Version date = 23 Apr 2021. May be minor revisions or corrections after 23 Apr 2021. Always check online syllabus in UBC Canvas course website for most recent version of course syllabus.

Course

Phil 220 Sec 98A May-Aug 2021 3 credits
Distance ed course, not accelerated syllabus

Course Team

Course Organizer

Leslie Burkholder
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Virtual ZOOM office hours Mon Fri 5.00PM-5.30PM, Wed 4-5.00PM PST
(Vancouver time).

Texts (Recommended and Required)

Barker-Plummer et al, *Language Proof and Logic* 2nd ed (LPL2 textbook). Available at UBC bookstore, Amazon, Chapters, download from CSLI at https://ggweb.gradegrinder.net/store
    UBC bookstore etc: Physical printed text + software-on-CD package
    Download: Text as .pdf + software
    If second hand make sure (i) both printed text and CD combination and (ii) registration/license has not been used.

Additional material online inside UBC Canvas course website.

Learning outcomes

Upon successful completion of this course students will be able to
(a) Demonstrate understanding of some important logic concepts (for example: validity, logical truth / falsehood /contingency, consistency)
(b) Translate or symbolize statements from a natural language into one of several different formal logic languages
(c) Construct proofs in tableau, resolution refutation, and natural deduction systems.
(d) Employ strategies in the construction of these different kinds of proofs

Evaluation / Assessmenr

X% = 1 course intro orientation quiz + Many UBC Canvas homework exercises. Homework exercises done at home. Open book, open computer windows, non-cumulative, two tries. Highest grade taken of three attempts. Worth each homework depends on number questions. 1 point on any Canvas homework exercise worth same as 1 point on any other Canvas homework exercise. Homeworks each available all term unlimited time. All due by midnight (PST) one day after class period for term ends.

Check UBC academic calendar for term for end of classes date. Check Course Calendar on course homepage for date. Late submissions worth 0%.

Y% = GradeGrinder textbook homework exercises submissions. Worth each GradeGrinder exercise depends on number questions. 1 point on any Gradegrinder homework exercise worth same as 1 point on any other Gradegrinder homework exercise. GradeGrinder each available all term unlimited time. GradeGrinder submissions done at home. Open book, open computer windows, non-cumulative, unlimited tries. Most recent grade taken. All due to Gradegrinder with instructor submission by midnight (PST) one day after after class period for term ends. Check UBC academic calendar for term for end of classes date. Check Course Calendar on course homepage for date. Late submissions worth 0%.

Z% = Supervised final exam during final exam period for term + Respondus setup quizzes. Closed book, closed computer window, one try only. Final exam dates and times to be determined. See Final exam information link in course website. Final exam may be done ealier than exam period.

Course grade = X + Y + Z
X = 30%
Y = 20%
Z = 50%

If you miss marked coursework (assignment, exam, presentation, participation in class) and are an Arts student, review the Faculty of Arts' academic concession page and then complete Arts Academic Advising's online academic concession form, so that an advisor can evaluate your concession case.

If you are a student in a different Faculty, please consult your Faculty's webpage on academic concession, and then contact me where appropriate.

Resources Supporting Student Success

UBC provides resources to support student learning and to maintain healthy lifestyles but recognizes that sometimes crises arise and so there are additional resources to access including those for survivors of sexual violence. UBC values respect for the person and ideas of all members of the academic community. Harassment and discrimination are not tolerated nor is suppression of academic freedom. UBC provides appropriate accommodation for students with disabilities and for religious and cultural observances. UBC values academic honesty and students are expected to acknowledge the ideas generated by others and to uphold the highest academic standards in all of their actions. Details of the policies and how to access support are available here (https://senate.ubc.ca /policies- resources-support-student-success)

Academic Integrity and Accommodation for Students

Academic Integrity
The academic enterprise is founded on honesty, civility, and integrity. As members of this enterprise, all students are expected to know, understand, and follow the codes of conduct regarding academic integrity. At the most basic level, this means submitting only original work done by you and acknowledging all sources of information or ideas and attributing them to others as required. This also means you should not cheat, copy, or mislead others

about what is your work. Violations of academic integrity (i.e., misconduct) lead to the breakdown of the academic enterprise, and therefore serious consequences arise and harsh sanctions are imposed. For example, incidences of plagiarism or cheating may result in a mark of zero on the assignment or exam and more serious consequences may apply when the matter is referred to the Office of the Dean. Careful records are kept in order to monitor and prevent recurrences. A more detailed description of academic integrity, including the University's policies and procedures, may be found in the UBC Calendar: Student Conduct and Discipline.

