

**PHI169 - 3 credits**

# CRITICAL REASONING

*time & venue*

M&W 9:30-10:45 in C-349

M&W 11:00-12:15 in C-349

*instructor* **Marcello Di Bello**

*e-mail* [marcello.dibello@lehman.cuny.edu](mailto:marcello.dibello@lehman.cuny.edu)

*office hrs* M&W 2:00-3:00 in C-365

## ***course description<sup>1</sup>***

you will learn the basic concepts of probability theory and then apply them to examine a research question on a topic of your choice

*part 1* examines how to formulate a research question, identify hypotheses and collect evidence

*part 2* turns to probability theory as a tool to assess

the strength of the evidence supporting a hypothesis

*part 3* applies probability theory to answering a research question of your choice

## **materials**

you will read newspaper articles and excerpts from scholarly essays as well as watch video clips

slides, handouts and homework assignments will allow you to concentrate on key aspects of the course materials

## **website**

course materials are available on the course website

[philosophy169.wordpress.com](http://philosophy169.wordpress.com)



<sup>1</sup> from the Bulletin: "Introduction to the concepts and method of thinking, reading and writing analytically and evaluatively"

## requirements

### ✦ six pass/fail assignments

**NB:** you must must pass all pass/fail assignments in order to pass the course

- ✦ two in-class exams, each counting for **15%** of the grade
- ✦ **present** your research findings and write a **report** (each **30%** of the grade)
- ✦ **participation** (**10%** of the grade)

Grading criteria and further details about course requirements are available on the course website

## assignment submission

a paper version should be handed in at the beginning of class and an electronic version should be submitted on the course website

## late policy

if an assignment is submitted late, you will not receive credit for it

## course objectives

you will develop

- ✦ intellectual honesty and humility
- ✦ analytical writing skills
- ✦ skills for oral presentations
- ✦ knowledge of probability theory
- ✦ research skills (e.g. identifying questions and hypotheses, collecting and weighing evidence)

**SCHEDULE** - *Below is a tentative list of course topics. Further details are available on the course website.*

### **PART 1 - QUESTIONS, EVIDENCE, HYPOTHESES**

*week 1: Jan 29 & Jan 31*

Introduction

*week 2: Feb 5 and Feb 7*

Questions

*week 3 & 4: Feb 14 and Feb 21 - No class on Feb 12 & Feb 19*

Hypotheses

*week 5: Feb 26 & Feb 28*

Evidence

*week 6: Mar 5 & Mar 7*

Hypotheses and evidence

### **PART 2 - PROBABILITY**

*week 7: Mar 12 & Mar 14*

Basics of probability

*week 8: Mar 19 & Mar 21*

Conditional probability

*week 9: Mar 26 & Mar 28*

Bayes' theorem

*week 10: No class on Apr 2 & Apr 4*

Spring break

*week 11: Apr 9 & Apr 11*

Bayes' theorem (continued)

*week 12: Apr 16 & Apr 18*

Review

**PASS/FAIL STAGE 1**  
**due Feb 14**

**PASS/FAIL STAGE 2**  
**due Feb 26**

**PASS/FAIL STAGE 3**  
**due Mar 12**

**EXAM 1**  
**Mar 26**

**EXAM 2**  
**Apr 18**

## course etiquette

- ♦ do the reading and come to class prepared
- ♦ disagree with me and your fellow students, but be polite
- ♦ don't be shy
- ♦ don't get distracted by the virtual world, e.g. facebook, instagram, .

## no plagiarism

you may not copy the work of others without acknowledgement, or else *you will fail the class*

## disability accommodation

students who have a disability which may necessitate an academic accommodation or the use of auxiliary aids and services in a class should contact the *Office of Student Disability Services* located in Shuster, room 238, phone number 718-960-8441

## tutoring services

the *Academic Center for Excellence (ACE)* is the tutoring centers on campus

the ACE provides appointment based and drop-in tutoring in the humanities, social sciences, and writing, as well as general writing and academic skills workshops

to obtain information about the ACE, please visit their website at [www.lehman.edu/issp](http://www.lehman.edu/issp) or call the ACE at 718-960-8175

## PART 3 - APPLYING PROBABILITY

**week 13:** Apr 23 & Apr 25

Prior probabilities

**week 14:** Apr 30 & May 2

Evidence given hypothesis

**week 15:** May 7 & May 9

Applying Bayes' theorem

**week 16:** May 14 & May 16

Students' presentations

**PASS/FAIL STAGE 4**  
due Apr 30

**PASS/FAIL STAGE 5**  
due May 7

**PASS/FAIL STAGE 6**  
due May 14

**PRESENTATION STAGE 7**  
Schedule TBA

**FINAL REPORT STAGE 8**  
due May 18