PHIL 220-98A (2020S): Dr. Leslie Burkholder

Version date = 27 Apr 2020. May be minor revisions or corrections after 27 Apr 2020. Always check online syllabus in UBC Canvas course website for most recent version of course syllabus.

Course

Phil 220 Sec 98A May-Aug 2020 3 credits
No class section, not accelerated syllabus

Lectures

None

Course Team

Course Organizer

Leslie Burkholder
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Virtual zoom office hours by appointment.

Teaching Assistant

Texts (Recommended and Required)

Barker-Plummer et al, *Language Proof and Logic* 2nd ed (LPL2 textbook). Available at Discount Texts in Village, UBC bookstore, Amazon and 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 an 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 both resolution refutation and natural deduction systems.
(d) Employ strategies in the construction of these different kinds of proofs

Evaluation / Assessment

X% = 1 course intro orientation quiz + Many UBC Canvas homework exercises. Homework exercises done at home. Open book, open computer windows, non-cumulative, unlimited tries. Best grade taken. 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 (up to end final exam period) worth 50% of on time submissions. Late submissions after end of final exam period 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 (up to end final exam period) worth 50% of on time submissions. Late submissions after end of final exam period worth 0%.

Z% = Supervised final exam during final exam period for term. 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, Contact instructor for information about accelerated course.

Course grade = X + Y + Z
X = 30%
Y = 30%
Z = 40%

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.

1. 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 11 May 2020)

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.*** **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 (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 videos that go with LPL2 textbook. Go to YouTube at
https://www.youtube.com/playlist?list=PL_onPhFCkVQjXugm0ak5NYEeFL-OGcYj5. Watch "Language
proof and logic 01 Reasoning proofs and valid arguments"
Do exercises in UBC Canvas Assessments exercises 1.3.1, 1.3.2, 1.4

Week 2 (Starting Mon 18 May 2020)

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.
See how to use TARSKI'S WORLD at
https://www.gradegrinder.net/Support/documentation.html?software=tarski#
Watch videos that go with LPL2 textbook. Go to YouTube at
https://www.youtube.com/playlist?list=PL_onPhFCkVQjXugm0ak5NYEeFL-OGcYj5. Watch "Language
proof and logic 02 FOL - A model of natural language" and "Language proof and logic 111 Names and
individual constants" and "Language proof and logic 112 Predicates and predicate symbols" and
"Language proof and logic 113 Putting the pieces together" and "Language proof and logic 121 The
blocks world language and editing worlds" and "Language proof and logic 123 Spatial predicates and
identity"
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: Artficial 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 videos that go with LPL2 textbook. Go to YouTube at
https://www.youtube.com/playlist?list=PL_onPhFCkVQjXugm0ak5NYEeFL-OGcYj5 Watch "Language
proof and logic 313 Negation in English and FOL" and "Language proof and logic 321 Conjunction in
English and FOL" and "Language proof and logic 331 Inclusive and exclusive or" and ""Language proof
and logic 341 deMorgan's laws" and "Language proof and logic 712 Syntax and truth table for
implication" and "Language proof and logic 721 If, only if, and provided" and "Language proof and logic
731 Syntax and semantics of biconditional"
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.
No exercises in UBC Canvas Assessments

Recommended do extra practice exercises outside Canvas. Go to [Many Worlds Logic](#) outside Canvas. Go to Truth-functional logic II Calculations (exercises 3,4)

Week 3 (Starting Mon 25 May 2020)

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 videos that go with LPL2 textbook. Go to YouTube at https://www.youtube.com/playlist?list=PL_onPhFCkVQjXugm0ak5NYEeFL-OGcYj5. Watch "Language proof and logic 911 Quantified expressions and determiners" and "Language proof and logic 913 The two FOL quantifiers" and "Language proof and logic 921 Variables wffs and quantifiers" and "Language proof and logic 932 Quantifier semantics and the domain" and "Language proof and logic 1442 FOL quantifiers consider the whole domain" and "Language proof and logic 922 Building sentences with quantifiers" and "Language proof and logic 1111 Multiple uses of a single quantifier" and "Language proof and logic 1112 Our first multiple quantifier sentence" and "Language proof and logic 1113 The ordering of mixed quantifiers"
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
Read LM Unit 2 sec 5, sec 6, sec 8.
Watch videos that go with LPL2 textbook. Go to YouTube at https://www.youtube.com/playlist?list=PL_onPhFCkVQjXugm0ak5NYEeFL-OGcYj5. Watch "Language proof and logic 944 Translating complex nonun phrases" and "Language proof and logic 1033 De Morgan's rules for quantifiers" and "Language proof and logic 1112 Our first multiple quantifier sentence" and "Language proof and logic 1113 The ordering of mixed quantifiers"
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