Academic Accommodation for Students with Disabilities
Academic accommodations help students with a disability or ongoing medical condition overcome challenges that may affect their academic success. Students requiring academic accommodations must register with Access & Diversity. A&D will determine that student's eligibility for accommodations in accordance with Policy 73: Academic Accommodation for Students with Disabilities. Academic accommodations are not determined by your instructors, and instructors should not ask you about the nature of your disability or ongoing medical condition, or request copies of your disability documentation. However, your instructor may consult with Access and Diversity should the accommodations affect the essential learning outcomes of a course.

Week 1 (Starting Mon 10 May 2021)

Topics: Course introduction. UBC Canvas course website.
Tasks
Read LPL2 textbook "Introduction" p 1-5
Read LPL2 textbook "Introduction" p 5-11 (how to use SUBMIT and GRADEGRINDER and other software).
See how to use SUBMIT at https://www.gradegrinder.net/Support /documentation.html?software=submit and at https://www.gradegrinder.net/Support /videoTutorial.html
Do exercise "You try it" LPL2 textbook "Introduction" p 5-10. *Use same name as in Canvas grades record. This is preferred name chosen on SSC.* Use SUBMIT to send exercise to GradeGrinder. Include instructor name and email address. If instructor name included submission registers you as member of course at GRADEGRINDER. If instructor name not included submission does not register you at GRADEGRINDER.
Do course orientiation exercise in UBC Canvas Assessments. All answers correct.

Topics: Introduction to symbolic logic and logical concepts.
Read LPL2 textbook ch 2 sec 0-1 p 41-44 (explanation argument, validity, logical consequence concepts), ch 4 sec 1 p 94 first three paragraphs (explanation logical truth concept), ch 4 sec 2 p 106 first two paragraphs (explanation logical equivalence concept), exercise 11.15 first sentence only (brief explanation logical independence concept, don't do exercise), ch 5 sec 3 p 138 3rd and 2nd last paragraphs and ch 5 sec 4 p 141-142 (explanation contradiction/inconsistency concept)
Read LPL2 textbook ch 1 sec 0,1,2.
Read LM (Learning Modules in Canvas) Unit 1 sec 1, sec 2, sec 3, sec 4.
Watch "Valid and sound arguments (11.41)" at https://www.gradegrinder.net/Products/lpl-index.html. Go to Online Course tab > Online Materials at ch 2.

Do exercises in UBC Canvas Assessments exercises 1.3.1, 1.3.2, 1.4.1, 1.4.2

Watch ZOOM lecture class recordings from Jan-Apr 2021. Recording available in Media Gallery in Canvas.

Week 2 (Starting Mon 17 May 2021)

Topics: Tarski artificial language and worlds. Other logic languages and worlds.
Tasks
Read LPL2 textbook ch1 sec 0, ch1 sec 1, ch1 sec 2, ch1 sec 3, ch1 sec 4, ch 1 sec 7.
Read LM Unit 2 sec 1.
Watch "Atomic sentences (20.10)" at https://www.gradegrinder.net/Products/lpl-index.html. Go to Online Course tab > Online Materials at ch 1.
See how to use TARSKI'S WORLD at https://www.gradegrinder.net/Support/documentation.html?software=tarski#
Do (submit to GradeGrinder using SUBMIT program and be sure to set to also email to instructor at leslie.burkholder@ubc.ca) LPL2 textbook exercises 1.3, 1.4, 1.5. GradeGrinder record can be checked at GradeGrinder website.
Do exercises in UBC Canvas Assessments exercise The Bonus Survey

