



**INTRODUCTION TO**  
**CRITICAL**  
**THINKING**  
**FOR ADULTS**

*with Karsten Miermans*



This course is an introduction to critical thinking. Thus, the broad goal of this course is to become much more objective and systematic in your thinking.

### **Broad topics**

1. Logic & reason
2. Updating beliefs & evidence-based reasoning
3. Biases
- (4.) We may also have time for a fourth part (either quantitative information or defense against the dark arts).

**We'll assume no prior knowledge.** However, if there's enough interest, we will probably split into two groups by prior experience and/or difficulty level.

### **Administrative details**

- **Months:** October—February 2020.
- **Day and time:** Every other week on Wednesdays from 19.00 hrs.
- **Duration:** 1.5 hrs per class
- **Time investment:** approximately 1 hr per week
- **Cost:** 30 E per month (<http://lyzeum-muenchen.de/Kosten>)
- **Format:** Mixture of traditional lecture, games/exercises and discussion
- **Where:** Mixed virtual / in-person (those that really can't be there in person can join via Zoom)

For those students that want to continue with more advanced topics<sup>1</sup>, we'll give the option of extending the course by another six months (if enough interest).

Besides the course evenings, I'll typically give (small!) assignments. Want to go deeper than what we'll cover together? That's of course possible — I'd be delighted to help you (at no additional cost) in your journey to become a better critical thinker with personal assignments and more advanced projects.

### **More specific concepts that we'll study**

- **structure and analyze arguments**
- differentiate between different **types of arguments** (valid, sound, invalid, inductive, deductive)
- recognize basic formal and informal **logical fallacies**
- differentiate **falsifiable from unfalsifiable claims**, and to propose ways to test beliefs
- recognize selected methods from the '**dark arts**'
- recognize basic **cognitive biases** in your thinking
- use selected **debiasing strategies**
- include evidence to **systematically update your beliefs**
- use basic **estimation methods** to propose quantitative answers

---

<sup>1</sup> Possible topics include: influential deductive arguments in ethics & philosophy, game theory, Bayesian updating, equivalence class forecasting and doing projects