

## **Phil/LPS 31: Introduction to Inductive Logic Course Syllabus**

### **Instructor:**

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Office SST 785 – Office hours: Tu/Th 1-2pm and by appointment

### **Teaching Assistant:**

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**Course description:** This course introduces elements of inductive logic. There will be an emphasis on different philosophical aspects of the problem of induction and on the relation between probability and inductive logic, in particular as it pertains to scientific reasoning. Some familiarity with basic formal logic will be assumed.

**Course objectives:** By the end of this course you should have a basic knowledge of informal inductive reasoning and some of the ways it can be made more precise, especially elementary probability theory. You should in particular be able to examine inductive arguments critically and design strong inductive arguments, as well as understand the importance of inductive reasoning in science and in everyday life.

### **Required text:**

- Brian Skyrms (1999): Choice and Chance. An Introduction to Inductive Logic. Wadsworth Publishing, 4th edition.

### **Course Requirements:**

- Exams: Two quizzes (Week 4, Week 8) and a final exam (Wed, Jun 12, 8:00-10:00am). Make-up quizzes or a make-up exam will be allowed only with proper documentation excusing the student's absence or with prior approval from the instructor.
- Homeworks: There will be three homework assignments. Two homework accompany each quiz, and the last one is associated with the final. Homeworks are not mandatory, but a successful completion of the homework assignment can earn back points on quizzes (up to 10%).

### **Grade Evaluation:**

Quizzes: 30% each

Final Exam: 40% total

- Quiz grades will be posted online via EEE. Quizzes and homeworks will be returned by your TA in discussion sections or office hours.

- Take a look at UCI's policy on academic honesty. *Any cheating will result in an F for the course and will be reported to the appropriate University officials.*

Letter grade distribution by percentage:

$A+ \geq 97$ ;  $A = 93 - 96$ ;  $A- = 90 - 92$   
 $B+ = 87 - 89$ ;  $B = 83 - 86$ ;  $B- = 80 - 82$   
 $C+ = 77 - 79$ ;  $C = 73 - 76$ ;  $C- = 70 - 72$   
 $D+ = 67 - 69$ ;  $D = 63 - 66$ ;  $D- = 60 - 62$   
 $F < 60$

## Topics

Logical preliminaries (Skyrms Ch. 1; week 1)

Probability and induction (Skyrms Ch. 2; week 2)

Traditional problem of induction (especially Skyrms Ch. III.1, III.2; week 3)

Experimental methods (Skyrms Ch. 5; weeks 4 and 5)

Probability calculus (Skyrms Ch. 6; weeks 6, 7 and 8)

Kinds of probability (Skyrms Ch. 7; week 9)

Probability and the scientific method (Skyrms Ch. 8; week 10)