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Department of Mathematics

College of Liberal Arts
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(<http://clas.ufl.edu/>)

Mathematical Logic 1, Fall 2019

Titles and codes:

Mathematical Logic 1, MHF 6306, Section 3620

Meeting time and place:

LIT 0305, MWF 5th period

Instructor:

Ethan McCarthy

Office:

434 Little Hall, Office Hours: MW 7th period, F 6th period

Contact:

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Brief description:

This course is the first of a two-part introduction to mathematical logic at the graduate level. The main topics are model theory, computability, and set theory. The course will begin with a review of basic logic, including the language of first order logic, mathematical structures, and deductions, including Gödel's Completeness Theorem.

Fall semester will include an introduction to model theory, as well as an introduction to computability theory sufficient to formulate and prove Gödel's Incompleteness Theorem. Students successfully completing this sequence should, at least in principle, be prepared to take the Ph.D exam in logic.

Previous versions of that exam can be found here: [<http://gma.math.ufl.edu/past-exams/phd-logic/>] (<http://gma.math.ufl.edu/past-exams/phd-logic/>).

References:

The following references are being held on library course reserves:

Model Theory: An Introduction – David Marker

Fundamentals of Mathematical Logic – Peter G. Hinman

The *Open Logic Text* is a useful reference freely available online [<http://builds.openlogicproject.org/>] (<http://builds.openlogicproject.org/>).

Grading:

Grades will be based on homework and class participation.

Further administrative matters:

Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found in the online catalog at: [<https://catalog.ufl.edu/.../attendance.aspx>] (<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>). Students are expected to read ahead in the textbook before class, attend, and participate in class discussions.

Students are expected to provide feedback on the quality of instruction in this course based on 10 criteria. These evaluations are conducted online at [<https://evaluations.ufl.edu/>] (<https://evaluations.ufl.edu/>). Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at [<https://evaluations.ufl.edu/results/>] (<https://evaluations.ufl.edu/results/>).

Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation.

Honor pledge:

UF students are bound by The Honor Pledge which states,

“We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code.”

On all work submitted for credit by students at the University of Florida, the

following pledge is either required or implied:

“On my honor, I have neither given nor received unauthorized aid in doing this assignment.”

The Honor Code [<http://www.dso.ufl.edu/.../student-conduct-honor-code/>] (<http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>) specifies a number of behaviors that are in violation of the code and possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

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