Course Syllabus

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Office hrs:  MWF 12:00 - 1:10 and by appointment, or try me anytime I am in (sometimes in the
             Logic Lab UH 052, x72667)

Brief Description:

This is a first course in classical metalogic. You have, presumably, already learned to use the classical
symbolic logic. In this course we think rigorously about that logic you have learned to use. There is
doing of logic; in particular, axiomatic systems are introduced and used. But the main weight is on
what the logic does and how it works. Central results are soundness and completeness of the predicate
calculus. This material is fundamental in disciplines as diverse as philosophy, mathematics and
computer science. It is essential for those who will investigate theoretical underpinnings in such areas;
it will be illuminating for those who would undertake further course work or reading in these and
related disciplines.

Course Expectations:

The prerequisite is Phil 300 (or consent of instructor). In a class like this, nothing is more important
than regular class attendance, class participation, and faithful, on-time completion of assignments. In a
small and advanced class such as this, it goes without saying that each of us specially depends upon the
others for the quality and nature of class interaction. So I’ll leave off comments about phones and the
like to simply depend on your honor and good judgement.

Text:

The text for this course is the complete Symbolic Logic: An Accessible Introduction to Serious
Mathematical Logic by Prof Roy. You may obtain this by adding to the text for 300 (the way it is
available in the Bookstore). Alternatively, the complete manuscript is available at Print Center (in the
mall at Little Mountain on Kendall about a mile east of University). An online copy is at
http://philosophy.csusb.edu/~troy/int-ml.htm Though the electronic copies have value, everyone will
need a bound hardcopy of their own.
**Grading:**

Grading is based on homework, two midterm exams, and a final exam. There are some opportunities to obtain extra credit.

(a) The midterm and final exams are take-home exams given according to the attached schedule. Each is comprehensive. Exams contribute a total of 80% of the grade. This percentage will be whichever is greater of:

\[
\begin{align*}
\text{standard} & : \quad (0.2)(M1) + (0.2)(M2) + (0.4)(F) \\
\text{M1 dropped} & : \quad (0.2)(M2) + (0.6)(F) \\
\text{M2 dropped} & : \quad (0.2)(M1) + (0.6)(F)
\end{align*}
\]

So a midterm exam may be dropped with its credit shifted onto the final. On this scheme, mathematically, everyone ought to be in the running for an ‘A’ or ‘B’ for this portion of the grade right up to the very end. The final counts *at least* 40%. It will not be entirely dropped in favor of the midterms. Because of the potential to drop an exam, late exams will not be accepted apart from (prior) agreement with the instructor – in effect, the makeup for an exam is the final.

(b) Homework will be regularly assigned in class and due at the beginning of the following period. Assignments will be marked on a 2-point scale according to the following criteria: 2 homework is complete; 1 at least half complete; 0 less than half complete. Thus the homework component of the grade samples regular effort and attendance. However, the due date for up to two assignments will be suspended so that so that the assignments count as on-time all the way up to the last day of instruction. The suspended dates are to allow for emergency. So exceptions to the general policy will be allowed only in exceptional (continuing) circumstances.

(c) Extra credit problems will sometimes be assigned along with homework. These assignments are designed to go with corresponding homework, but will count as on time up to the following exam. *Clearly indicate assignment numbers!* These are worth 5% of the total grade (making regular homework far more important than these problems).

*Grading Notes:* Numbers convert to grades as follows: a score \(\geq 90\%\) is an ‘A’, a score \(\geq 80\%\) is a ‘B’, etc. You are guaranteed to receive *at least* the grade earned according to this scheme. However, in computing final grades the instructor reserves the right to lower this scale (e.g., > 89%, ‘A’ etc.); this does not happen ordinarily.
Order of Instruction (tentative):

I. Background SL ch 7
II. Axiomatic Deduction SL ch 3
III Mathematical Induction SL ch 8
— first midterm exam
IV. Preliminary Results SL, ch 9
    More Preliminary Results Roy, ch 10 (very tentative)
    — second midterm exam
V. Main Results Roy, ch 11
    More Main Results Roy, ch 12 (very tentative)
    — final exam (by 12:00 F 6/19)

Details:
(a) You may choose any method for getting homework done (short of xeroxing or printing out answers, or the work of another student). In this class, there is nothing unethical if you work together with other students, or even if you copy off the board when problems are worked in class (but not all problems will be worked in class).

(b) The above homework policy DOES NOT apply to the take-home exams. These are open-book, but are to be worked on your own—without the assistance of other students, lab assistants, the instructor, your mother, etc. Academic honesty is always essential. Plagiarism will result in an automatic F for the course, and standard University discipline. If you have any questions or concerns, feel free to talk things over with me. See also the very nice discussion, “What is Plagiarism” from my website http://philosophy.csusb.edu/~troy/courses.htm and also the policy document at http://academic-affairs.csusb.edu/personnel/fam/fam820.htm

(c) There are no adds after the census date. Role is required to be taken at the end of the 6th week and recorded for financial aid purposes; if you will be absent on that day, please make prior arrangements with the instructor. If you are in need of an accommodation for a disability in order to participate in this class, please contact Services to Students with Disabilities at UH-183, (909)537-5238. As a matter of principle, everyone should receive messages from their CSUSB e-mail. An easy way to do this is to set it up to forward to your regular address.