Implementation Science in Care and Public Health

Course Outline

Credits: 156 hours, equivalent to ca. 6 EC
Level: postgraduate
Amsterdam Public Health research institute (APH)
Amsterdam Center for Implementation Science (AmsCIS)
2026

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Introduction

Welcome to the Implementation Science in Care and Public Health course!

This postgraduate program provides a broad introduction to the field of Implementation Science, with a focus on its application in real-world health care and public health settings. The course equips you with the knowledge, skills and practical tools needed to design, conduct and evaluate implementation research.

The course aims to deepen your theoretical and methodological understanding of the challenges involved in researching the implementation of evidence-based practices. It offers in-depth knowledge of topics such as implementation theories, models and frameworks, matching and tailoring implementation strategies, stakeholder engagement, process evaluation, de-implementation and key implementation competencies. You will engage in a dynamic learning environment that includes interactive knowledge modules, hands-on workshops, peer-learning sessions, video-based microlearnings and applied research assignments.

You will benefit from the teaching team's extensive national and international implementation (research) experience, whose diverse backgrounds and strong ties to the Amsterdam Public Health Research Institute shape the course. By the end of the course, you will be equipped with the skills and insights needed to critically design, conduct and evaluate implementation studies that contribute to evidence-based implementation and improved practice.

Who is this course for?

This course is suitable for researchers just starting with an implementation research project, as well as those who wish to further advance their expertise. Researchers at all careers stages (junior, PhD, postdoc) and from diverse care settings, including public health, mental health, intellectual disabilities and long-term care, are welcome to participate. We will be working on your individual implementation study, so we recommend bringing your own case.

What this Course Outline offers

This Course Outline provides a high-level overview of the course structure, content, learning objectives, activities and examination details. For more detailed information on each component, please refer to the Course Manual (available exclusively to registered participants, one month before the start of the course).

Learning objectives

By the end of this course, you will be able to:

- Explain the core concepts and principles that define Implementation Science.
- Describe, compare and apply key theories, models and frameworks used in Implementation Science.
- Formulate relevant scientific questions within the field of Implementation Science.
- Develop and apply implementation study designs and research methods effectively.
- Analyze and evaluate implementation processes and outcomes within health care and public health settings.
- Reflect on your personal strengths and areas for growth in both implementation research and key professional competencies.

Course overview

Course structure

The course consists of four different modules:

1. Introduction to Implementation Science
2. Matching and tailoring implementation strategies
3. Process evaluation
4. De-implementation

Each module consists of a range of educational activities, including:

- Two in-class interactive lectures
- A hands-on workshop
- A peer-learning session
- A self-paced microlearning

Each module is designed to support both theoretical and methodological understanding and practical skill development. Activities are supported by preparatory work, such as reading relevant literature and conducting assignments. Essential topics of Implementation Science will be covered, including implementation theories, models and frameworks, implementation research designs, stakeholder engagement, implementation strategies, process evaluation and de-implementation.

Assignment: throughout the course, you will develop an implementation research protocol for your own study, including a rationale, design and methods section and a plan for analysis and dissemination.

Assessment & grading

Participation is required for the following components:

- Attendance at the introduction session
- Attendance: at least 7 out of 8 lectures
- Attendance: at least 3 out of 4 workshops
- Attendance: at least 3 out of 4 peer-learning sessions
- Completion of the assignments related to the microlearnings
- Completion of an implementation research study protocol

You will receive a certificate of attendance (equivalent to ca. 6 EC) upon fulfilling the requirements above. The course is graded on a pass/fail basis.

Language and location

The course is taught in English. Lectures and workshops are delivered on campus at the Vrije Universiteit Amsterdam. Peer-learning sessions are held either in person or online. Video-based microlearnings are self-paced and offered online.

Contact

Should you have any questions, please contact us via email: aph.amscis@amsterdamumc.nl.

Course coordination and teachers

Course coordinator

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Course administrator

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Teachers

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Course schedule

Below you will find a detailed overview of the course schedule.

