases”

1. Course Description

One of the ways to address infectious diseases without overlooking the understanding of contexts, social dynamics, perceptions and social responses of different human groups in relation to their health is the use of data collection, analytic methods and approaches developed within different disciplinary fields. Undoubtedly, research as a process, increasingly requires the management of different methods and tools to conduct complex analyses in a practical way and, above all, in accordance with social and institutional realities and needs for new knowledge. The current global and local challenges require comprehensive perspectives that articulate diverse approaches and perspectives. Therefore, this inter-institutional and international course will explore and integrate qualitative and quantitative methods to address knowledge gaps in the prevention and control of infectious diseases.

This course will provide the participants with methodological and conceptual fundamentals of mixed-methods research. Modules will include: overview of mixed-methods research; developing a mixed-methods research question; strategies for integrating qualitative and quantitative research in mixed-methods study designs; instrument design for mixed-methods research; qualitative interview and focus group discussion; developing interview guides for qualitative research; qualitative data analysis; as well as quantitative, qualitative, and mixed-methods approaches to planning, implementing, and evaluating health interventions.

2. Target audience

This course is designed for:

- Students registered in a formal postgraduate program at national universities who will be assigned credits for their participation
- Postgraduate student without credits as complementary training to their academic process
- Research professors and faculty affiliated with post-graduate programs in health and social sciences of Colombian universities
- Investigators interested in implementation or mixed-methods research on infectious diseases

3. Course Objectives

This postgraduate course will introduce mixed-methods research as a strategy to understand infectious diseases in relation with social realities when implementing public health interventions in local and global contexts.

After completing this course, students will:

- Gain an overall understanding of mixed-methods for health research
- Understand the strengths and limitations of qualitative and quantitative data and how they can be integrated to more fully answer health research questions
- Understand the value of complementary methods and approaches for understanding

infectious diseases in relation with social contexts

4. Methodology

The course methodology includes:

- **Weekly web-based lectures or workshops** on each topic presented by Colombian and international experts.
- **Lectures and workshops that will be delivered within a virtual** network of graduate programs in public health and biomedical sciences in Colombia, creating an “inter-institutional classroom.”
- **Videos and research articles** to illustrate the core concepts of the course to be reviewed by participants before each session to enrich the learning process

Students aiming to receive academic credits for the course must

- be sure their University assigns an institutional course coordinator
- confirm the number of credits to be assigned by the university for the course
- complete videos and/or reading assignments, as well as any additional activity assigned by their institutional course coordinator.
- participate in discussions, review research papers, complete homework assignments, etc., as determined by their institutional course coordinator.
- complete a final assessment (research protocol or concept note). The course coordinator at each institution will be responsible for grading his or her students work

Participating universities may include additional academic activities and define the criteria for the final grade of students in their graduate programs

5. Readings

- All readings for each lecture topic will be distributed via the [Moodle course platform](#)

6. Evaluation

- Attendance: 30%
- Knowledge evaluation: 30%
- Final assignment: 40%
- Note: For students receiving credits, evaluation may also include additional quizzes, additional homework, or brief reading reports prior to each lecture to be submitted to the institutional course coordinator. (To be defined with course coordinator).

7. **Credits:** For students registered in a formal postgraduate program. The number of credits should be assigned by each University. In this case Universities must assign a professor to assume the responsibility of institutional course coordinator

Estimated dedication:

- a. Lecturers: 2 hours per week, 17 weeks
- b. Independent study: 4 hours per week, 17 weeks.
- c. Postgraduate programs could include additional work sessions organized/ supervised by Institutional course coordinator

8. **Language:** English / Spanish

9. **Pre-requisites:** Undergraduate degree in a biomedical, public health, other health-related field or social sciences, or permission of one of the course coordinators.

10. **Course Schedule** (Tuesdays 10 am -12 noon)

No	Date	Topics	Lecturers
Module 1. Introduction and Overview of Mixed-Methods Research			
1	August 9	Overview of mixed-methods in health research <ul style="list-style-type: none"> • Overview and Brief history of the field • Strengths and limitations of mixed-methods research 	Leslie Curry (Yale)
2	August 16	Introduction to mixed-methods research design, a mixed-methods research experience <ul style="list-style-type: none"> • Identifying the best research design to fit the question • A mixed-methods research experience 	Mari Armstrong-Hough (NYU)
Module 2. Overview of Qualitative methods for health Research			
3	August 23	Qualitative research approaches	Diana Rubio (U. Javeriana Bogotá)
4	August 30	Field work and community engagement in qualitative research <ul style="list-style-type: none"> • How to Most effectively and efficiently engage the community • Sampling and data collection in qualitative research • Participatory techniques for data collection 	Diana Castro (UdeA)
5	September 6	Developing semi-structured interviews and focus group discussion <ul style="list-style-type: none"> • Interview guides, interviewing skills 	Lauretta Grau (Yale)

