

# UWG PHILOSOPHY PROGRAM

PHIL 4160 sec.01

**SYMBOLIC LOGIC** (3 hours)

Spring Semester 2018

TR 11am–12:15pm, Humanities 208

Prerequisites: NONE

All online content available through CourseDen/D2L

Email: rlane@westga.edu\*

Instructor: **Dr. Robert Lane**, TLC 2247

*Office Hours:*

T: 8:40–9:20am; 12:30–2pm

W: 9:30–10:20am; 12–2pm

R: 8:40–9:20am; 12:30–2pm

*also by appointment*

My office telephone: (678) 839-4745

English/Philosophy telephone: (678) 839-6512

*\*All email communication must be conducted from your official UWG email account. Students are obligated to check their UWG email accounts on a regular basis and to ensure that their mailboxes do not become full. I am not allowed to disclose your grades over email.*

**COURSE DESCRIPTION:** An introduction to the application of symbolic methods to reasoning, covering sentential logic and predicate logic. Students will learn how to translate ordinary language sentences and arguments into the notation of symbolic logic, determine the truth value of compound sentences, distinguish among various valid and invalid argument forms, and demonstrate whether an argument in symbolic form is valid or invalid.

**LEARNING OUTCOMES:** By the end of the semester, each student will be able to:

- translate ordinary-language statements and arguments into the language of sentential logic and predicate logic, and *vice versa*;
- determine the truth-value of a compound sentence using the truth table method;
- distinguish among tautologies, contingent sentences and contradictions using the truth table method;
- distinguish between valid and invalid argument forms, using the truth table method and the proof method; and
- demonstrate that a given argument in symbolic form is deductively valid or invalid.

These course-specific learning outcomes contribute to the departmental learning outcomes of the Philosophy Program by enabling students better to

- incorporate a philosophical position in oral and written communications;
- critically outline and analyze philosophical issues;
- exhibit critical thinking skills.

## TEXTS:

- **Hausman, Kahane and Tidman, *Logic and Philosophy: A Modern Introduction*, 12th ed.** (113305000X).
- **Answers to assigned exercises, posted in CourseDen.** The answers to all even-numbered problems are in the back of your textbook. I will post answers to *all* assigned problems in CourseDen so that you can check all of your answers.

## METHODS OF ASSESSING STUDENT LEARNING:

- **Six quizzes (20 points each – your lowest quiz grade will be dropped).** These are designed to test your understanding of basic concepts and ensure that you have been keeping up with the reading and homework exercises. Each quiz will occur at the beginning of class and last about 20 minutes, after which the rest of the class period will be like a normal class (coverage of assigned exercises and normal lecture).
- **Mid-term exam (50 points) and comprehensive final examination (50 points).** Each of these exams will last the full class period.
- **Class participation** does not count toward your final grade in any formal way, but if you have been a regular participant in class throughout the semester (answering questions, contributing to class discussions, etc.), and if you end up with a final numeric average that is very close to that of the next highest letter grade, I may “bump” you up to that next grade.

<b>GRADING SCALE:</b>	<b>A 200 – 180 pts</b>	<b>D 139 – 120 pts</b>
	<b>B 179 – 160 pts</b>	<b>F 119 – 0 pts</b>
	<b>C 159 – 140 pts</b>	

**TIME REQUIREMENTS:** UWG grants one semester hour of credit for work equivalent to a minimum of (approximately) one hour (50 minutes) of in-class or other direct faculty instruction AND two hours of student work outside of class per week for approximately sixteen weeks. For this three credit-hour course, students are required to spend **two and a half hours (150 minutes) in class each week and to conduct at least an additional 6 hours of work relevant to this course outside of class each week.** You should expect to work more hours than this outside of class during periods when you are preparing for an exam.

