Fall 2023
Symbolic Logic
Philosophy 322—01

Professor:
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Office Location: CCC 418
Office Hours: MWF, 11:00am—12:00pm; By Appointment

Course Information:
Class Time: MWF, 9:00am—9:50am
Class Location: CCC 322

Course Description:
This is an introductory level course in symbolic logic. Contrary to what might be popular belief, there is an objective way to determine whether arguments are good and bad. In this course we will study the ways in which philosophers construct and analyze arguments by learning about what makes these arguments good and bad. Specifically, we will work on translating arguments in ordinary language to symbolic form, modeling these arguments, testing them for validity, and proving them. We will spend most of our time with basic propositional logic and end the course with first-order predicate logic.

Text:
Rental:

1. Logic Primer 3rd Ed., Collin Allen, Michael Hand
   MIT Press
   ISBN: 978-0-262-54364-4
2. Dona Warren Texts
   Provided in "Content" Tab on Canvas

Course Goals:
By carefully studying the nature of argumentation, students will learn how to construct and criticize logically valid and sound arguments. Such skills are instrumental in learning to analytically engage complex material, read closely, argue persuasively, and communicate effectively.

Expectations:
Students are expected to check into Canvas daily to check for class announcements, complete assignments, use the discussion board, etc. Students are expected to attend every class and remain for the entire time. Do not come late or leave early. Students must complete the necessary readings prior to class and be prepared for discussion and participation. Students will treat other students with respect. This means turning off all electrical equipment, including cell phones, laptops, and tablets. Students must also address their peers in a respectful tone. It is important to note that the nature of this class will inevitably result in disagreements among colleagues; however, it is essential to maintain respect toward one another despite disagreement. The following website is also incredibly helpful for the class. Use it regularly for practice problems and review:
https://logic.tamu.edu/

Disability Information:
Students with disabilities should register with the ADA coordinator on campus and let me know at the beginning of the semester. I would be happy to accommodate you in any way that I can. Just let me know. More information can be found at:
http://www.uwsp.edu/stuaffairs/Documents/RightsRespons/ADA/rightsADAPolicyInfo.pdf

Intellectual Property Notice:
Lecture materials and recordings for Philosophy 322 are protected intellectual property at UW-Stevens Point. Students in this course may use the materials and recordings for their personal use related to participation in this class. Students may also take notes solely for their personal use. If a lecture is not already recorded, you are not authorized to record my lectures without my permission unless you are considered by the university to be a qualified student with a disability requiring accommodation. [Regent Policy Document 4-1] Students may not copy or share lecture materials and recordings outside of class, including posting on internet sites or selling to commercial entities. Students are also prohibited from providing or selling their personal notes to anyone else or being paid for taking notes by any person or commercial firm without the instructor's express written permission. Unauthorized use of these copyrighted lecture materials and recordings constitutes copyright infringement and may be addressed under the university's policies, UWS Chapters 14 and 17, governing student academic and non-academic misconduct.

Academic Integrity:
Cheating, fabrication, plagiarism or helping others to commit these acts will not be tolerated. Academic dishonesty will result in severe disciplinary action including, but not limited to, failure of the student assessment item or course, and/or dismissal from the University.

Academic integrity violations include, but are not limited to:

1) Cheating: Intentionally using or attempting to use unauthorized materials, information, notes, study aids, or other devices in any academic exercise. This definition includes unauthorized communication of information during an academic exercise.
2) Fabrication and Falsification: Intentional and unauthorized alteration or invention of any information or citation in an academic exercise. Falsification is a matter of inventing or counterfeiting information for use in any academic exercise.
3) Multiple Submissions: The submission of substantial portions of the same academic work for credit (including oral reports) more than once without authorization.
4) Plagiarism: Intentionally or knowingly presenting the work of another (including AI generators) as one's own (i.e., without proper acknowledgment of the source). The sole exception to the requirement is when the ideas, information, etc., is common knowledge.
5) Complicity in Academic Dishonesty: Intentionally or knowingly helping or attempting to help another to commit an act of academic dishonesty.

Additional information can be found at:
http://www.uwsp.edu/stuaffairs/Documents/RightsRespons/SRR-2010/rightsChap14.pdf

Grading Criteria:
Assignments can be completed beyond the due dates for both unexcused and excused absences. For unexcused absences, a late penalty may be imposed. Late work must be complete within one week of the assignment due date.
Grading will be based on the following:

1) Four exams worth 20 points each (80 points total). Exams will be in class and announced.
2) Ten quizzes worth 2 points each (20 points total). Quizzes will be in class and unannounced.
3) A pre and post test. Completing each assignment (regardless of performance) will result in 5 points each.
4) Engagement

    Engagement comes in many forms. I reserve the right to raise or lower final grades up to 10 points based on engagement, meaning that it is also possible for engagement points to remain at 0. There is no hard and fast rule for raising or lowering the 10 points. While the grade is subjective, it is not arbitrary. Taken together, engagement includes, but is not limited to:

    a) Preparation: reviewing readings and materials before class.
    b) Focus: avoiding distractions during class.
    c) Presence: responsive during class.
    d) Asking Questions: in class, out of class, on the discussion board, through email, etc.
    e) Listening: hearing what others say, and what they are not saying.
    f) Specificity: referring to specific ideas from readings and discussions.
    g) Synthesis: making connections between readings and discussions.

