PHIL 2303
Introduction to Formal Logic

CLASS SYLLABUS

LONE STAR COLLEGE UNIVERSITY PARK

Instructor Contact Information

Instructor: Professor Paul Tran-Hoang

Email: Paul.Tran-Hoang@lonestar.edu

Office Location: TBD

Student Hours: Wednesday and Friday 1pm-2pm. I am available outside these hours. Feel free to drop me an email and I will be happy to accommodate for your schedule.

Phone: TBD

Website / Other Contact: TBD

Welcome to PHIL 2303

Course Title: PHIL 2303

Course Subject: Introduction to Formal Logic

Course Section: 6001

Classroom Location: Virtual

Semester and Year: Fall 2020

Class Days and Times: Online Course - no scheduled days

Course Overview

Credit Hours: 3

Contact Hours: 48

Prerequisite: MATH 0310; College Level Readiness in Reading AND Writing

Lecture Hours: 3

Lab Hours: NA

Core Applicability: Mathematics [20]

Catalog Description: The purpose of the course is to introduce the student to symbolic logic, including syllogisms, propositional and predicate logic, and logical proofs in a system of rules.

Student Learning Outcomes:
1 - Determine the logical structure of English arguments by identifying premises and conclusions. 2 - Translate English statements into propositional and predicate notation. 3 - Validate argument forms using the methods of truth tables and a system of propositional logic. 4 - Understand basic concepts of formal logic including truth functionality, validity, soundness, tautology, contradiction, counterexample, and equivalence.

In our efforts to prepare students for a changing world, students may be expected to utilize computer technology while enrolled in classes, certificate, and/or degree programs within LSCS. The specific requirements are listed below:

Access to a personal computer with a current, updated operating system. Chrome or Firefox web browser must be installed to complete course assignments.

Getting Ready

Required Material:

Patrick J. Hurley, *A Concise Introduction to Logic*, 13th Edition (Cengage). You'll need a version that comes with MindTap (see **Important Note**)

Important Note: You will also need access to MindTap where homework will be completed and submitted. You should purchase the "Digital Platform" version of this textbook found at this link: https://www.cengage.com/c/a-concise-introduction-to-logic-13e-hurley/9781305958098PF/

If you are taking multiple classes with Cengage materials, you may want to purchase "Cengage Unlimited" which gives you access to all Cengage access codes and textbooks.

However, what you should **not** do is simply purchase the textbook on its own (i.e., the $32.99 version in the link above). It will not come with MindTap.

Instructor Guidelines and Policies

Student Hours: These hours will be held on Webex and will function as discussion hours. I will prepare selected solutions to the week's problem set. Students are welcome to ask questions about any problem from the homework. Any student is welcome and encouraged to come.

Attendance: This is an online course and thus, attendance will not be taken. However, it is expected that students check D2L and email regularly for class updates.

Late Work: Late work is accepted but will receive a 15% grade reduction for each unexcused day that it is late.

Make-up Assessments: Students must contact the instructor prior to missing a scheduled examination. An opportunity to take a makeup examination will be offered to those who make prior contact with the instructor. All make-up exams will be administered in any Lone Star campus assessment center.

Cell Phones and Computers: When navigating the course's D2L page and its contents, it is important to minimize distractions. It would be useful to put your phone away (perhaps in a different room) while studying for this course.

Official Day of Record: Students that have not attended an in-class meeting or participated in an online class prior to the official day of record will be dropped from the course without exception. Official day of record for this course is 9/4/20.

Withdrawal Policy: Withdrawal from the course after the official day of record and prior to "W" Day, 11/9/20 will result in a final grade of "W" on your transcript. Instructor approval is necessary if you want to withdraw after official day. No credit will be awarded for a course earning a "W." If you stop attending class, you must withdraw at the registration office prior to "W" day. If you stop attending class and do not officially withdraw, you will receive an "F" for the course.

Six Drop Rule: Students who enrolled in Texas public institutions of higher education as first-time college students during the Fall 2007 term or later are subject to section 51.907 of the Texas Education Code, which states that an institution of higher education may not permit a student to drop (withdraw with a grade of "W") from more than six courses, including courses that a transfer student has previously dropped at other Texas public institutions of higher education that have already been counted against their six drop limit. Each student should fully understand this drop limit before you drop any course. Please see a Counselor or Advisor in our Student Services area for additional information and assistance. This policy does not affect developmental or ESOL students.

Academic Dishonesty: We will strictly follow Lone Star College's academic dishonesty policy as laid out in https://www.lonestar.edu/departments/libraries/academic_integrity_brochure.pdf

Conflict Resolution

If you have an issue with any aspect of the class (grading, policies, instructor behavior, etc.), please discuss the issue with your instructor outside of class time. If you cannot resolve the issue with your instructor, you may contact the department chair to further discuss the matter.

