Phil 512 — Philosophy and Logic (Non-Classical Logic)

Spring 2012 – Prof. Kevin C. Klement (Please call me "Kevin.")
Mondays, Wednesdays and Fridays 11:15am–12:05pm in 374 Bartlett

Course description: Introduction to various non-classical logical systems, including conditional logics, relevance logics, intuitionist logics, paraconsistent logics and fuzzy logics. Focus will be on propositional systems and tableau-style proofs, with a smattering of formal semantics, metatheory and quantification theory.

Prerequisites: Phil 310 (Intermediate Logic) or equivalent, or consent of instructor.

Contact info: My office is 358 Bartlett. My office hours are Mondays 2:30–3:30 and Wednesdays 12:15–1:15pm and by appointment. My office phone is (413) 545-5784. My email address is `klement@philos.umass.edu`.

Web pages: Our "public" website is `http://courses.umass.edu/phil512-klement/`. More useful is our Moodle page, where you can download lecture notes, electronic copies of the readings and more, and even view your grades. Moodle is available at `https://moodle.umass.edu/`.

Textbook: Graham Priest, *An Introduction to Non-Classical Logic: From If to Is* (2nd ed.). Cambridge University Press, 2008. ISBN 978-0-521-67026-5. The text is available at Amherst Books in downtown Amherst. We shall also be making heavy use of handouts. All course readings will be made available electronically on Moodle.

Requirements and Grading: Your course grade is determined by the following requirements:

Homework packet 1:	10%
Homework packet 2:	10%
Homework packet 3:	10%
Homework packet 4:	10%
Take-home midterm exam:	25%
Take-home final exam:	25%
Participation and attendance:	10%
Total	100%

Homework: Homework exercises will be assigned almost every class period. You should try to complete each assignment by the next class period, though if you get stuck, you may ask for help during the next class. On the days indicated on the reverse, I will collect all the homework assigned that has not yet been collected, and assign a grade to the packet as a whole. In general, your grade on your homework will be determined as much by depth of engagement, diligence and comprehensiveness as by getting the correct answer.

Exams: The midterm and final exam in this course will take the form of take-home exams covering the material discussed in class prior to the exam. Typically, the exams will contain a number of questions, some asking for a proof, tableau, derivation or solution to a logical problem, and possibly an essay question or two. Typically, you will be given some choice regarding which questions to answer. You will have about a week or a tad more to complete each exam.

Policies: Homework and exams may be handwritten. You may collaborate with your peers on *homework* assignments provided you do not *copy* from them. You may *not* collaborate with your peers on *exams*.

Course Schedule

Subject to change!

September 5	Course Introduction
September 7–10	“Mathematical Prolegomenon” (Priest; pp. xxvii–xxxii)
September 12–14	Classical logic; tableaux; philosophical issues (Priest; chap. 1)
September 17–19	System K; possible world semantics (Priest; chap. 2)
September 21–24	Other “normal” modal logics; accessibility (Priest; chap. 3)

Homework Set 1 (for the above) due Monday, Oct. 1st

September 26–October 1	Non-“normal” modal logics; strict implication (Priest; chap. 4)
October 3–5	Conditional logics (Priest; chap. 5)
October 8	Columbus day. Class moved to Tuesday.
Tues., October 9	Conditional logics, continued (Priest, chap. 5)
October 10–15	Intuitionist logic (Priest; chap. 6)

Homework Set 2 (for the above) due Monday, Oct. 22nd
Midterm exam (for all the above) due Wednesday, Oct. 24th

October 17–22	Many-valued logics generally (Priest, chap. 7)
October 24–29	First Degree Entailment (FDE) (Priest, chap. 8)
October 31–November 5	FDE with strict implication (Priest, chap. 9)

Homework Set 3 (for the above) due Wednesday, November 14th

November 7–9	Other relevance logics (Priest, chap. 10)
November 12	Veteran’s day; no class.
November 14–16	Relevance logic, continued (Priest, chap. 10)
November 19–21	Fuzzy logic (Priest, chap. 11)
November 23	Thanksgiving break; no class.
November 26–28	Fuzzy logic, continued (Priest, chap. 11)
November 30–December 7	Non-classical quantification theory; other topics (Priest; part II, selections)

Homework Set 4 and Final Exam (for the above) due by 5pm on Saturday, December 15th (the end of finals week).