Week 4 (Starting Mon 27 Jan 2020)

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 videos that go with LPL2 textbook. Go to YouTube at https://www.youtube.com/playlist?list=PL_onPhFCkVQjXugm0ak5NYEeFL-OGcYj5. Watch "Language proof and logic 923 Formal rules for forming wffs" and "Language proof and logic 924 Free and bound

variables"
No (submit to GradeGrinder using SUBMIT program and be sure to set to also email to instructor) LPL2 textbook exercises
Do exercises in UBC Canvas Assessments exercises 3.2, 3.3, 3.5, 3.7, 3.8
Recommended do extra practice exercises outside Canvas. Go to Many Worlds Logic outside Canvas. Go to Truth-functional logic II Calculations (exercises 1,2)

Week 5 (Starting Mon 01 Jun 2020)

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 videos about translation outside Canvas: Video1,
Watch videos that go with LPL2 textbook. Go to YouTube at https://www.youtube.com/playlist?list=PL_onPhFCkVQjXugm0ak5NYEeFL-OGcYj5. Watch "Language proof and logic 313 Negation in English and FOL" and "Language proof and logic 321 Conjunction in English and FOL" and "Language proof and logic 331 Inclusive and exclusive or" and ""Language proof and logic 341 deMorgan's laws" and "Language proof and logic 342 Translation from English to FOL" and "Language proof and logic 712 Syntax and truth table for implication" and "Language proof and logic 721 If, only if, and provided" and "Language proof and logic 722 Some example translations" and "Language proof and logic 731 Syntax and semantics of biconditional"
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
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

Week 6 Starting Mon 08 Jun 2020)

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 "Language proof and logic 911 Quantified expressions and determiners" and "Language proof and logic 912 Quantifiers are everywhere" and "Language proof and logic 913 The two FOL quantifiers" and "Language proof and logic 921 Variables wffs and quantifiers" and "Language proof and logic 922 Building sentences with quantifiers" and "Language proof and logic 941 Aristotle and his sentence forms" and "Language proof and logic 942 The semantics of the Aristotelian forms" and "Language proof and logic 943 The final Aristotelian form"

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

Week 7 (Starting Mon 15 Jun 2020)

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 videos that go with LPL2 textbook. Go to YouTube at https://www.youtube.com/playlist?list=PL_onPhFCkVQjXugm0ak5NYEeFL-OGcYj5. Watch "Language proof and 1111 Multiple uses of a single quantifier" and "Language proof and 1112 Our first muliple quantifier sentence" and "Language proof and 1113 The ordering of mixed quantifiers" and "Language proof and 1121 The step-by step translation method" and "Language proof and 1411 At least n" and "Language proof and 1412 At most n two ways" and "Language proof and 1114 Exactly one" and "Language proof and 1413 Exactly n" and "Language proof and 1431 The Russellian analysis of definite descriptions" and "Language proof and 1432 Uniqueness is required" and "Language proof and 1433 Strawson on definite descritions"
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

Topics: Applications logic language translation.
Tasks:
Read LM Unit 5 sec 3-4.
Nothing to read in LPL2 textbook
Recommeded 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

Week 8 (Starting Mon 22 Jun 2020)

Topics: Nonstandard interpretations and the logical concepts again.
Tasks:
Read LM Unit 2 Sec 7, Unit 6 all sections
Nothing to read in LPL2 textbook
No videos that go with LPL2 textbook.
Do exercises in UBC Canvas Assessments exercises 2.7, 6.2, 6.3, 6.5, 6.6, 6.7, 6.8
No (submit to GradeGrinder using SUBMIT program and be sure to set to also email to instructor) LPL2 textbook exercises

Week 9 (Starting Mon 29 Jun 2020)

Topics: Normal forms
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)
Watch videos that go with LPL2 textbook. Go to YouTube at https://www.youtube.com/playlist?list=PL_onPhFCkVQjXugm0ak5NYEeFL-OGcYj5. Watch "Language proof and logic 133 - Function symbols" and "Language proof and logic 453 - A general procedure for NNF" and "Language proof and logic 461 - A distribution law and DNF" and "Language proof and logic 462 - A distribution law and CNF" and "Language proof and logic 463 - Checking for CNF and DNF" and "Language proof and logic 1131 - PNF defined" and "Language proof and logic 1132 - PNF procedure" and "Language proof and logic 1133 - An example"
Read LM The Resolution Refutation Textbook "Clausal form" p 14-20
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