Department/Division Contact:

Department Chair, HUMA, PHIL, HIST:
Dr. Matthew Keyworth, Matthew.J.Keyworth@lonestar.edu, 281-290-5056
Dean of Instruction, Arts and Humanities:
Jonathan Anderson, Jonathan.Anderson@lonestar.edu, 281-401-5313

Grade Determination

Problem sets Every week students will submit solutions to Aplia assignments from the Hurley textbook. Solutions to exercises are to be submitted electronically via MindTap (Cengage's proprietary software for the textbook). If you would like to re-attempt an assignment (for example, Aplia 1.1) for the week, please email me and I will delete your previous attempt. MindTap does not allow me to delete attempts for individual problems.

Exams Each exam will cover a unit in the course. Students will have a week to work on exams and will send me pictures of their solutions. These exams are to be completed alone by students. See Academic Dishonesty policy above.

Your grade will be determined by the following	**Summary**		**Percent of Final Average**
Weekly Problem sets	Starting the second week, there will be weekly problem sets due at 11:59pm on the Sunday the problem set is assigned. The lowest two homework scores will be dropped.		70.0
Exams	There will be three written exams throughout the semester. The last exam will be the Final exam which is cumulative.		30.0
	Total:		100.0

Letter Grade Assignment

Letter Grade		**Final Average in Percent**
A		90 - 100
B		80 - 89
C		70 - 79
D		60 - 69
F		< 60

Tentative Instructional Outline

Mon 08/24	Introductions, syllabus, technical details.	Set up MindTap for homework. Post discussion board introduction. Syllabus Quiz.
Mon 08/31	What is logic? This week we provide an overview of the topics that we will explore in this course.	Read Sections 1.1-1.3 of Hurley. Problem set due 11:59pm on Sunday 9/6.
Mon 09/07	What does it mean for a statement to follow from others? This week we discuss validity and invalidity.	Read Sections 1.4-1.5 of Hurley. Problem set due 11:59pm on Sunday 9/13.
Mon 09/14	This week we introduce the language of propositional logic and discuss how natural language arguments can be translated into this language. We then introduce the truth table method to provide analysis of natural language operators such as “and”, “or”, and “if…then”.	Read Sections 6.1 and 6.2 of Hurley. Problem set due 11:59pm on Sunday 9/20.
Mon 09/21	We will use the method of truth tables to analyze propositions. We will also explore notions such as logical equivalence, consistency, and inconsistency. This week we will use truth tables to analyze arguments.	Read 6.3 and 6.4 of Hurley. Problem set due 11:59pm on Sunday 9/27.
Mon 09/28	This week we discuss the method of indirect truth table. We apply this method to study valid argument form and invalid argumentative fallacies.	Read 6.5 and 6.6 of Hurley. Problem set due 11:59pm on Sunday 10/4.
Mon 10/05	This week we review what we have covered thus far. We also discuss the algorithmic decidability of propositional logic.	**Exam 1 due 11:59pm on Sunday 10/11.**
Mon 10/12	This week we introduce the method of proofs as a test for validity. This method aims to capture rigorous thinking in natural language.	Read Section 7.1 of Hurley. Problem set due 11:59pm on Sunday 10/18.
Mon 10/19	We discuss more proof rules to add to our arsenal of valid rules of thinking.	Read 7.2 of Hurley. Problem set due 11:59pm on Sunday 10/25.
Mon 10/26	We introduce a number of simplifying equivalences to our proof system. This includes De Morgan's rule, Commutativity, and others.	Read 7.3 of Hurley. Problem set due 11:59pm on Sunday 11/1.

Mon 11/02	We discuss more rules of equivalence and expand our proof system. We begin to study so-called "weaker" logical systems.	Read 7.4 of Hurley. Problem set due 11:59pm on Sunday 11/8.
Mon 11/09	This week we discuss conditional proofs as a method for proving conditional statements.	Read 7.5 of Hurley. Problem set due 11:59pm on Sunday 11/15.
Mon 11/16	We discuss the notion of an indirect proof also known as a "proof by contradiction." We will also show how conditional and indirect proofs can be used to show that a proposition is a logical truth, i.e., a truth that follows from no assumptions.	Read 7.6 and 7.7 of Hurley. Problem set due 11:59pm on Sunday 11/22.
Mon 11/23	This week, we begin our discussion of predicate logic, a system which improves the perspicuity of propositional logic.	Read Section 8.1 of Hurley. **Exam 2 due 11:59pm on Sunday 11/29.**
Mon 11/30	We introduce the first proof rules of predicate logic, namely, existential instantiation and universal generalization.	Read Section 8.2 of Hurley. Problem set due 11:59pm on Sunday 12/6.
Mon 12/07	Finals Week	**Exam 3 due 11:59pm on Sunday 12/13.**

Lone Star College-University Park is committed to your success!

GradUP

The LSC-University Park community is here to support you and we encourage you to graduate! Many of you come to a community college because it provides an open door and it makes sense financially. What you may not realize is what attaining an associate's or workforce degree can do for you. Below are just some of the reasons why a degree is a positive move for your life and career:

GRAD UP
You commit. We commit. You graduate.