Topics: Artificial logic languages (eg Tarski logic language) truth-functional operators.
Tasks:
Read LPL2 textbook ch 3 sec 0-4 p 67-77 (skip "game rule for NOT" p 69, skip "game rule for AND" p 72, skip "game rule for OR" p 75-76), ch 3 sec 5-6 p 79-84, ch 7 sec 0-2 p 178-189 (skip "game rule for IF" p 180, skip "game rule for IFF" p 185), ch 7 sec 4 p 192-198.
Read LM Unit 2 sec 2.
Watch "The blocks world language (24.14)" at https://www.gradegrinder.net/Products/lpl-index.html. Go to Online Course tab > Online Materials at ch 1.
Watch "The Boolean connectives: Negation (18.19)" at https://www.gradegrinder.net/Products/lpl-index.html. Go to Online Course tab > Online Materials at ch 3.
Watch "The Boolean connectives: Conjunction (18.37)" at https://www.gradegrinder.net/Products/lpl-index.html. Go to Online Course tab > Online Materials at ch 3.
Watch "The Boolean connectives: Disjunction (16.03)" at https://www.gradegrinder.net/Products/lpl-index.html. Go to Online Course tab > Online Materials at ch 3.
Watch "Conditionals (15.19)" at https://www.gradegrinder.net/Products/lpl-index.html. Go to Online Course tab > Online Materials at ch 7
Watch "Biconditionals (10.18)" at https://www.gradegrinder.net/Products/lpl-index.html. Go to Online Course tab > Online Materials at ch 7.
Do (submit to GradeGrinder using SUBMIT program and be sure to set to also email to instructor) LPL2 textbook exercises 3.2, 3.3, 3.7, 3.10, 3.13, 3.18, 7.10 (ignore "play the game" in this exercise), 7.16, 7.17, 7.25. GradeGrinder record can be checked at GradeGrinder website.
Do exercises in UBC Canvas Assessments exercise 1.3.3
Recommended do extra practice exercises outside Canvas. Go to Many Worlds Logic outside Canvas. Go to Truth-functional logic II Calculations (exercises 3,4)

Topics: Artificial logic languages (eg Tarski logic language) quantifiers.

Tasks:
Read LPL2 textbook ch 9 sec 0-2 p 229-233, sec 4-5 p 237-245 (skip "Game rules quantifiers" p 239-241)
Read LM Unit 2 sec 3
Watch "Introduction to the quantifiers (6.43)" at https://www.gradegrinder.net/Products/lpl-index.html. Go to Online Course tab > Online Materials at ch 9.
Watch "Quantifier equivalences (17.28)" at https://www.gradegrinder.net/Products/lpl-index.html. Go to Online Course tab > Online Materials at ch 10.

Watch ZOOM lecture class recordings from Jan-Apr 2021. Recording available in Media Gallery in Canvas.

Week 3 (Starting Mon 24 May 2021)

Topics: Artificial logic languages (eg Tarski logic language) quantifiers.
Tasks:
Read LPL2 textbook ch 9 sec 0-2 p 229-233, sec 4-5 p 237-245 (skip "Game rules quantifiers" p 239-241)
Read LM Unit 2 sec 3, LM Unit 2 sec 5, LM Unit 2 sec 6, LM Unit 2 sec 8
Watch "Introduction to the quantifiers (6.43)" at https://www.gradegrinder.net/Products/lpl-index.html. Go to Online Course tab > Online Materials at ch 9.
Watch "Quantifier equivalences (17.28)" at https://www.gradegrinder.net/Products/lpl-index.html. Go to Online Course tab > Online Materials at ch 10.
Do (submit to GradeGrinder using SUBMIT program and be sure to set to also email to instructor) LPL2 textbook exercises 9.5, 9.6. GradeGrinder record can be checked at GradeGrinder website.

Topics: Artificial logic languages (eg Tarski logic language) more on quantifiers.
Tasks:
Read LPL2 textbook ch 10 sec 3 p 280 (starting at "De Morgan laws for quantifiers")-281, ch 10 sec 4, ch 11 sec 0-2, ch 11 sec 7.
Read about truth-functional expansions in course materials folder in Canvas course website
Watch to be determined
Do (submit to GradeGrinder using SUBMIT program and be sure to set to also email to instructor) LPL2 textbook exercises 9.9, 9.14, 10.22, 11.2, 11.3, 11.9, 11.10, 11.12, 11.38
Do exercises in UBC Canvas Assessments exercises 2.5, 2.6, 2.8

Topics: Syntax Tarski logic language and other logic languages. Legal strings and formulas. Free variables. Sentences vs wffs. Main logic operator.
Tasks:
Read LPL2 textbook ch 9 sec 3 p 233-236
Read LM Unit 3 sec 1-5, sec 7-8
Watch "Variables, wffs, and sentences (24.02)" at https://www.gradegrinder.net/Products/lpl-index.html. Go to Online Course tab > Online Materials at ch 9.
Recommended do extra practice exercises outside Canvas. Go to Many Worlds Logic outside Canvas. Go to Truth-functional logic II Calculations (exercises 1,2)
Do exercises in UBC Canvas Assessments exercises 3.2, 3.3, 3.5, 3.7, 3.7, 3.8

Watch ZOOM lecture class recordings from Jan-Apr 2021. Recording available in Media Gallery in Canvas.