Course component	Date
Introduction lecture	Tuesday March 10, 10:00 AM – 1:00 PM
Module 1	
Module 1a, interactive lecture	Tuesday March 17, 10:00 AM – 1:00 PM
Module 1b, interactive lecture	Tuesday April 7, 10:00 AM – 1:00 PM
Workshop 1	Tuesday April 14, 10:00 AM – 1:00 PM
Peer-learning session 1	Tuesday April 14, 2:00 PM – 5:00 PM
Module 2	
Module 2a, interactive lecture	Tuesday May 12, 10:00 AM – 1:00 PM
Module 2b, interactive lecture	Tuesday May 26, 10:00 AM – 1:00 PM
Workshop 2	Tuesday June 9, 10:00 AM – 1:00 PM
Peer-learning session 2	Tuesday June 9, 2:00 PM – 5:00 PM
Module 3	
Workshop 3	Tuesday September 8, 10:00 AM – 1:00 PM
Module 3a, interactive lecture	Tuesday September 15, 10:00 AM – 1:00 PM
Module 3b, interactive lecture	Tuesday September 29, 10:00 AM – 1:00 PM
Peer-learning session 3	Tuesday September 29, 2:00 PM – 5:00 PM
Module 4	
Module 4a, interactive lecture	Tuesday Oktober 27, 10:00 AM – 1:00 PM
Module 4b, interactive lecture	Tuesday November 10, 10:00 AM – 1:00 PM
Workshop 4	Tuesday November 24, 10:00 AM – 1:00 PM
Peer-learning session 4	Tuesday November 24, 2:00 PM – 5:00 PM

Course elements

The various elements of the course are explained below.

Lectures

Introduction lecture

The course kicks off with a welcome from the course coordinator and instructors. You will receive an overview of the course's purpose and structure, including lectures, workshops, peer-learning sessions and microlearning activities. Afterwards, you will meet in peer-learning groups to get to know one another and start discussing your initial study proposals.

Module 1. Introduction to Implementation Science

This introductory module establishes the conceptual and methodological groundwork for the rest of the course. It introduces key implementation theories, models and frameworks, explains how they relate to research design, and prepares you to begin developing your own implementation research plan.

By the end of this module, you will be able to explain the concepts of knowledge utilization and implementation and its importance in study design. You will also be able to identify and select relevant implementation theories, models and frameworks to effectively support, optimize and evaluate knowledge utilization and implementation within your own research design.

Module 2. Matching and tailoring implementation strategies

This module introduces the principles of tailored implementation. In the first part, we will unravel the conceptual background of tailoring and explore the core mechanisms of the approach, including determinant identification. The second part focuses on strategy matching. You will also explore how to define, select and measure implementation outcomes that matter to your project, and how these outcomes provide crucial insight into the mechanisms of your chosen strategies.

By the end of this module, you will be able to identify determinants of an implementation process in a specific context, develop implementation strategies to address them, apply methods and tools such as CFIR-ERIC, Implementation Mapping, Causal Pathway Diagrams and the ItFits Toolkit. You will also learn to select indicators of implementation success. Eventually, you will be able to design implementation research that connects strategy mechanisms to implementation outcomes.

Module 3. Process evaluation

Process evaluations are essential for understanding how impact is - or is not - achieved in practice, as well as how implementation, mechanisms and context interact to shape outcomes. In a process evaluation, researchers may examine participants' views of the intervention; assess how the intervention is implemented; explore contextual factors that affect implementation; monitor dose and reach; and consider how all this may have influenced the outcomes of the intervention effectiveness trial. During this module, we will guide you through each step involved in designing your own process evaluation.

Module 4. De-implementation

De-implementation is often perceived as even more challenging in practice than implementation. Various factors come into play during de-implementation processes, such as cognitive biases, habit persistence

and the tendency to justify current practices with outdated evidence. Additionally, 'action bias' plays a role: the psychological preference to act rather than to do nothing, even when that action is not effective. In this module, you will learn about the dilemmas and difficulties involved in identifying and defining low-value care, explain the concept of de-implementation, describe relevant de-implementation theories, models and frameworks and recognize the key challenges involved in de-implementation.

