Philosophy 21002/001/16313
Introduction to Formal Logic
Spring 2024

2:15 -3:30 pm, M W, **Room MCG 310**

Instructor: Clarence G. Uher
Office: Philosophy Department – 320 Bowman Hall, Room M

Office Hours: M W 9:00 - 9:45 AM, and 3:45-5:30 PM and by appointment

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[Important: Please identify the course you are taking (days and times) in your email.]

A.   Course Description

 The focus of this course is on deductive arguments and the formal systems of analysis applied to arguments. The formal systems will include the use of Venn diagrams, truth tables, and the rules of natural deduction to develop proofs in both sentential and predicate logic. The concepts of *validity* and *soundness* will be explored during the process of analysis. The study of formal logic will give us an opportunity to discuss the relationship between human reasoning, language usage, and mathematical reasoning as each system of analysis develops. The formal analysis of deductive arguments will be approached as a process of *puzzle solving* to temper the formal aspect of the course.

Success in this course will most often depend on the student's willingness to work on course material outside of the classroom. Proficiency in formal logic is best achieved through **daily practice**. It is more productive to study the course material everyday for forty-five minutes, than to spend five hours studying at the end of the week.

B.   Learning Outcomes

➢ Students will be able to analyze deductive arguments using formal systems including the use of truth tables, and the rules of natural deduction to develop proofs in both propositional and predicate logic.

➢ Students will be able to identify and distinguish *valid* (good deductive arguments) from invalid (bad deductive arguments).

➢ Students will enhance their critical thinking skills and understand the important role that logical reasoning plays in effective critical thinking.

C. Kent Core Component

This course may be used to satisfy a Kent Core requirement. The Kent Core as a whole is intended to broaden intellectual perspectives, foster ethical and humanitarian values, and prepare students for responsible citizenship and productive careers. Logical reasoning is an important element of effective communication and thinking. The study of formal logic gives students the opportunity to examine and practice reasoning skills that include *pattern recognition* and the use of formal systems to solve problems.

D. Text

The textbook for this course is a FLASH BOOK. The link for the Flash Book can be found on the course Home Page in Canvas.

Patrick J. Hurley & Lori Watson, A *Concise Introduction to Logic, 13th edition* ISBN: 978130595809 (hardcover edition)

E. Graded Assignments

(a)   There will be twelve (12) quizzes during the term. Your two lowest quiz scores will be dropped. A missed quiz is counted as a dropped quiz.   There are no make-ups offered for missed quizzes until the dropped quizzes are exhausted. There are exceptions to this policy (e.g.: Military Service, University sanctioned events, participation in University athletics, Band and field trips required by a University course). All the aforementioned exceptions will require documentation.   (20 points each.)

(b)   Two midterm exams will cover the course material completed up to the date of the exam. (50 points each.)

(c)   The final exam will cover material completed after the last midterm and will follow a similar format as the mid-term exams. (100 points.)

(d)   Please note; all quizzes and exams will be taken in class.

Class absence: The Philosophy Department Procedure for handling student absence is in conformity with the Student Academic Policy and Procedures set down as University Policy in the University Policy Register 3 - 1.2. http://www.kent.edu/policyreg/administrative-policy-regarding-class-attendance-and-class-absence Students should contact me as soon as possible (please use your KSU email account) when absent. Keep in mind that any make-up work that you are eligible for will require some form of documentation. Please note: Attendance is NOT part of your grade even though your attendance will be recorded on a sign-in sheet every class meeting.

F.   Make-ups

Please contact me as soon as possible if your absence has caused you to miss **any** graded coursework. Students will be permitted to make up missed quizzes (after the two dropped quizzes are exhausted) or exams due to an excused absence (e.g., a doctor's excuse). **If a student does not have the proper documentation, they will not be permitted to take a make-up exam.** A *request of make-up form* must be completed prior to taking the make-up assignment. Make-up work must be completed in a timely manor. In most cases, work must be completed on the day the student returns to class.