Week 4 (Starting Mon 31 May 2021)

Topics: Syntax Tarski logic language and other logic languages. Legal strings and formulas. Free variables. Sentences vs wffs. Main logic operator.
Tasks:
Read LPL2 textbook ch 9 sec 3 p 233-236
Read LM Unit 3 sec 1-5, sec 7-8
Watch "Variables, wffs, and sentences (24.02)" at https://www.gradegrinder.net/Products /lpl-index.html. Go to Online Course tab > Online Materials at ch 9.
Recommended do extra practice exercises outside Canvas. Go to Many Worlds Logic outside Canvas. Go to Truth-functional logic II Calculations (exercises 1,2)
Do exercises in UBC Canvas Assessments exercises 3.2, 3.3, 3.5, 3,7, 3.8

Topics: Tarski logic language truth-functional operators translation.
Tasks:
Review LPL2 textbook ch 3 sec 0-4 p 67-77 (skip "game rule for NOT" p 69, skip "game rule for AND" p 72, skip "game rule for OR" p 75-76), ch 3 sec 5-6 p 79-84, ch 7 sec 0-2 p 178-189 (skip "game rule for IF" p 180, skip "game rule for IFF" p 185), ch 7 sec 4 p 192-198.
Read LPL2 textbook ch 3 sec 7 p 84-89, ch 7 sec 3 p 189-192
Read LM Unit 4 sec 1-2
Watch "Equivalence and translation" at https://www.gradegrinder.net/Products/lpl-index.html. Go to Online Course tab > Online Materials at ch 3.
Watch "Conditionals" and "Biconditionals" at https://www.gradegrinder.net/Products/lpl-index.html. Go to Online Course tab > Online Materials at ch 7.
Recommended do extra practice exercises outside Canvas. Go to Many Worlds Logic outside Canvas. Go to Truth-functional logic I Elementary translations (exercises 1, 2,3)
Do exercises in UBC Canvas Assessments exercises 4.2.1, 4.2.2

Watch ZOOM lecture class recordings from Jan-Apr 2021. Recording available in Media Gallery in Canvas.

Week 5 (Starting Mon 07 Jun 2021)

Topics: Tarski logic language truth-functional operators translation.
Tasks:
Review LPL2 textbook ch 3 sec 0-4 p 67-77 (skip "game rule for NOT" p 69, skip "game rule for AND" p 72, skip "game rule for OR" p 75-76), ch 3 sec 5-6 p 79-84, ch 7 sec 0-2 p 178-189 (skip "game rule for IF" p 180, skip "game rule for IFF" p 185), ch 7 sec 4 p 192-198.
Read LPL2 textbook ch 3 sec 7 p 84-89, ch 7 sec 3 p 189-192
Read LM Unit 4 sec 1-2
Watch "Equivalence and translation" at https://www.gradegrinder.net/Products/lpl-index.html. Go to Online Course tab > Online Materials at ch 3.
Watch "Conditionals" and "Biconditionals" at https://www.gradegrinder.net/Products/lpl-

index.html. Go to Online Course tab > Online Materials at ch 7.
Recommended do extra practice exercises outside Canvas. Go to <u>Many Worlds Logic</u> outside
Canvas. Go to Truth-functional logic I Elementary translations (exercises 1, 2,3)
Do exercises in UBC Canvas Assessments exercises 4.2.1, 4.2.2
Do (submit to GradeGrinder using SUBMIT program and be sure to set to also email to
instructor) LPL2 textbook exercises 3.20, 3.21, 7.11, 7.12, 7.15