		<ul style="list-style-type: none"> • Considerations about whether to conduct individual or focus group interviews 	
6	September 13	Data analysis in qualitative research – Understanding of qualitative data <ul style="list-style-type: none"> • Different analytic approaches • Software programs 	Diana Rubio (U. Javeriana) & Diana Castro (UdeA / CIDEIM)
7	September 20	Workshop 1: Case study in qualitative research	Diana María Castro (UdeA)
Module 3. Overview of Quantitative Methods for Health Research			
8	September 27	Creating structured surveys and assessing psychometric properties	Javier Mignone (Universidad de Manitoba)
9	October 4	Common quantitative methods, sampling, and data collection approaches in mixed-methods research	Juan Carlos Quintero (UdeA)
10	October 11	Data analysis in quantitative research <ul style="list-style-type: none"> • Vital statistics 	Maria Patricia Arbeláez (UdeA)
Quiz			
Module 4. Mixed-Methods Research, from theory to design			
11	October 18	Problem statement: Developing an appropriate mixed-methods research question <ul style="list-style-type: none"> • When and why to use mixed methods in health research • Which design to use when addressing what kind of research question 	Ellen Mitchell Institute of Tropical Medicine in Belgium
12	October 25	Basic mixed-methods research designs (Approaches, Types)	Claudia Marcela Vélez (UdeA)
13	November 1	Data analysis in mixed-methods research <ul style="list-style-type: none"> • Triangulation of information in Mixed-Methods research 	Ellen Mitchell Institute of Tropical Medicine in Belgium
14	November 8	Writing up the results and knowledge translation: using research insights to advocate for change	Claudia Marcela Vélez (UdeA)
15	November 15	Writing qualitative and mixed methods papers	Lauretta Grau (Yale)

16	November 22	Discussion panel & workshop: mixed-methods in infectious diseases research	Carlos Rojas (UdeA). Diana Castro (UdeA) Juan Carlos Quintero Egresado maestría TDR
Final assignment (due date Nov 29)			

11. Course coordinators

- CIDEIM:
 - Coordinator: Dr. Diana María Castro Arroyave Social Scientist-CIDEIM Research Associate at the Universidad de Antioquia
 - Co-coordinador: María Isabel Echavarría MPH Global Health
- Yale University
 - Dr. Laretta Grau PhD Research Scientist in Epidemiology Yale University School of Public Health

12. Institutional course coordinators

Medellin	Universidad de Antioquia	Carlos Rojas Profesor Titular Coordinador Grupo Epidemiología/Programa de becas TDR/Programa Manitoba Facultad Nacional de Salud Pública carlos.rojas@udea.edu.co
		Sara Robledo Profesora titular Facultad de Medicina Coordinadora Desarrollo y Servicios para productos Biotecnológicos Universidad de Antioquia sara.robledo@udea.edu.co
Cali	Universidad del Valle	Gloria Inés Palma Profesora Titular Escuela de Ciencias Básicas gloria.palma@correounivalle.edu.co
	Universidad Libre	Robinson Pacheco Director Maestría en Epidemiología robinson.pachecol@unilibre.edu.co
	Universidad San Martín	Juan De Dios Villegas Decano de Facultad de Salud juan.villegas@sanmartin.edu.co
Bogotá	Universidad del Bosque	Yamileth Ortiz Directora Doctorado en Salud Pública Facultad de Medicina oyamileth@unbosque.edu.co

	Pontificia Universidad Javeriana	Juan Carlos Ulloa Profesor Asociado, Departamento de Microbiología, Laboratorio de Virología Grupo de Enfermedades Infecciosas Facultad de Ciencias julloa@javeriana.edu.co
Bucaramanga	Universidad Industrial de Santander	Oscar Leonel Rueda, PhD Profesor Posgrados Departamento de Ciencias Básicas orueda@uis.edu.co
Caribe	SUE Caribe (Sistema de Universidades Estatales del Caribe Colombiano – Doctorado de Medicina Tropical)	Doris Gómez Directora Regional Doctorado en Medicina Tropical - SUE Caribe degomez@hotmail.com

Contact:

Alejandra Chamorro
Training Course Portfolio Manager, CIDEIM, Cali, Colombia
achamorro@cideim.org.co