"Pass" Range			**"Fail" Range**	
(70—100 Points)			(<70 Points)	
"A" Range	**"B" Range**	**"C" Range**	**"D" Range**	**"F" Range**
	B+ (87—89)	C+ (77—79)	D+ (67—69)	F (<60)
A (94—100)	B (84—86)	C (74—76)	D (60—66)	
A- (90—93)	B- (80—83)	C- (70—73)		

Course Schedule:

Unit I: Natural Language to Propositional Logic

Week 1	**(September 3—September 9)**	
September 6	Syllabus/Course Introduction	
September 8	Pre-Test	
Week 2	**(September 10—September 16)**	
September 11	Conditionals	Warren, Ch. 1; pg. 1-14
September 13	Conditionals	Warren, Ch. 1; pg. 1-14
September 15	Conditionals	Warren, Ch. 1; pg. 1-14
Week 3	**(September 17—September 23)**	
September 18	Conjunctions and Biconditionals	Warren, Ch. 2; pg. 1-7
September 20	Conjunctions and Biconditionals	Warren, Ch. 2; pg. 1-7
September 22	Conditionals Again	Warren, Ch. 3; pg. 1
Week 4	**(September 24—September 30)**	
September 25	Negation	Warren, Ch. 4; pg. 1-4
September 27	No Class	
September 29	No Class	
Week 5	**(October 1—October 7)**	
October 2	Disjunction	Warren, Ch. 5; pg. 1-2
October 4	Review	
October 6	Exam I	

Unit II: Truth Tables—Testing for Validity

Week 6	**(October 8—October 14)**	
October 9	Basic Logical Notations; Elements of a Formal Language	AH, 1.1—1.2; pg. 1-5
October 11	Well-Formed Formulas; Translation to Sentential Wffs	AH, 1.3—1.4; pg. 5-15
October 13	Truth Tables—Sentences, Sequents	AH, 3.1-3.2; pg. 37-42
Week 7	**(October 15—October 21)**	
October 16	Truth Tables—Tautologies	AH, 3.3; pg. 42-44
October 18	Truth Tables—Indirect Truth Tables	AH, 3.4-3.4.2; pg. 44-47
October 20	Exam II	

Unit III: Natural Deduction—Proving Valid Arguments

Week 8	**(October 22—October 28)**	
October 23	Primitive Rule: →E	Warren, Ch. 1; 15-17
October 25	Primitive Rules: &I, ←→I	Warren, Ch. 2; 7-8
October 27	Primitive Rules: &E, ←→E	Warren, Ch. 2; 9-11
Week 9	**(October 29—November 4)**	
October 30	Primitive Rules: vE, vI	Warren, Ch. 5, 2-3
November 1	Primitive Rule: →I	Warren, Ch. 3; 1-7
November 3	Primitive Rule: RAA	AH, 2.1, pg. 24-25

Week 10	**(November 5—November 11)**	
November 6	Primitive Rules	AH, 2.1; pg. 17-23
November 8	Primitive Rules	AH, 2.1.1, pg. 25-26
November 10	Natural Deduction Primitive Rules (No RAA)	AH, 2.1.2, pg. 26
Week 11	**(November 12—November 18)**	
November 13	Natural Deduction Primitive Rules (with RAA)	AH, 2.1.3, pg. 27
November 15	Natural Deduction Derived Rules	AH, 2.2.1, pg. 28-29
November 17	Natural Deduction Derived Rules	AH, 2.2.1, pg. 28-29
Week 12	**(November 19—November 25)**	
November 20	Natural Deduction Derived Rules	AH, 2.2.1, pg. 28-29
November 22	Natural Deduction Theorems	AH, 2.3-2.3.1, pg. 33-35
November 24	No Class—Academic Holiday	
Week 13	**(November 26—December 2)**	
November 27	Natural Deduction Theorems	AH, 2.3-2.3.1, pg. 33-35
November 29	Review	
December 1	Exam III	

Unit IV: Logic of Quantification

Week 14	**(December 3—December 9)**	
December 4	Predicate Logic: Universals	Warren, Ch. 7, pg. 1-6
December 6	Predicate Logic: Universals	Warren, Ch. 7, pg. 6-10
December 8	Predicate Logic: Existentials	Warren, Ch. 8, pg. 1-3
Week 15	**(December 10—December 16)**	
December 11	Predicate Logic: Existentials	Warren, Ch. 8, pg. 3-6
December 13	Predicate Logic: Translation	AH, 4.2, pg. 61
December 15	Post Test	
Week 16	**(December 17—December 22)**	
December 19	Final Exam (10:15am—12:15pm)	