Learning Outcome for Mathematics Graduate Students

Approved by the Faculty of the Department of Mathematics on October 20, 2009

1 Learning Outcomes for Masters' Degree Student Students

The following learning outcomes are expected of the Masters' degree students.

- Students should have broad knowledge and understanding of several core areas of mathematics. Students should be able to formulate and solve mathematical problems in these areas.
- Students should be able to understand, construct and communicate proofs of mathematical theorems.
- Students should be able to study and understand mathematical articles and communicate them verbally.

These learning outcomes are assessed through the following degree requirements.

- Students will be required to complete a range of mathematics courses with a GPA of 3.0 or above.
- Students will be required to pass a final exam, in which a student will study and present a piece of mathematical work to an examination committee.

2 Learning Outcomes for Ph.D. Students

The following learning outcomes are expected of the doctoral degree students.

- Students should have a broad and in-depth understanding of several core areas of mathematics. Students should be able to formulate and solve mathematical problems in these areas.
- Students should be able to search mathematical literature and gain comprehensive knowledge of current mathematical developments in their fields of specialization.
- Students should be able to produce a piece of original research work that is publishable in a peer-reviewed journal. Students should be able to effectively communicate mathematical research, both verbally and in writing.

These outcomes are assessed through the following degree requirements.

- Students will be required to pass written preliminary exams in several core areas of mathematics.
- Students will be required to pass a Ph.D. qualifying exam in their proposed research area.
- Students will be required to write a comprehensive thesis and pass a final thesis defense.