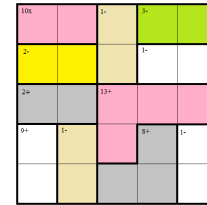# Course Announcement (Fall'17)
## CSCI/MATH/PHIL 372
## Logic and Computers



There has been a tremendous increase recently in the use of logic to model and reason about systems. This inter-disciplinary course introduces students to this topic, and gives students an understanding of logics and their use in formalizing real-world problems. It is also one of 4 required courses in the new logic minor.

## Topics

Logics that will be covered include propositional, predicate, temporal, and higher-order. For each of these logics, topics to be covered include:

- A summary of theoretical properties of the logic.

- Application of the logic to model and represent real-world problems. It is expected that most problems in this course will be games and puzzles, though students are encouraged to suggest problems in their areas of interest.

- Techniques for automated reasoning in the logic.

- Analyzing and proving properties of the problems being modeled using automated techniques that have seen an explosive growth in recent years. Techniques include SAT/SMT solvers, theorem provers, and model checkers.

The course is project-driven, and intended to be accessible to majors in all 3 areas (CSCI, Math, Phil). There is no programming, though you will use computer tools.

## Course Information

Time: Tuesday/Thursday $7^{00}$ – $8^{15}$ PM
Instructor: Subash Shankar (`subash.shankar@hunter.cuny.edu`), HN-1000F
Prerequisites: PHIL/MATH/CSCI 275 or CSCI 150 or instructor's permission (please contact instructor before registration)
I expect 4-5 homeworks (small projects), and 2-3 tests.

**All the puzzles (and 1 biological process) around the edges of this page can be modeled and solved/analyzed using [different] logics**