

Logic and Critical Thinking

Last Updated: Fri, 01/09/2026

Course prefix: PHIL

Course number: 3113

Section: HMB

CRN (you may add up to five):

35153

Instructor First Name: Hernan

Instructor Last Name: Medina Botero

Semester: Spring

Academic year: 2026

Course description:

We all want to think right about the world around us, and act accordingly (we try to avoid acting from misleading information or faulty reasoning processes all the time!). Critically thinking is one way of doing this, and this course aims to provide you with tools to better think about any issue.

In this course, you will learn both about how our brains process information, and how to better evaluate that information. More specifically, you will learn to identify ways of thinking that are reliably misleading, which is a first step to overcome these thinking pitfalls. But you will also learn some strategies to think better. In particular, you will acquire tools to assess evidence and arguments, and to adjust your beliefs accordingly.

Course learning outcomes:

Upon successful completion of this course, students will be able to

- identify and avoid a range of biases that distort our thinking,
- assess the strength of an argument by examining its logical structure,
- determine whether a fact is evidence for a hypothesis or independent of it and assess the strength of a piece of evidence,
- use the updating rule to determine the probability of a hypothesis given some evidence,
- evaluate generalizations and causal arguments.

Required course materials:

We will be using an online textbook for this course, available only on the Top Hat platform:

- Manley, D. (2022). *Reason Better: An Interdisciplinary Guide to Critical Thinking*. Top Hat.

Grading policy:

Assignment (Grade Weight)

- Exam 1 (15%)
- Exam 2 (15%)
- Exam 3 (20%)
- Quizzes (15%)
- Top Hat Homework (10%)
- Participation (15%)
- Leading Discussion (10%)

Attendance policy:

You are expected to attend class regularly. Notice that there is a participation grade in the course, and it is impossible to get full participation credit without regularly attending class. It is your responsibility to attend exams, and complete assignments by the established due date.

Academic honesty/integrity statement:

Georgia Tech aims to cultivate a community based on trust, academic integrity, and honor. Students are expected to act according to the highest ethical standards. For information on Georgia Tech's Academic Honor Code, please visit

<http://www.catalog.gatech.edu/policies/honor-code/> or

<http://www.catalog.gatech.edu/rules/18/>.

Any student suspected of cheating or plagiarizing on a quiz, exam, or assignment will be reported to the Office of Student Integrity, who will investigate the incident and identify the appropriate penalty for violations.

Core IMPACTS statement(s) (if applicable):

This is a Core IMPACTS course that is part of the Humanities area.

Core IMPACTS refers to the core curriculum, which provides students with essential knowledge in foundational academic areas. This course will help master course content, and support students' broad academic and career goals.

This course should direct students toward a broad Orienting Question:

- How do I interpret the human experience through creative, linguistic and philosophical works?

Completion of this course should enable students to meet the following Learning Outcome:

- Students will effectively analyze and interpret the meaning, cultural significance and ethical implications of literary/philosophical texts or of works in the visual/performing arts.

Course content, activities and exercises in this course should help students develop the following Career-Ready Competencies:

- Ethical Reasoning
- Information Literacy
- Intercultural Competence