

# Logic and Critical Thinking

PHIL 3113, 3 credits

Fall 2026

## General Information

### 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 Goals and 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.

### **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

## Course Materials

### **Textbook:**

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.

## Course Requirements and Grading

Assignment	Grade Weight	Grading Scale	
Exam 1	15%	A	90 - 100%
Exam 2	15%	B	80 - 89%
Exam 3	20%	C	70 - 79%
Quizzes	15%	D	60 - 69%
Top Hat Homework	10%	F	below 60%
Participation	15%		
Leading Discussion	10%		

### **According to policy, grades at Georgia Tech are interpreted as follows:**

- A Excellent (4 quality points per credit hour)
- B Good (3 quality points per credit hour)
- C Satisfactory (2 quality points per credit hour)
- D Passing (1 quality point per credit hour)
- F Failure (0 quality points per credit hour)

### **Description of Graded Components:**

- **Participation:** The point of ‘participation’ is that you are an active part of the course, that you contribute something to it; as such, there are different ways of contributing. One of them is speaking up during class; other alternatives include sharing relevant content with the class (articles, papers, videos), or proposing a different way in which you can contribute.
- **Weekly Quizzes (Canvas):** Each week, you will answer a quiz about the material covered during the week. Quiz format will consist of objective questions (multiple-choice, true/false, fill in the blank, or a mathematical problem).
- **Top Hat Homework:** Homework questions are embedded in your *Reason Better* text on Top Hat.
- **Leading Discussion:** Starting on week 3, students will be assigned as discussion leaders for the week. Discussion leaders will motivate participation in the discussion by bringing questions on the topics covered in the assigned reading(s), examples for analysis, relations they find between class topics, or between class topics and their daily lives, interests, etc.
- **Exams:** There will be three exams in the course, the third of which is a cumulative final exam covering all of the course material.

# Course Expectations and Guidelines

## Health and Safety

If you are experiencing symptoms of a respiratory illness, it is a good idea to refrain from coming to campus. Keeping each other safe is a shared responsibility. I encourage you to follow the recommendations issued by the CDC (<https://www.cdc.gov/respiratory-viruses/prevention/precautions-when-sick.html>).

## Academic Integrity

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.

## Generative AI

AI is changing the world quickly. It is impressive what different Large Language Models (LLMs) can do, and it is very tempting to use them for various daily tasks; these models are faster than us, have access to more information than we can process, and even produce text in a tone that sounds strikingly human.

Given this, it can be tempting to use AI models to complete your coursework. I encourage you to use these models to help you in this course if you feel the need to use them (for example, because you are still unclear about a concept and you want feedback on what you are missing). That being said, using them to *help* you and using them to *complete* your assignments are two very different things. The latter is a form of academic misconduct! You do not need AI to do well in this course, and you will get more out of it if you do not rely on AI too much.

Let me say a bit more about this last point. There are multiple abilities that we, as humans, need in order to relate to each other and to navigate the world in a meaningful way. For example, you are better off when you know how to read and write. Similarly, you are better off having a basic command of math. These abilities require practice. Thinking is just the same. You are better off when you can do your own reasoning, and you get better at it by practicing. This is what this course wants you to do: become better at reasoning.

If you have AI complete your work (summarize readings for you, take notes, answer a quiz, etc.), you are commissioning it to do a basic task that it would be better for you to fully command before giving it up. In fact, what will likely happen in the long run is that you decommission your own thinking. (In debates about the ethics of artificial intelligence, the concern is that you are more vulnerable to *deskilling* over time—the process by which you lose important skills due to lack of experience and practice.) Just as you probably would not be OK saying “I actually do not want to learn to read, since AI can do it for me,” you should be troubled by the idea of having AI doing your own thinking tasks.

This course is an opportunity to slow down and consciously use your thinking abilities, your reflective powers. We do not have that opportunity very often in this fast-paced world. Use AI wisely, as an aid when needed, and use this course as a space to work on your own critical abilities.

*\* Most of this statement on Generative AI (the parts I largely agree with) is taken from a similar statement by Tyler Cook.*

## **Accommodations for Students with Disabilities**

If you are a student with learning needs that require special accommodation, contact the Office of Disability Services at (404)894-2563 or <http://disabilityservices.gatech.edu/>, as soon as possible, to make an appointment to discuss your special needs and to obtain an accommodations letter. Please also e-mail me as soon as possible in order to set up a time to discuss your learning needs.

## **Student-Faculty Expectations Agreement**

At Georgia Tech we believe that it is important to strive for an atmosphere of mutual respect, acknowledgement, and responsibility between faculty members and the student body. See <http://www.catalog.gatech.edu/rules/22/> for an articulation of some basic expectation that you can have of me and that I have of you. In the end, simple respect for knowledge, hard work, and cordial interactions will help build the environment we seek. Therefore, I encourage you to remain committed to the ideals of Georgia Tech while in this class.

## **Attendance, Participation, Late Assignments, and Missed Work**

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. *If you experience or anticipate circumstances that affect your ability to complete an assignment, please contact me at least 2 days in advance of the due date so we can work on a solution.* Assignments (including exams) will not be accepted past the due date, unless prior arrangements have been made. Please review Georgia Tech's general rules on Attendance and Missed Work [here](#).

## **No Discrimination**

The Ivan Allen College of Liberal Arts supports the Georgia Institute of Technology's commitment to creating a campus free of discrimination on the basis of race, color, religion, sex, national origin, age, disability, sexual orientation, gender identity, or veteran status. We further affirm the importance of cultivating an intellectual climate that allows us to better understand the similarities and differences of those who constitute the Georgia Tech community, as well as the necessity of working against inequalities that may also manifest here as they do in the broader society

## **Student Resources**

Here is a great reference list with the wide array of resources that Georgia Tech offers, visit <https://students.gatech.edu/student-resource-guide>.