G.   Grades

Your final letter grade is calculated from the total points you acquire during the semester. The chart below indicates the minimum point total needed for the corresponding letter grade. Your final grade will be composed of the following:

10 Quizzes @ 20 points each	200 points
2 Midterm Exams @ 50 points each	100 points
Final Exam	100 points
	400 points total

Minimum Points	0	240	252	270	280	292	310	320	332	350	360
Grade	F	D	D+	C-	C	C+	B-	B	B+	A-	A

H.   Make-ups
Please contact me as soon as possible if your absence has caused you to miss graded coursework. Students will be permitted to make up missed quizzes (after the three dropped quizzes are exhausted) or exams due to an excused absence (e.g., a doctor's excuse). **If a student does not have the proper documentation, they will not be permitted to take a make-up exam.** A *request of make-up form* must be completed prior to taking the make-up assignment. Make-up work must be completed in a timely manner. In most cases, work must be completed on the day the student returns to class.

I.   Testing Your Faith Act (HB 353)
The University welcomes individuals from all different faiths, philosophies, religious traditions, and other systems of belief, and supports their respective practices. In compliance with University policy and the Ohio Revised Code, the University permits students to request class absences for up to three (3) days, per term, in order to participate in organized activities conducted under the auspices of a religious denomination, church, or other religious or spiritual organization. Students will not be penalized as a result of any of these excused absences.

The request for excusal must be made, in writing, no later than fourteen (14) days after the first day of instruction in a particular course and include the date(s) of each proposed absence or request for alternative religious accommodation. The request must clearly state

that the proposed absence is to participate in religious activities. The request must also provide the particular accommodation(s) you desire.

You will be notified by me if your request for accommodation is approved, or, if it is approved with modification. I will work with you in an effort to arrange a mutually agreeable alternative arrangement. For more information regarding this Policy you may contact the Student Ombuds (ombuds@kent.edu).

J.   Course Material On-line

There will be some course material found in the course "Modules" on Canvas. Students can find the course syllabus, course notes, and assignments by clicking on the course link. The "course notes" found online are not intended to be an alternative to attending lectures or as a substitute for the student's own notes on course material. All e-mails are sent to students using the Kent State University e-mail account.

 NOTICE OF MY COPYRIGHT AND INTELLECTUAL PROPERTY RIGHTS. Any intellectual property displayed or distributed to students during this course (including but not limited to power points, notes, quizzes, examinations) by the instructor remains the intellectual property of the instructor. This means that the student may not distribute, publish or provide such intellectual property to any other person or entity for any reason, commercial or otherwise, without the express written permission of the instructor.

K.   Conduct in the Classroom
Proper conduct in the classroom will be expected of every member of the class. Let's make kindness extended to everyone our goal. Personal conversations, frequently coming to class late, or leaving class early are disruptive behaviors that are disrespectful to others in the class. Cell phones should not be on desktops or in your lap; please keep cell phones in your pocket or in a book bag during the entire lecture.

Students should request permission to record course lectures and discussions. Use of laptops and notebooks will be permitted in class. Laptops and notebooks must only be used to access course material. Laptops and notebooks must not be used to check e-mail, or "surfing the web".

L.   Cheating and Plagiarism Policy

University policy 3342-3-01.8 deals with the problem of academic dishonesty, cheating, and plagiarism. None of these will be tolerated in this class. The sanctions provided in this policy will be used to deal with any violations. If you have any questions, please read the policy at https://www.kent.edu/policyreg/administrative-policy-regarding-student-cheating-and-plagiarism and/or ask.

M.   Grievance procedure

The Philosophy Department Grievance Procedure for handling student grievances is in conformity with the Student Academic Complaint Policy and Procedures set down as

University Policy 3342-4-16 in the <u>University Policy Register</u>. For information concerning the details of the grievance procedure please see the Departmental Chairperson.

