

Philosophy 2303.01E— Logic

Spring 2019

Dr. Bill Bolin

Office & Hours: Talbot HL 324, MW 3:30p—5:00p, T 2:00—4:00, and by appt.

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COURSE DESCRIPTION

This course will allow you many opportunities to study and practice informal and formal logic. We will examine different ways to evaluate deductive arguments for validity and inductive arguments for strength, including historical arguments, fictitious arguments, and even contemporary arguments in the news. For the most part, we will practice categorical logic (ex., “All Spartans are brave persons...”), truth-functional logic (ex., “It is not the case that both: Crimea is part of Ukraine and Crimea is part of Russia...”), symbolic logic (ex., “‘Neither Aristotle nor Boethius is still alive,’ translates $\sim[A \vee B]$ ”), and Nyaya logic (ex., “There is fire on that mountain because there is smoke on it...”). The primary take-away of the course is that you will be able to judge arguments, your own and others’, based on different types of reasoning.

No textbooks are required. We will learn our logic through open-source material, stirring lectures, and a few corny jokes.

Handouts will be available through the course shell in D2L Brightspace, so you’ll need the ability and equipment to access that shell.

STUDENT LEARNING OUTCOMES

1. Students will successfully test an argument for validity.
2. Students will analyze categorical arguments.
3. Students will analyze truth-functional arguments.
4. Students will be able to demonstrate knowledge of the interconnectedness of global dynamics (issues, processes, trends, and systems).
5. Students will be able to analyze, evaluate, or solve problems when given a set of circumstances, data, texts, or art.
6. In written, oral, and/or visual communication, A&M-Commerce students will communicate in a manner appropriate to audience and occasion, with an evident message and organizational structure.
7. Students will be able to interpret, test and demonstrate principles revealed in empirical data and/or observable facts.
8. Students will demonstrate an understanding of societal and/or civic issues.

COURSE OBJECTIVES

1. To examine and evaluate arguments with regard to internal validity.
2. To demonstrate proficiency in explaining how parts of arguments relate to each other to prove validity.
3. To demonstrate understanding of features of logic from both Western and non-Western civilizations.

ASSIGNMENTS

Exams: You will take four exams, each covering roughly a quarter of the semester. The questions on each exam will look much like the questions in the exercises we'll be doing as preparation, with spaces provided on the exam sheet for your written answers.

Quizzes: You will take eight quizzes to test your comprehension of some of the reading and of class lectures. These timed quizzes will be taken during class and cannot easily be made up.

Homework: You will have plenty of homework from the exercises provided, but that homework will not be graded. We will regularly review the homework exercises in class, and you are expected to keep up with it to prepare for the exams and to complete the student learning outcomes.

EVALUATION

Assignment Values	Final Grade Ranges
Exams (4 @ 30 pts. each) 120 pts. Quizzes (8 @ 10 pts. each) 80 pts.	A=180--200 B=160--179 C=140--159 D=120--139 F=0--119

ATTENDANCE

Regular attendance is important for several reasons, but it is especially important for you to keep up with the assignments in this class. The tentative calendar below offers only the most general description of activities; more detail will be provided in class as the semester goes on. If you are absent the day an assignment is due, you must contact me and make satisfactory arrangements for turning in the assignment. Failure to make *prior satisfactory* arrangements will result in your forfeiting the right to turn in that assignment. As per university policy, excessive absences (three weeks' worth) may result in your being dropped from the course.

PLAGIARISM/ACADEMIC DISHONESTY STATEMENT

Instructors in the Department of Literature and Languages do not tolerate plagiarism and other forms of academic dishonesty. Instructors uphold and support the highest academic standards, and students are expected to do likewise. Penalties for students guilty of academic dishonesty include disciplinary probation, suspension, and expulsion. (Texas A&M University-Commerce Code of Student Conduct 5.b[1,2,3]). Academic dishonesty on one assignment in this course will most likely lead to a failing grade for the course.

TENTATIVE CALENDAR

Jan. 14 Introduction to course

Jan. 16 Definitions of *logic*: Read from The Many Worlds of Logic

Jan. 18 Argumentation: Read "The Pragmatic Approach"

Jan. 21 MLK Holiday

Jan. 23 Inductive and deductive arguments: Read "Deductive and Inductive Arguments"

Jan. 25 Inductive and deductive arguments, continued

Jan. 28 Evaluating deductive arguments

Jan. 30 Evaluating deductive arguments, continued, including Knights and Knaves

Feb. 1 Evaluating inductive arguments

Feb. 4 Informal fallacies: Examples at Purdue OWL and School of Thought

Feb. 6 Informal fallacies, continued

Feb. 8 **Exam 1**

Feb. 11 Categorical logic form; Read from The Many Worlds of Logic

Feb. 13 Categorical logic form, continued

Feb. 15 Categorical logic form, continued

Feb. 18 Syllogism

Feb. 20 Syllogism, continued

Feb. 22 Syllogism, continued

Feb. 25 Boole and Venn

Feb. 27 Boole and Venn, continued

Mar. 1 **Exam 2**

Mar. 4 Truth-functional logic; Read from The Many Worlds of Logic

Mar. 6 Truth-functional logic and form

Mar. 8 Truth-functional language beginnings

Mar. 11 English to TL

Mar. 13 English to TL, continued

Mar. 15 English to TL, continued, and a little talk about truth tables

Mar. 18–22 Spring Break

Mar. 25 Truth-functional rules

Mar. 27 Truth-functional rules, continued

Mar. 29 Truth-functional rules continued

Apr. 1 Truth-functional inference rules

Apr. 3 Truth-functional inference rules, continued

Apr. 5 **Exam 3**

Apr. 8 Truth-functional replacement rules

Apr. 10 Truth-functional replacement rules, continued

Apr. 12 Indirect and conditional proof

Apr. 15 Indirect and conditional proof, continued

Apr. 17 Indirect and conditional proof, continued

Apr. 19 Read Putnam's "Meaning and Reference," available in the course shell [Online Meeting]

Apr. 22 Bearers of truth

Apr. 24 Premise-free proofs

Apr. 26 Premise-free proofs, continued

Apr. 29 Classical Indian logic

May 1 Arabic logic; Confucian logic

May 3 Review

May 8 **Exam 4** (8:00a—10:00a Final Exam schedule)

Students with Disabilities:

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities.

If you have a disability requiring an accommodation, please contact:

**Office of Student Disability Resources and Services
Texas A&M University-Commerce**

**Gee Library
Room 162**

Phone (903) 886-5150 or (903) 886-5835

Fax (903) 468-8148

StudentDisabilityServices@tamuc.edu

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***Campus Concealed Carry statement:** Campus Concealed Carry - Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in Texas A&M University-Commerce buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and A&M- Commerce Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations. For a list of locations, please refer to ([http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedure s/34SafetyOfEmployeesAndStudents/34.06.02.R1 .pdf](http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedure%2034SafetyOfEmployeesAndStudents/34.06.02.R1.pdf)) and/or consult your event organizer). Pursuant to PC 46.035, the open carrying of handguns is prohibited on all A&M-Commerce campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.*

***Tenets of Common Behavior statement:** All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. (See Student's Guide Handbook, Policies and Procedures, Conduct)¹*

¹ In other words, don't be a distraction during class.