Topics: Tarski logic language identity and quantifier operators translation.
Tasks:
Review LPL2 textbook ch 9 sec 0-2 p 229-233, sec 4-5 p 237-245 (skip "Game rules
quantifiers" p 239-241), ch 10 sec 3-4 p 279 (starting at "De Morgan for quantifiers")-286, ch 11
sec 0-2 p 298-306, ch 11 sec 7 p 320-324.
Read LPL2 textbook ch 9 sec 6 p 245-253, ch 7 sec 3 p 189-192, ch 11 sec 3-5 p 307-317
Read LM Unit 4 sec 3, 5-6
Watch "Translation involving quantifiers" at https://www.gradegrinder.net/Products/lpl-
index.html. Go to Online Course tab > Online Materials at ch 9.
Do exercises in UBC Canvas Assessments exercises 4.2.1, 4.2.2, 4.3.3, 4.5, 4.6
Do (submit to GradeGrinder using SUBMIT program and be sure to set to also email to
instructor) LPL2 textbook exercises 9.12, 9.13, 9.16, 9.17, 9.18, 11.4, 11.16, 11.17, 11.19, 11.20

Watch ZOOM lecture class recordings from Jan-Apr 2021. Recording available in Media
Gallery in Canvas.

Week 6 (Starting Mon 14 Jun 2021)

Topics: Tarski logic language identity and quantifier operators translation.
Tasks:
Review LPL2 textbook ch 9 sec 0-2 p 229-233, sec 4-5 p 237-245 (skip "Game rules
quantifiers" p 239-241), ch 10 sec 3-4 p 279 (starting at "De Morgan for
quantifiers")-286, ch 11 sec 0-2 p 298-306, ch 11 sec 7 p 320-324.
Read LPL2 textbook ch 9 sec 6 p 245-253, ch 7 sec 3 p 189-192, ch 11 sec 3-5 p 307-317
Read LM Unit 4 sec 3, 5-6
Watch "Translation involving quantifiers" at https://www.gradegrinder.net/Products/lpl-
index.html. Go to Online Course tab > Online Materials at ch 9.
Do exercises in UBC Canvas Assessments exercises 4.2.1, 4.2.2, 4.3.3, 4.5, 4.6
Do (submit to GradeGrinder using SUBMIT program and be sure to set to also email to
instructor) LPL2 textbook exercises 9.12, 9.13, 9.16, 9.17, 9.18, 11.4, 11.16, 11.17, 11.19,
11.20

Topics: Tarski logic language quantifier operators complex patterns translation, eg
numeric quantification, definite descriptions.
Tasks:
Read LPL2 textbook ch 14 sec 0-1 p 373-383, ch 14 sec 3 p 388-391
Read LM Unit 4 sec 4, Unit 5 sec 2
Watch "Sentences containing multiple quantifiers" and "Translation and ambiguity" at
https://www.gradegrinder.net/Products/lpl-index.html. Go to Online Course tab > Online
Materials at ch 11.
Watch "Numerical quantifiers" and "Definite descriptions" at

https://www.gradegrinder.net/Products/lpl-index.html. Go to Online Course tab > Online Materials at ch 14.
Do exercises in UBC Canvas Assessments exercises 4.4, 5.2
Do (submit to GradeGrinder using SUBMIT program and be sure to set to also email to instructor) LPL2 textbook exercises 14.1, 14.3, 14.4, 14.28

Watch ZOOM lecture class recordings from Jan-Apr 2021. Recording available in Media Gallery in Canvas.

Week 7 (Starting Mon 21 Jun 2021)

Topics: Applications logic language translation.
Tasks:
Read LM Unit 5 sec 3-4.
Nothing to read in LPL2 textbook
Recommended on BNA project: Guardian newspaper articles Bloomfield and Kowalski on logic and law in Course Materials folder
Recommended on Arrow and voting methods: New Yorker magazine article in Course Materials folder
Recommended Arrow movie in Course Materials folder
Do exercises in UBC Canvas Assessments exercises 5.3
No (submit to GradeGrinder using SUBMIT program and be sure to set to also email to instructor) LPL2 textbook exercises

Topics: Semantic tableau/truthtrees. The truth-functional operators.
Read LM Unit 7
Nothing to read in LPL2 textbook
Recommended: Sections from Hodges, Logic Sec 10, 11, 20 in Course Materials folder
Watch video on truth-functional tableau from India Inst Technology at http://nptel.ac.in/courses /109104040/. Go to Lecture 19 and 20 and 21
No (submit to GradeGrinder using Submit program set to also email to instructor) LPL2 textbook exercises

Watch ZOOM lecture class recordings from Jan-Apr 2021. Recording available in Media Gallery in Canvas.