## METHODS OF INSTRUCTION

- This is primarily a lecture course, but each **class meeting will require student participation**. On most class days, you will be assigned both homework exercises from your textbook and a reading assignment. **In order to keep up with the class material, you MUST do the homework exercises and reading assignments when they are assigned. The material in this class builds cumulatively, and if you fall behind it will be difficult, perhaps impossible, for you to catch up. I will not be checking to ensure that you do this homework--you are all adults, and I expect you to behave as responsible students in this class.** At the beginning of each class, we will review some of the exercises assigned for that day. You should be prepared to participate by explaining how you answered or solved each question or problem. After this review of exercises, I will lecture on the material you've been assigned to read for that day. You should be prepared to ask any questions you have about the reading assignment.

## MISSED TESTS / EXTRA CREDIT:

- If you know that you will need to miss class on a day on which a test is scheduled (for example, due to a UWG sponsored event), you must let me know about your absence as far in advance as possible so that we can schedule another day and time for you to take the test (or a make-up test). If you miss a test without receiving my explicit permission beforehand and making arrangements for a make-up test, you will be permitted to take a make-up test if and only if one of the following conditions applies: (a) Your absence was due to illness or injury serious enough to require professional medical care and which prevented you from contacting me before the test; or (b) Your absence was due to other extenuating circumstances beyond your control. I will determine on a case-by-case basis what constitutes "extenuating circumstances beyond your control." You may be required to provide documentation pertaining to your absence before you are allowed to take a make-up test. **Make-up tests will usually be longer and potentially more difficult than the original test that you missed.**
- **Extra-credit work will not be given under any circumstances. Work completed for other courses will not be accepted in this course.**

## ATTENDANCE, LATE ARRIVAL, EARLY DEPARTURE

- **You may miss four class meetings (two weeks of class) with no effect on your grade. Beginning with your fifth absence, you will lose 8 points (about 4% of your total course grade) from your final average for every class meeting you miss. This policy takes effect on the day of our second class meeting (Thursday January 11).** I will make exceptions for absences necessitated by UWG-sponsored events or by other circumstances that were absolutely outside your control. However, I will make these exceptions **only if ALL of your absences can be accounted for in one of these ways** (e.g., if you miss seven classes and you have documented, acceptable reasons for missing only six classes, then your seventh absence will still count against you). Documentation will be required in all cases in which I make an exception to this attendance policy.
- **Students who miss 8 or more class meetings (four weeks, or one month, worth of classes) will not earn a passing grade in this course.** In this case the reason for your absences is irrelevant. If you are unable to attend class for a month due to medical reasons, a family emergency, or any other reason, you should withdraw from the course; if the withdrawal date has passed, you should apply for a hardship withdrawal.
- An early departure or late arrival might be counted as an absence depending on the circumstances. I will decide in each case whether an early departure or a late arrival counts as an absence. If you know before class that you will not be able to stay for the entire class session, please inform me of this before class and sit as close to the door as possible, so as to cause as small a distraction as possible when you leave.

## TITLE IX

- UWG is committed to fostering a safe, productive learning environment. Title IX and our school policy prohibits discrimination on the basis of sex. Sexual misconduct—including harassment, domestic and dating violence, sexual assault, and stalking—is also prohibited at UWG. Our school encourages anyone experiencing sexual misconduct to talk to someone about what happened, so they can get the support they need and our school can respond appropriately. If you wish to speak confidentially about an incident of sexual misconduct, want more information about filing a report, or have questions about school policies and procedures, please contact our Title IX Coordinator, Claudia Lyerly (678-839-2981; [clyerly@westga.edu](mailto:clyerly@westga.edu)). UWG school is legally obligated to investigate reports of sexual misconduct, and therefore it cannot guarantee the confidentiality of a report, but it will consider a request for confidentiality and respect it to the extent possible. As a teacher, I am also required by our school to report incidents of sexual misconduct and thus cannot guarantee confidentiality. I must provide our Title IX coordinator with relevant details such as the names of those involved in the incident.