N.   Student Accessibility

Kent State University is committed to inclusive and accessible education experiences for all students. University Policy 3342-3-01.3 requires that students with disabilities be provided reasonable accommodations to ensure equal access to course content. Students with disabilities are encouraged to connect with Student Accessibility Services as early as possible to establish accommodations. If you anticipate or experience academic barriers based on a disability (including mental health, chronic medical conditions, or injuries), please let me know immediately.

Student Accessibility Services (SAS) Contact Information:

Location: University Library, Suite 100
Email: sas@kent.edu
Phone: 330-672-3391
Web: www.kent.edu/sas

Students who are using SAS should meet with me to discuss their accommodations and how those accommodations will be implemented for this course.

O.   Registration Requirements

The last day to "Add" or change sections of courses for Spring 2024 is 1/22/2024 (Monday). The course withdrawal deadline (without a "W") is 1/29/2024 (Monday) and (with a "W") is 4/1/2024 (Monday). *University policy requires all students to be officially registered in each class they are attending. Students who are not officially registered for a course by published deadlines should not be attending classes and will not receive credit or a grade for the course. Each student must confirm enrollment by checking his/her class schedule (using Student Tools in FlashLine) prior to the deadline indicated. Registration errors must be corrected prior to the deadline.*

The course withdrawal deadline is 4/1/2024.

<u>Prerequisite: MATH 00022 or equivalent test score.</u> Students in the course who do not have the proper prerequisites risk being deregistered from the class

Requirements for success in this course:

1. Complete the reading and homework assignments BEFORE the lecture.

> ➤ <mark>Analyzing your homework is the most effective way for me to identify the problems you are experiencing with the material</mark>.

2. Daily practice!

   > ➤ I know that this is mentioned above…but it bears repeating.

3. <u>See me for help</u>: if you are finding errors on your homework assignments or are earning low quiz scores (**14 points or less on a 20 point quiz**).

   > ➤ Often problems can be corrected in a few minutes, if detected early. Do not allow a simple misunderstanding spiral out of control.

Week Dates (M-F)	Reading Assignment
1 (1/15 - 1/19)	Introduction to the course & syllabus review.
2 (1/22 - 1/26)	1st Day Lecture Chapter 1, Sections 1.1 - 1.5
3 (1/29 - 2/2)	Chapter 4, Sections 4.1-4.3 (up to The Modern Square of Opposition) Chapter 5, Sections 5.1-5.2.
4 (2/5 - 2/9)	Chapter 5, Sections 5.3 *Chapter 6, Section 6.1*
5 (2/12 - 2/16)	*Chapter 6, Section 6.2* Chapter wrap-up and Review for midterm exam #1
6 (2/19 - 2/23)	**Midterm Exam #1 (50 points)** Chapter 6, Section 6.3
7 (2/26 – 3/1)	Chapter 6, Section 6.4 Chapter 6, Section 6.5
8 (3/4 – 3/8)	Chapter 6, Section 6.6 Chapter 7, Section 7.1
9 (3/11 – 3/15)	Chapter 7, Section 7.2 Continue with Sections 7.1 & 7.2

10	Review for midterm exam #2
(3/18 – 3/22)	Midterm Exam #2 (50 points)

Spring Break! (3/25 - 3/29)

11	
(4/1 – 4/5)	Chapter 7, Section 7.3
12	Chapter 7, Section 7.4
(4/8 – 4/12)	In Class Assignment -- Rules of Replacement, Sect. 7.3 & 7.4
13	Chapter 7, Sections 7.5 &7.6
(4/15 – 4/19)	Chapter 8, Sections 8.1 & 8.2
14	Chapter 8, Section 8.3
(4/22 – 4/26)	In Class Assignment
15	Chapter 8, Section 8.6
(4/29-5/3)	Chapter 8, Section 8.7

Final Exam — Wednesday, May 8, 2024, at 12:45-3:00 pm.

The instructor reserves the right to change, correct, or amend the syllabus and reading schedule during the semester. It is the responsibility of students to check email messages and course announcements to stay current in the course.