Week 8 (Starting Mon 28 Jun 2021)

Topics: Semantic tableau/truthtrees. The truth-functional operators.
Read LM Unit 7
Nothing to read in LPL2 textbook
Recommended: Sections from Hodges, Logic Sec 10, 11, 20 in Course Materials folder
Watch video on truth-functional tableau from India Inst Technology at http://nptel.ac.in /courses/109104040/. Go to Lecture 19 and 20 and 21
Do exercises in UBC Canvas Assessments exercises 7.1, 7.3, 7.6
No (submit to GradeGrinder using Submit program set to also email to instructor) LPL2 textbook exercises

Topics: Semantic tableau/truthtrees. Quantifier operators and identity.
Read LM Unit 7
Nothing to read in LPL2 textbook
Recommended: Sections from Hodges, *Logic Sec 10, 11, 20, 36, 40* in Course Materials folder
Watch video on quantificational tableau from India Inst Technology at http://nptel.ac.in /courses/109104040/. Go to Lecture 40 and 41
Do exercises in UBC Canvas Assessments exercises 7.2, 7.4, 7.7, 7.5
No (submit to GradeGrinder using Submit program set to also email to instructor) LPL2 textbook exercises

Watch ZOOM lecture class recordings from Jan-Apr 2021. Recording available in Media Gallery in Canvas.

Week 9 (Starting Mon 05 Jul 2021)

Topics: Semantic tableau/truthtrees. Quantifier operators and identity.
Read LM Unit 7
Nothing to read in LPL2 textbook
Recommended: Sections from Hodges, *Logic Sec 10, 11, 20, 36, 40* in Course Materials folder
Watch video on quantificational tableau from India Inst Technology at http://nptel.ac.in/courses /109104040/. Go to Lecture 40 and 41
Do exercises in UBC Canvas Assessments exercises 7.2, 7.4, 7.7, 7.5
No (submit to GradeGrinder using Submit program set to also email to instructor) LPL2 textbook exercises

Topics: Normal forms and clausal form
Tasks:
Read LPL2 textbook ch 4 sec 5 (NNF), ch 4 sec 6 (CNF and DNF), ch 11 sec 7 (prenex), ch 1 sec 5 (functions), ch 18 sec 5 (Skolemization), ch 18 sec 7 p 536-540 (clausal form)
Read LM The Resolution Refutation Textbook "Clausal form" p 1-13 and p 21-44
Watch videos
Do exercises in UBC Canvas Assessments exercises: None
Do (submit to GradeGrinder using SUBMIT program and be sure to set to also email to instructor) LPL2 textbook exercises 4.31, 4.39, 4.40, 11.37, 11.38

Watch ZOOM lecture class recordings from Jan-Apr 2021. Recording available in Media Gallery in Canvas.

Week 10 (Starting Mon 12 Jul 2021)

Topics: Resolution refutation proofs and rules.
Tasks:
Read LPL2 textbook ch 17 sec 4, ch 18 sec 6, ch 18 sec 7
Watch videos
Read LM The Resolution Refutation Textbook "Clausal form" p 1-13 and p 21-44 in course materials (modules > week11)
Read "Instructions for ROBINSON" in course materials (modules > week11)
Do exercises in UBC Canvas Assessments exercises: None

Do (submit to GradeGrinder using SUBMIT program and be sure to set to also email to instructor) LPL2 textbook exercises: None

Watch ZOOM lecture class recordings from Jan-Apr 2021. Recording available in Media Gallery in Canvas.

Week 11 (Starting Mon 19 Jul 2021)

Topics: Resolution refutation proofs and rules.
Tasks:
Read LPL2 textbook ch 17 sec 4, ch 18 sec 6, ch 18 sec 7
Watch videos
Read LM The Resolution Refutation Textbook "Clausal form" p 1-13 and p 21-44 in course materials (modules > week11)
Read "Faking identity in ROBINSON" in course materials (modules > week11)
Do exercises in UBC Canvas Assessments exercises: None
Do (submit to GradeGrinder using SUBMIT program and be sure to set to also email to instructor) LPL2 textbook exercises: None
Do exercises in UBC Canvas Assessments exercises 10.6, 10.7

Topics: Natural deduction proofs / derivations. Rules for truth-functional operators. Using derivation rules forwards and backwards.
Tasks:
Read LPL2 textbook ch 2 sec 2-4 p 46-62, ch 5 all secs p 128-142, ch 6 all secs p 143-177, ch 8 sec 0-2 p 199-215
Watch videos
Do (submit to GradeGrinder using SUBMIT program and be sure to set to also email to instructor) LPL2 textbook exercises 2.16, 6.1, 6.2, 6.7, 6.33, 8.17

Watch ZOOM lecture class recordings from Jan-Apr 2021. Recording available in Media Gallery in Canvas.