For the Americans with Disabilities Act, UWG Email, Credit Hour, and UWG Honor Code policies as well as information on Academic Tutoring, Student Services, and Technical Requirements, Privacy Policy, and Accessibility Statements, please see <http://www.westga.edu/UWGSyllabusPolicies/>

## EXPECTATIONS FOR CLASSROOM BEHAVIOR

- **You may not use electronic devices, including smart phones and laptops, while class is in session, for any reason (talking, texting, Tweeting, etc.). Cell phones, laptops, etc., must be turned off and put away at the beginning of each class. I will make an exception to this policy ONLY IF you have purchased or rented electronic copies of our textbooks and need to access them during class; in this case, you must disable Internet connectivity on your device for the duration of the class and use your electronic device ONLY for viewing the textbooks.**
- **Do not leave the room during class unless it is absolutely necessary that you do so.** Leaving the classroom while class is in session is both disrespectful and distracting. So when you come to class, be prepared to remain in the classroom for the full duration of the class period.
- **Do not study material from other classes while this class is in session.** While you are in this class, I expect your attention to be focused on it rather than on your other courses.
- **Students may be dismissed from any class meeting at which they exhibit behavior that disrupts the learning environment of others.** Such behavior includes—but is not limited to—arriving late for class, allowing cell phones to ring, speaking disrespectfully to the instructor and/or to other students, and using personal audio or visual devices. **Each dismissal of this kind will count as an absence and will be applied toward the attendance policy above.**

### **From the *UWG Undergraduate Catalog*:**

- “Instruction begins the first day of class. In face-to-face courses, if students fail to attend the first day and have not contacted the instructor to explain their absence, they may be dropped during the Drop/Add Period to make room for other students.”
- “Class attendance policies are determined by each instructor for his or her courses and may be found in the syllabus. Since course policies differ, students are responsible for understanding attendance requirements for each course. Failure to comply with those requirements may significantly affect grades.”
- **“Students are expected to attend each class meeting.** Students absent from class while officially representing the University or observing religious holidays should generally not be penalized in the calculation of final grades, as long as they provide advance notice and expeditiously make arrangements to complete any missed work.
- “University-sponsored activities include but are not limited to the following: intercollegiate athletic competitions; musical/theatrical/art performances or exhibitions associated with a degree program; debate competitions; and research conferences. Activities not considered to be university-sponsored include participation in clubs, even if they are affiliated with UWG, or events associated with social organizations such as fraternities or sororities.
- “Regardless of the reason for the absence, each student is responsible for the material covered in class, for completing any assignments, and for making specific arrangements with the instructor for any work missed. The degree to which missed work can be made up will depend upon the nature of the work and its intended purpose. Make-up is at the discretion of the instructor.
- “Any student who must be absent for more than one week of class should notify the Patient Advocates in Health Services, telephone 678-839-6452. The student should also notify the instructor or department.”

**THIS SCHEDULE IS TENTATIVE AND MAY CHANGE AS THE SEMESTER PROGRESSES. THIS INCLUDES TEST DATES, WHICH ARE SUBJECT TO CHANGE.** If because of an absence you miss in-class announcements about deviations from this schedule because, you are still responsible for keeping up with test dates and reading assignments. All readings and exercises are from Hausman, Kahane, & Tidman, *Logic and Philosophy* (12<sup>th</sup> ed.).

Jan.	exercises due	reading due	lecture topic	Quizzes
T 9	--	--	Introduction to arguments	
R 11	1-1	Ch.1 (all)	Deduction and induction	
T 16	1-2, 1-3	Ch.2:1-6 (pp.19-28)	Symbolizing in sentential logic	
R 18	<b>CAMPUS CLOSED due to weather.</b>			
T 23	2-1 (we will do all of 2-2 and 2-3 in class)	Ch.2:7-10 (pp.28-34)	Symbolizing in sentential logic	
R 25	2-4	Ch.2:11-14 (pp.35-47)	Symbolizing in sentential logic	
T 30	2-5, 2-6, 2-7, 2-8	Ch.3:1-2 (pp.55-64)	Truth tables	