Week 10 (Starting Mon 06 Jul 2020)

Topics: Resolution refutation proofs.
Tasks:
Read LPL2 textbook ch 17 sec 4, ch 18 sec 6, ch 18 sec 7
Watch videos that go with LPL2 textbook.
Read LM The Resolution Refutation Textbook "Clausal form" p 1-13 and p 21-44
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

Topics: Resolution refutation proof construction strategies.
Tasks:
Read LPL2 textbook
Watch videos that go with LPL2 textbook.
Read LM
Do (submit to GradeGrinder using SUBMIT program and be sure to set to also email to instructor) LPL2 textbook exercises: None

Week 12 (Starting Mon 13 Jul 2020)

Topics: Natural deduction proofs / derivations. Rules for identity, the truth-functional operators, 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 that go with LPL2 textbook. Go to YouTube at https://www.youtube.com/playlist?list=PL_onPhFCkVQjXugm0ak5NYEeFL-OGcYj5.
Read LM Unit 8 sec 1, sec 2, sec 4, sec 5, sec 7

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 2.16, 6.1, 6.2, 6.7, 6.8, 6.33, 8.17, 13.1, 13.10

Week 13 (Starting Mon 20 Jul 2020)

Topics: Positive subformulas. Natural deduction identity proof /derivation strategies, truth-functional proof /derivation construction strategies.
Tasks:
Read LPL2 textbook ch 6 sec 5, ch 8 sec 2
Read LM Unit 3 sec 9, Unit 8 sec 3, sec 6
Do exercises in UBC Canvas Assessments exercises 3.9, 8.3, 8.5
Do (submit to GradeGrinder using SUBMIT program and be sure to set to also email to instructor) LPL2 textbook exercises 2.17, 2.18, 6.3-6.6, 6.9, 6.12, 6.18-6.20, 6.24-6.27 no informal proofs to be submitted just FITCH proofs, 8.19, 8.20, 8.23, 8.24, 8.25, 8.26-8.30 not using Taut Con or Ana Con rule.

Topics: Quantifier proof/ derivation strategies.
Tasks:
Read LPL2 textbook ch 13 sec 3
Read LM Unit 8 sec 8, sec 9
Do exercises in UBC Canvas Assessments exercises 8.8
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, 13.2 not using Taut Con or Ana Con rule, 13.3 not using Taut Con or Ana Con rule, 13.4 not using Taut Con or Ana Con rule, 13.8 not using Taut Con or Ana Con rule, 13.11 not using Taut Con or Ana Con rule, 13.14 not using Taut Con or Ana Con rule, 13.28-13.31 not using Taut Con or Ana Con rule

Strategies flowchart: TF+identity+Quantifier operators

Week 14 (Starting Mon 27 Jul 2020)

Topics: Logic applications proofs / derivations: Russell 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 Russells' set theory paradox in course materials folder in Canvas.
Do exercises in UBC Canvas Assessments exercises 9.2.1, 9.2.2, 9.2.3, 9.3.1, 9.3.5
Do exercise in UBC Canvas 9.5.2
No (submit to GradeGrinder using SUBMIT program and be sure to set to also email to instructor) LPL2 textbook exercises

Topics: Logic applications proofs / derivations: Anselm's proof
Tasks:
Watch background YouTube video about Anselm's proof for existence of God in course materials folder in Canvas.
Do exercises in UBC Canvas Assessments exercises 9.x.y

Do exercise in UBC Canvas 9.5.3

No (submit to GradeGrinder using SUBMIT program and be sure to set to also email to instructor) LPL2 textbook exercises

Topics: Logic applications proofs / derivations: Arrow on preferences
Tasks:
Read LPL2 textbook ch 15 sec 6 p 432 "Properties of relations"
Read LM Unit 9 sec 5
Do exercises in UBC Canvas Assessments exercises 9.5.1
No (submit to GradeGrinder using SUBMIT program and be sure to set to also email to instructor) LPL2 textbook exercises

Last day of classes Thu 13 Aug

Final exam period for course Mon 03 Aug to Fri 21 Aug

Final exam available to be completed in Canvas off-campus with decreasing time. See course calendar in Canvas.