

**PHI 220 – Logic**  
Section A – T & TR – 11:00-12:15 – Tribble A304  
Section B – T & TR – 2:00-3:15 – Tribble A306  
Wake Forest University  
Spring 2020

Instructor: Dr. Jonathan Barker  
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Office: Tribble B310  
Office Hours: T & TR 3:30pm to 5pm or by appointment

**Course Description**

Elementary study of the laws of valid inference, recognition of fallacies, and logical analysis.

**Required Text**

*A Concise Introduction to Logic*, Hurley & Watson (13<sup>th</sup> Edition)

**Assessment**

*Weekly Exercises* (15%)

On every “exercises” day on the reading schedule, please (1) complete the exercises before class, (2) bring your answers with you to class, and (3) be prepared to be called on to explain your answers out loud. These class sessions will be devoted to working through the exercises together, in a *collaborative* and *non-judgmental* manner. Note: I don’t expect your answers to be perfect (or even good!).

*Midterm Exam* (30%)

The midterm will focus on propositional logic (translations, truth-functionality, truth-tables, and argument forms), although there will also be some questions on material from the beginning of the semester (ex. basic definitions, informal fallacies, etc.) A study guide will be posted on Sakai roughly one week before the midterm exam.

*Final Exam* (40%)

A cumulative, in-class exam, which will be heavily weighted toward material covered in the second half of the semester. So, although you should study everything we’ve covered, you should spend the most time on natural deduction and predicate logic. Dates and times for the final:

Section A: 9am Wednesday, May 6<sup>th</sup>

Section B: 9am Friday, May 8<sup>th</sup>

## *Paradoxes Email Assignment (15%)*

Details to be posted on Sakai in due course.

## **Policies**

### *Attendance Policy*

Each student may have no more than **two** unexcused absences. Every unexcused absence thereafter will result in a one-third letter grade deduction from your final grade. So, for example, one additional unexcused absence over the two freebies will cause a final grade of A- to be lowered to a B+. A second additional unexcused absence will cause an A- to become a B. A third will cause an A- to become a B-. And so on.

### *Laptops*

No laptops out during class, please.

### *Disabilities*

I am committed to providing accommodations to students with disabilities. If you are eligible for accommodations, please contact me and/or the Learning Assistance Center & Disability Services (phone: 336.758.5929, email: [lacds@wfu.edu](mailto:lacds@wfu.edu)).

### *Academic Honesty*

From the Wake Forest student conduct website:

[Signing the The Honor Code] means that students have agreed not to deceive (lie to) any member of the community, not to steal from one another, not to cheat on academic work, not to plagiarize academic work, and not to engage in any other form of academic misconduct. It means that we can trust each other, and that we willingly accept responsibility for our own conduct and activities. This is a tradition that goes back to the founding of Wake Forest, and with your participation, it continues to be a cornerstone of our community and our interactions with one another.

## **Schedule**

### **Week 1**

1/14—What is logic?

CITL 1.1: Arguments, Premises,  
& Conclusions

1/16—Arguments

Reading:

CITL 1.3: Deduction & Induction

CITL 1.4: Validity, Truth, Soundness,  
Strength, Cogency

~~CITL 1.5: Proving Invalidity~~

Week 2

1/21—Arguments (Exercises)

Exercises:

CITL Exercise 1.4.I, V

~~CITL Exercise 1.5.I, II~~

1/23— Proving Invalidity

Reading:

CITL 1.5: Proving Invalidity

Week 3

1/28— Proving Invalidity (Exercises)

CITL Exercise 1.5.I, II

1/30—Informal Fallacies I

Reading:

CITL 3.1: Fallacies in General

CITL 3.2: Fallacies of Relevance

CITL 3.3: Fallacies of Weak Induction

Week 4

2/4—Informal Fallacies I (Exercises)

Exercises:

CITL Exercise 3.2.I & III

CITL Exercise 3.3.I & IV

2/6—Informal Fallacies II

Reading:

CITL 3.4: Fallacies of Presumption, Ambiguity, & Illicit Transference

Week 5

2/11—Paradoxes: the Sorites

Reading: on Sakai

2/13—Propositional Logic I

Reading:

CITL 6.1: Symbols and Translations

Week 6

2/18— Propositional Logic I

Reading

CITL 6.2: Truth Functions

2/20—Propositional Logic I

Exercises: 6.2.I

Week 7

2/25—Propositional Logic II

2/27—No Class (APA Central)

Reading: CITL 6.3: Truth Tables for Propositions

Week 8

3/3—Review Session

3/5—Midterm Exam

Week 9—10

3/10—3/23 Break & COVID Cancelation

Week 11

3/24—Paradoxes: Moral Dilemmas

Reading: Sainsbury, Chapter 2.4

3/26—Propositional Logic II

CITL 6.3: Truth-Tables for Propositions

CITL 6.4: Truth-Tables for Arguments

Week 12

3/31—Propositional Logic II

Exercises: CITL 6.3.II 1—5; CITL 6.4.II 15—25

4/2—Paradoxes: the Ship of Theseus

No Reading

Week 13

4/7—Propositional Logic III  
CITL 7.1: Rules of Implication I

4/9—Propositional Logic III  
Exercises: CITL 7.2: Rules of Implication II

Week 14

4/14—Propositional Logic III  
Exercises:  
CITL 7.1 I (1—10) & III (1—10)  
CITL 7.2 I (1—10) & III (1—10)

4/16—Propositional Logic III  
Reading:  
CITL 7.3 Rules of Replacement I  
CITL 7.4 Rules of Replacement II

Week 15

4/21—Propositional Logic III  
Exercises:  
CITL 7.3 III (10—20; 30—35)  
CITL 7.4 III (10—20; 40—45)

4/23—Paradoxes: Freedom  
No Reading

Week 16

4/28—Propositional Logic IV  
Reading:  
CITL 7.5 Conditional Proof

4/30—Propositional Logic IV  
Exercises:  
CITL 7.5 I (1—5; 15—20)