Syllabus for Math 654

1 Course Information

Math 654 will cover set theory, model theory and computability theory. In particular syntax and semantics of first order logic; incompleteness, completeness, and compactness theorems; Loewenheim-Skolem theorems; computable and computably enumerable sets; axioms of set theory; ordinals and cardinals. The course is for graduate students only.

The textbook for the course is *The Foundations of Mathematics*, by Kenneth Kunen.

The lectures will be held in 314 Keller Hall, Monday, Wednesday and Friday 2:30-3:30pm.

2 Instructor

Instructor: Dr. Achilles Beros

Email address: beros@math.hawaii.edu

Office: 306 Keller Hall

Office Hours: Monday 3:30pm-4:30pm, Wednesday 10am-11am and Friday 10am-11am.

3 Grading

The course grade will be assigned based on 5 components.

- Homework (60%)

- Midterm (15%) (October 12, 2016)

- Take-Home Final Exam (25%) (December 2 to December 9, 2016)

The exam dates and times are fixed. No makeup exams or alternate times will be possible. Genuine, documented medical/family emergencies will be considered on a case by case basis.

Homeworks will be due weekly. There will be no late homeworks.

4 Policies

- The use of computational or network-connected devices (e.e., calculators, smartphones, tablets, laptops etc.) is strictly forbidden during in-class exams.

- Homework will be due at the beginning of class every Friday.

- Discussion of homework assignments is permitted, but solutions must be written up independently.

- Clear and logical proofs are of critical importance in this course and the grading of the homework and exams will reflect this fact.