Workshops

Workshop 1. Stakeholder engagement

In this practical workshop, we will guide you through the process of identifying, understanding and actively involving stakeholders throughout your project. By the end of the workshop, you will be able to systematically identify stakeholders, select appropriate engagement strategies and design a plan to engage stakeholders effectively in your own research project.

Workshop 2. Matching determinants to strategies

Though interactive exercises and hands-on application of frameworks such as CFIR, ERIC, Implementation Mapping, Tailored Implementation, and the ItFits Toolkit, you will learn to navigate complex implementation contexts and design strategies that increase the likelihood of success. We will focus on specifying implementation strategies, following theoretical guidance. This ensures your strategies are actionable, measurable and directly linked to the determinants they address.

By the end of this workshop, you will be able to develop a tailored implementation plan for your own project, with clearly defined, actionable strategies linked to determinants and outcomes.

Workshop 3. Logic model building

In this workshop, you will move beyond theory and build a logic model tailored to your own research project. Step by step, we will guide you in translating your intervention activities, assumptions and goals into a structured model, representing the processes and causal pathways of both an intervention and its implementation processes which will serve as a solid foundation for your process evaluation.

The workshop equips you with a clear, well-developed logic model that not only strengthens the design of your study but also helps to communicate its rationale to funders, stakeholders and peers.

Workshop 4. Designing de-implementation strategies

During this workshop, you will work with real-world cases and evidence-informed frameworks to co-create de-implementation strategies. By combining theory with applied exercises, the workshop aims to bridge the gap between understanding the problem and implementing meaningful change in practice.

You will be able to apply de-implementation theories, models and frameworks to practical cases or your own research plan, identify key barriers and facilitators to discontinuing low-value practices in their own context, generate and prioritize potential de-implementation strategies tailored to specific settings and develop an outline of an evaluation plan to assess the feasibility and impact of chosen strategies.

Microlearnings

In between the lectures and workshops, you will individually complete 4 online microlearnings, each focused on a specific topic. These microlearnings include videos, interactive elements and short assignments. For each microlearning, you will write a brief reflection for your final assessment on how the topic could be incorporated into your own research project. This helps ensure that theoretical concepts are meaningfully connected to your study protocol and enriches the joint reflections during the peer-learning sessions.

Together, the microlearnings support you in translating theoretical concepts from Implementation Science into practical research design.

Peer-learning sessions

During 4 peer-learning sessions, you will apply the knowledge gained from the lectures, workshops and microlearnings to develop your implementation study protocol. Each session builds on the previous one, guiding you step by step from an initial outline to a near-final study protocol. Working in small groups under the guidance of one of the course teachers, you will review each other's work, engage in discussions and learn from shared feedback.

These sessions also include dedicated attention to core competencies and professional development in Implementation Science. Each meeting focuses on a different competency, providing opportunities for reflection and growth across the breath of Implementation Science research and practice.

Through these peer-learning sessions you will not only refine your own study protocol, but also strengthen your skills in peer review, critical self-reflection and collaborative problem-solving.

Assignment

Throughout the course, you will develop an implementation research protocol for your own study, including a rationale, design and methods section and a plan for analysis and dissemination.

Prior to the introduction lecture, you will submit a short description outlining your research project.

During the peer-learning sessions, you will receive feedback on your study protocol through both peer-to-peer and teacher input. Prior to each session, you will receive draft protocols of your group members. Each session will focus on new sections of the protocols and follows a structured format: short presentations of draft protocols, a focused discussion, followed by an open group discussion. Discussions will focus on the Implementation Science behind the protocol, rather than the specific project topic. In the final peer-learning session, feedback will cover all components of your protocol.

The final study protocol should be written in English and has a maximum length of 1,500 words (excluding the reference list). It should include a project description; research rationale; description and a justification for your chosen implementation theory, model or framework; methods section; and a short paragraph in which you reflect on how the implementation theory, model or framework will help you analyze the implementation process and/or outcomes.