1. You'll be eligible for more jobs.
2. You could have higher earning potential.
3. You can finish in two years or less.
4. You have options for career paths.
5. You can discover what you want from your academic program and career.
6. You can apply for additional scholarships.
7. Many of the colleges in Texas have articulation agreements with community colleges that allow you to receive full credit for the courses you have completed.
8. Your transfer acceptance is higher with an associate's degree.

If you have any questions or need guidance with your academic plan and graduation, please ask for assistance. There are resources, advisors, and additional materials available to you. Because your academic success is important, Lone Star College fosters and commits to a set of cultural beliefs.

					
One LSC I develop meaningful relationships and collaborate for mutual success.	**Student Focused** I support and prepare each student to succeed in college and life.	**Own It** I bring my best, rise above challenges, and own my contributions.	**Advance Equity** I advance diversity and inclusion to create an equitable environment.	**Cultivate Community** I cultivate a community of trust and integrity through transparent dialogue and purposeful actions.	**Choose Learning** I learn, grow, and create opportunities for others to do the same.

Your success is our primary goal! If you are experiencing challenges achieving your academic goals, please contact your instructor or an advisor. We can provide assistance with academic needs, ADA accommodations, classroom difficulties, financial concerns, and other issues.

Advising: The Advising process is an integral part of your academic success. Academic advisors are available to assist you with a variety of academic services including admissions, testing, advising, registration, referral of campus and community resources, add/drop/withdrawal process, transfer planning and graduation processes.
https://lonestar.edu/advising.htm

Academic Calendar: https://lonestar.edu/academic-calendar

Final Exam Schedule: https://lonestar.edu/examschedule.htm

Important Registration Dates:

Fall 2020

Apr. 15	Registration begins
Aug. 15	Payment due
Aug. 24	Fall classes begin
Dec 4	Payment due (Winter mini-mester)
Dec. 7-13	Fall 2020 Final Exams
Dec 13	End of semester
Dec 14	Winter mini-mester begins
Jan. 3	3-week mini-mester ends
Jan. 10	4-week mini-mester ends

Counseling Services: Counseling services are available to students who are experiencing difficulty with academic issues, selection of college major, career planning, or personal issues. Visit https://lonestar.edu/counseling-services.htmfor more information.

Student Learning Resource Center (SLRC) - While the campus is closed, we are just a click away! The Student Learning Resource Center, also known as the SLRC, consists of the library's digital resources and research assistance, academic coaching, and the assistive technology lab. These free services are available to currently enrolled Lone Star College students to support academic success.

Academic Coaching: Writing, Math, and Science
Academic Coaching includes elements of traditional tutoring but focuses on the goals and the process of teaching students to become more effective learners over the course of their studies. Academic Coaching provides academic support for subjects virtually through an online platform called Upswing. This support comes in the form of live coaches as well as a variety of tools and resources to support your academic success.
Academic Coaching aids with writing assignments and the writing process. Assistance in all levels of math and all areas of science is also provided.
More information, including hours, guidelines, and how to sign up for online tutoring, can be found online at https://upresearch.lonestar.edu/academiccoaching. Please contact uptutor@lonestar.edu for more information

Assistive Technology Lab
The Assistive Technology (AT) Lab provides services for students who have accommodations that have been approved by Disabilities Services. Students should begin the process in the Disability Services Office (https://lonestar.edu/disability-services.htm).
Assistive technology is any item, piece of equipment, software program, or product system used to increase, maintain, or improve the functional capabilities of persons with disabilities. Some examples of services include note-takers, reader/scribes, digital recorders, smart pens, and text-to-speech software.
More information can be found at https://lonestar.edu/up-assistivetech and you can contact the Assistive Technology Lab staff at upassistvietech@lonestar.edu.

Library: Digital and Research Resources
The University Park library is completely digital. Online collections of credible resources include articles, e-books, videos, and are accessible from anywhere with your **14-digit library barcode, which you can request online** (https://www.lonestar.edu/library/card.htm#card). Librarians are available to assist with finding, evaluating, and citing information and can also be contacted by **email** (uplibrary-ref@lonestar.edu), **text** (281.761.6852), or through the "**Chat** with the Librarian" button on the library webpages.
More information, including research and citation guides and a searchable FAQ, can be found online at https://lonestar.edu/up-library and https://upresearch.lonestar.edu.

As soon as our COVID-19 crisis is behind us, come visit the SLRC physical space on the eighth floor. You will find open computer labs, study spaces, and printers. Normally, students get their student ID here, interact with friendly staff, and check out textbooks from the reserve collection.
When we open again, take time to check out the resources and services of your Student Learning Resource Center. We'll see you there!

Lone Star College-University Park College Resources and System Policies

Please see this link for college details: **https://lonestar.edu/up-syllabus-policies**
Please see this link for system details: **http://www.lonestar.edu/syllabus-policies**