Feb.	exercises due	reading due	lecture topic	Quizzes
R 1	3-1, 3-3, 3-4, 3-5	Ch.3:3-6 (pp.65-76)	Truth tables	<b>QUIZ #1 (on ch.2)</b>
T 6	3-6, 3-7, 3-8	Ch.4:1-6 (pp.90-105)	Proofs	
R 8	4-1, 4-2, 4-3, 4-4, 4-5	Ch.4:7-10 (pp.107-113)	Proofs	<b>QUIZ #2 (on ch.3)</b>
T 13	4-6, 4-7, 4-8	Ch.4:11-12 (pp.115-125)	Proofs	
R 15	4-9, 4-10, 4-11, 4-12 <i>Optional: 4-13</i>	Ch.5:1-3 (pp.127-142)	Conditional & indirect proofs	
T 20	5-1, 5-3, 5-4, 5-5	--	Conditional & indirect proofs	<b>QUIZ #3 (on ch.4)</b>
R 22	--	--	Catch-up and review	
T 27	<b>Mid-Term Exam</b>			
<b>Wednesday Feb. 28: Last Day to Withdraw with a Grade of "W"</b>				

Mar.	exercises due	reading due	lecture topic	Quizzes
R 1	--	Ch.7:1-4 (pp.169-179)	Predicate logic symbolization	
T 6	7-1, 7-2, 7-3, 7-4, 7-5	Ch.7:5-7, 9 (pp.180-184, 190-191)	Predicate logic symbolization	
T 6	<b>PUBLIC EVENT: Lee McIntyre, "Post-Truth" (7pm, Kathy Cashen Recital Hall, Humanities Building)</b>			
R 8	<b>This class does not meet; Dr. Lane is attending a philosophy conference; assignment TBA.</b>			
T 13	7-6, 7-7, 7-9, 7-10	Ch.9:1-2 (pp.204-212)	Predicate logic proofs: First 4 rules	
R 15	9-1	Ch.9:3-5 (pp.213-223)	Predicate logic proofs: restrictions on the rules	<b>QUIZ #4 (on ch.7)</b>
T 20	<b>SPRING BREAK: CLASSES DO NOT MEET</b>			
R 22	<b>SPRING BREAK: CLASSES DO NOT MEET</b>			
T 27	9-2, 9-3	Ch.9:6 (pp.224-228)	Predicate logic proofs: Quantifier Negation	
R 29	<b>This class does not meet; Dr. Lane is attending a philosophy conference; assignment TBA.</b>			

Apr.	exercises due	reading due	lecture topic	Quizzes
T 3	9-5 (#1-15 only)	--	Predicate logic proofs	
R 5	--	Ch.10:1-2, 4 (pp.230-234, 238)	Relational predicate logic symbolization	<b>QUIZ #5 (on ch.9)</b>
T 10	10-1, 10-2, 10-3, 10-4 (#5-15 only)	Ch.10:5, 7-8 (pp.239-242, 246-254)	Relational predicate logic symbolization and proofs	
R 12	10-6, 10-7, 10-9, 10-10; <i>optional: 10-11 (hard!)</i>	--	Relational predicate logic proofs	
T 17	--	Ch.13:1 (pp.291-294 only)	Identity: Rules for Proofs	<b>QUIZ #6 (on ch.10)</b>
W 18	<b>PUBLIC EVENT: Forum on Truth (7:30pm, Kathy Cashen Recital Hall, Humanities Building)</b>			
R 19	13-1	Ch.13:1-3 (pp.294-304)	Identity: Symbolization & Definite Descriptions. Properties of Relations	
T 24	13-2, 13-3 (we will do all of 13-4 in class)	--	Catch-up and review	
R 26	--	--	Review / Course evaluations	
<b>FINAL EXAM: Tuesday May 8, 11am–1pm</b>				