Week 12 (Starting Mon 26 Jul 2021)

Topics: Natural deduction proofs / derivations. Rules for truth-functional operators. Using derivation rules forwards and backwards.
Tasks:
Read LPL2 textbook ch 2 sec 2-4 p 46-62, ch 5 all secs p 128-142, ch 6 all secs p 143-177, ch 8 sec 0-2 p 199-215
Watch videos
Do exercises in UBC Canvas Assessments exercises 8.2, 8.4, 8.7
Do (submit to GradeGrinder using SUBMIT program and be sure to set to also email to instructor) LPL2 textbook exercises 2.18, 6.3, 6.18, 8.24, 8.26 not using TautCon or AnaCon rules

Topics: Positive subformulas. Natural deduction proof /derivation strategies.
Tasks:
Read LPL2 textbook ch 6 sec 5, ch 8 sec 2, ch 13 sec 4
Read LM Unit 3 sec 9, Unit 8 sec 3, sec 6, sec 9

Do exercises in UBC Canvas Assessments exercises 3.9

Topics: Natural deduction proofs / derivations. Rules for quantifiers. Using derivation rules forwards and backwards.
Tasks:
Read LPL2 textbook ch 2 sec 2-4 p 46-62, ch 5 all secs p 128-142, ch 6 all secs p 143-177, ch 8 sec 0-2 p 199-215, ch 12 sec 0-4 p 328-347, ch 13 sec 0-3 p 351-369
Watch videos
Do exercises in UBC Canvas Assessments exercises 8.2, 8.4, 8.7
Do (submit to GradeGrinder using SUBMIT program and be sure to set to also email to instructor) LPL2 textbook exercises 13.1 (both Universal1 and Universal2), 13.10
Do (submit to GradeGrinder using SUBMIT program and be sure to set to also email to instructor) LPL2 textbook exercises 13.2 not using TautCon or AnaCon rules

Watch ZOOM lecture class recordings from Jan-Apr 2021. Recording available in Media Gallery in Canvas.

Week 13 (Starting Mon 02 Aug 2021)

Topics: Sets and Russell's set theory paradox
Tasks:
Read LPL2 textbook ch 1 sec 6 p 37-38, ch 15 sec 0-3 p 413-422, ch 15 sec 9 p 442-443
Read LM Unit 9 sec 1-3
Watch background YouTube video about Russell's set theory paradox in course materials folder in Canvas.
Do exercises in UBC Canvas Assessments exercises 9.2.1, 9.3.1

Topics: To be determined

Do (submit to GradeGrinder using SUBMIT program and be sure to set to also email to instructor) LPL2 textbook exercises 6.6, 6.9, 6.12, 6.20, 6.25-6.26 no wrtten work informal proofs not using FITCH to be submitted to Gradegrinder or instructor just FITCH proofs, 8.28-8.29 not using TautCon or AnaCon rules.
Do (submit to GradeGrinder using SUBMIT program and be sure to set to also email to instructor) LPL2 textbook exercises 13.3 not using Taut Con or Ana Con rule, 13.4 not using TautCon or AnaCon rules, 13.8 not using TautCon or AnaCon rules, 13.28-13.31 not using TautCon or AnaCon rules

Watch ZOOM lecture class recordings from Jan-Apr 2021. Recording available in Media Gallery in Canvas.

Week 14 (Starting Mon 09 Aug 2021)

Topics: To be determined

Canvas and Gradegrinder exercises due Fri 13 Aug 2021 11.59PM PST (Vancouver time)

Final exam available in Canvas starting Fri 13 Aug 2021 until Fri 20 Aug 2021

11.59PM PST (Vancouver time)

Week 15 (Starting Mon 16 Aug 2021)

Final exam available in Canvas starting Fri 13 Aug 2021 until Fri 20 Aug 2021 11.59PM PST (Vancouver time)